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Project Construction Field Material Management Procedure



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Project Construction Field Material Management Procedure

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Project Construction Field Material Management Procedure

1.0 PURPOSE

This procedure identifies the minimum controls and responsibilities of field procurement, and the storage and use of construction materials.

This procedure applies to works performed under all Government construction projects executed throughout the Kingdom of Saudi Arabia.

For the purposes of the Construction Management Procedures the Project Management Company is the Entity Project Management Organization (EPMO) appointed by the Entity and references prefixed with "Site", such as Site Construction Department, Site Engineering Department, represent the Project Management Company at Project level, on construction sites.

2.0 SCOPE

Many of the work activities and deliverable that are documented within this procedure are undertaken and managed by the Construction Contractors. However, these are covered here to identify methodologies that all projects should expect to see, be able to effectively audit Construction Contractors activities and identify poor performance so that mitigation measures can be put in place to ensure the successful delivery of the project.

Traffic and Logistics requirements and processes are not addressed in this procedure.

The Construction Contractor shall develop procedures to cover as a minimum the following:

- Material Requisition and Purchasing
- Material Receiving
- Material Storage Control
- Material Withdrawal
- Material Inventory Control
- Spare Parts Control
- Surplus Material Control

3.0 DEFINITIONS

Definitions	Description
Inspection and Test Plan (ITP)	A document that outlines specific inspection and testing requirements relevant to a specific process, which is used to monitor the work installation quality. The ITP identifies the items, materials and work to be inspected or tested; by whom, and at what stage or frequency; as well as Hold (H) and Witness (W) points, and references to relevant standards.
Material Requisition (MR)	An application used by the Construction Contractors Engineering Department or Supervision to electronically or manually generate MRs to request equipment, materials or services required for purchase, rental or subcontracting, during the project.
Materials Assignment Schedule (MAS)	A list of approved permanent plant, equipment, materials and services for use on the Project. The Site Engineering Department are usually tasked with the production of this list from the design documentation, specifications and drawings. The Construction Contractor may wish to submit alternative materials for approval or add to the list of approved materials where necessary.
Surplus Material	Excess material that remains unused at the end of a project.
Enterprise Content Management System (ECMS)	An information management and collaboration platform for managing and controlling Project documents and Entity records



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Definitions	Description
EMPM	An Entity Project Management Organization, this is an integrated team that comprises the Entity and its PMC responsible for managing all the Entity's projects.
Construction Contractor	The Main or Principal Contractor responsible for undertaking the Construction Works on the Project. Individual(s) or firm(s) engaged in the construction of buildings, either residences or commercial structures, as well as construction activities such as paving, highway construction, utility construction and landscape installation.
Site Contracts Department	Department within the Project Management Company that is responsible for administering Contracts.
Site Construction Department	Department within the Project Management Company that is responsible for Construction activities/operations
Site Engineering Department	Department within the Project Management Company that is responsible for Engineering or design activities /operations.
Purchase Order (PO)	A commercial document issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services.
Entity Project Management Organization (EPMO)	An Entity Project Management Organization, this is an integrated team that comprises the Entity and its PMC responsible for managing all the Entity's projects.

4.0 REFERENCES

1. EPM-KCQ-PR-000005: Project Construction Quality Management System Procedure
2. EPM-KCQ-PR-000006: Project Construction Control of Non-Conforming Items Procedure

5.0 RESPONSIBILITIES

5.1 Construction Contractor

The Construction Contractor shall be responsible for providing and maintaining all materials for the Works in accordance with the contract requirements until Turnover.

5.2 Site Construction Department

The Site Construction Department shall plan and provide the necessary resources to review and verify that the Construction Contractor is complying with the contract requirements as the works are progressed.

6.0 PROCESS

6.1 General

In order to meet the project schedule, the Construction Contractor must have a structured approach to identifying materials that are compliant with contract requirements, procuring materials in a timely manner and ensuring materials are in a fit state to be installed when required.

6.2 Planning

6.2.1 Materials Assignment

The Construction Contractor should have a clearly documented strategy of how all the required materials will be procured for a project.



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6.2.2 Verification and Fabrication Inspection

Once preferred materials suppliers have been identified the Construction Contractor should seek acceptance of the materials from the Site Construction Department in accordance with Project Construction Quality Management System Procedure: EPM-KCQ-PR-000005.

Any fabrication inspections or factory acceptance tests shall be identified in Inspection and Test Plans for each work activity and inspection scheduled in accordance with EPM-KCQ-PR-000005: Project Construction Quality Management System Procedure

Note: It is recommended that where possible regular inspections should be undertaken at off-site fabrication facilities to verify that manufactured items are being produced in accordance with contract requirements.

6.2.3 Material Requisition and Purchasing

Material Requisitions (MRs) are normally generated for all materials identified for purchase on the project Material Assignment Schedule.

MRs for Hazardous Materials must be approved by the Construction Contractors Safety Department before action by the Construction Contractors Procurement Department, a request for the Material Safety Data Sheet (MSDS) should accompany the Purchase Order.

Procurement will review each MR for completeness and accuracy. MRs containing discrepancies will be returned to the originator for correction or clarification.

The Construction Contractor may procure all materials of a certain type in a single bulk order or in multiple call-off orders, depending on available storage areas.

6.2.4 Materials Receiving

The Construction Contractor shall inspect materials as they arrive onsite in accordance with EPM-KCQ-PR-000005: Project Construction Quality Management System Procedure

Materials shall be placed into storage in accordance with manufactures recommendation. Special areas need to be allocated for hazardous and flammable materials

Material storage areas/yards should be well arranged, organized, maintained and labelled with grid locations and commodity/material areas.

Visual Inspection: will note any visual damages or unsatisfactory conditions. Any discrepancies should be reported as a Non-Conforming Item according to EPM-KCQ-PR-000006, Project Construction Control of Non-Conforming Items Procedure. The Non-Conforming item should be segregated or tagged to preclude inadvertent use of the item.

The Construction Contractor shall prepare for the proper unloading for the material and equipment. Material acceptance for release to construction should only occur after the material has been unloaded and visually inspected.

The Site Construction Department should undertake periodic surveillance of the storage facility to confirm adequate controls are in place. Particular care should be taken for hazardous and flammable materials

6.2.5 Material Use and Control

Storage areas should be segregated and secured to avoid damage, inadvertent use of materials and theft. In general, five storage criteria for the site storage to be considered:

- Outside Storage



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- Outside Storage, Covered
- Outdoor Storage Covered, Heated
- Inside Storage - Indoors
- Inside with Controlled Climate

Storage conditions shall be monitored to ensure vendor/manufacture's storage requirements are not compromised.

Permanent Equipment shall be temporarily stored on dunnage and in such a way as not to jeopardize its structural, mechanical, or electrical ability to function as designed once installed in its permanent location.

Storage location and conditions shall be in accordance with the project documents and manufacturer requirements. Any purges, space heaters, lubricants, as well as all maintenance requirements as stated by the manufacturer, shall be implemented and maintained while equipment is in storage. Material preservatives shall be applied as required by the manufacturer.

The Construction Contractor shall establish a system for requesting and approving the withdrawal of material from the storage area to ensure sufficient control is in place.

The Construction Contractor shall include any planned maintenance activities required prior to turnover in the Inspection and Test Plans (ITPs) in accordance with EPM-KCQ-PR-000005: Project Construction Quality Management System Procedure.

Planned maintenance will generally follow manufacturers' recommendation, and in order to maintain warranty support, all maintenance activities shall be recorded. Typical maintenance inspection requirements include:

- Visual inspection for physical damage, corrosion, or deterioration
- Cleanliness has been maintained
- Identification tags/marks are in place and are securely fastened
- Protective seals and covers are intact
- Protective coatings, lubricants, and preservatives are intact
- Periodic replacement of oils or preservatives as required by vendor
- Humidity indicators are monitored and desiccant is changed as required
- Rotation of cable reels, as required
- Space heaters are energized
- Electrical insulation resistance tests are being performed as required
- Rotation of shafts on rotating equipment is occurring, as required
- Appropriate closure of all end caps

6.2.6 Inventory Control

The Construction Contractor shall establish a system for controlling inventory levels. The quantities of each item should be established wherever possible at the beginning of the project, based on past experience, similar jobs, the scope of work and the need for repetitive replenishment of specific commodities. A minimum allowable inventory level should be identified and should represent a re-order trigger. It is important to ensure that surplus at the end of the project is minimized.

6.2.7 Spare Parts / Surplus

The Site Engineering Department is typically responsible for defining capital and operating spares. The recommended spare parts list and special tools list should be reviewed by the Entity.



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Manufacturers' recommendations for spare parts should be included in the review process to assist in the determination of spares and quantities and shall be in compliance with the contract.

The contract requirements will define the obligation to provide Spare Parts at project Turnover. The Construction Contractor is responsible for providing all Spare Parts at Turnover, irrespective of maintenance or rework requirements up until the point of Turnover.

Any Surplus material at the time of Turnover may be offered by the Construction Contractor to the Site Construction / Site Engineering Departments or Entity. However, the responsibility remains with the Construction Contractor to remove any unwanted / un-agreed surplus materials from site on or before the date of Turnover.

7.0 ATTACHMENTS

None.