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	Company Doc. No.	Contractor Ref. No.	Date	Revision

REVISION HISTORY	ISSUE DATE	DESCRIPTION	REVIEW / STATUS

PREPARED BY:	REVIEWED BY:	APPROVED BY:

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1. Purpose

The purpose of this Method Statement is to describe the details used and controls to be carried out for the installation of [Write Generator power in KV] Package Diesel Generator Set to ensure that it complies with Project requirements, specifications.

2. Scope of Work

This Method Statement applies to all installations of emergency and Packaged Diesel Generator Sets at [Company Name] & [Project Name]. Manpower and equipment shall be organized to meet the schedule as per the approved construction program.

3. Definition

Abbreviation

QAQC	- Quality Assurance Quality Control
MS	- Method Statement
MEP	- Mechanical, Electrical, Plumbing
RFIA	- Request for Inspection & Approval
MIR	- Materials Inspection Request
ITP	- Inspection and Test Plan
TBT	- Tool Box Talk

Approved" or "Approval

Means approved in writing by the applicable Engineers Assistant acting within the scope of their delegated authority.

Shop Drawings

Means drawings produced where the contract designs drawings require expressing in more basic form to facilitate construction.

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Final Inspection

This means the inspection of the records of works at completion or after pre-determined elements to ensure that all previous inspections and tests have been satisfactorily carried out and properly recorded.

Materials

This means all items covering the materials or equipment delivered to the site must be incorporated into the project.

Method Statements

This means a detailed technical document to be read along with the drawings, specifications, standards and codes of practice, technical datasheets, schedules, work instructions and any other technical document related to a particular work.

Reference Documents – Specifications, Drawings. Etc.

- Project Quality Plan
- Project General Specifications
- Approved Project Electrical Drawings
- Approved Method Statements (Ref - Installation of Cable Tray/ Ladder / Trunking & Installation of Electrical Cables
- Approved Material Submittal
- Manufacturer's Recommendations / Installation Instructions

4. Tools and Equipment

Equipment / Instrument

- Mobile Crane
- Insulation Test Meter, Earth Resistance Tester & 11KV Tester
- Multimeter Tester
- Mechanical Test Tools: Torque Wrench

Tools

- Electrician Hand Tools
- Crimping Tools
- Drilling & Grinding Machines
- Spanners
- Half Round file

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- Screw Drivers
- Open and Box Wrench
- Torque Wrench
- Pliers
- Crowbar & Hammer
- Electrician Hand Tools
- Crimping Tools
- Drilling & Grinding Machines
- Spanners
- Half-Round files
- Screw Drivers
- Open and Box Wrench
- Torque Wrench
- Pliers
- Crowbar & Hammer

5. Manpower

Staff:

- Construction Manager
- Site Engineer
- Supervisor
- QC Engineer / Inspector
- Quantity Surveyor
- Safety Officer

Labour

- Foreman
- Trade workers
- Helpers / Labours
- Banks man
- Crane Operator
- Rigger
- Drivers

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6. Responsible Personnel on Site

- The Project Manager shall be responsible for the overall construction activities.
- The Construction Manager, Site Engineers, Supervisors and Foremen shall implement this Method Statement.
- The manufacturer representative will be responsible for the overall supervision of Installation and Testing.
- The Material controller shall be responsible for receiving materials in the on-site warehouse.
- The site Engineer / Supervisor shall check the materials as per the manufacturer's recommendation before installation and shall be responsible for the installation as per approved shop drawings.
- Safety Officer shall ensure that appropriate/necessary measures are in place at the work location to avoid any unexpected events.
- QAQC Inspector shall be responsible for carrying out inspections for the materials delivered on-site. He shall document such inspections.
- QAQC Engineer / Inspector shall monitor the installation activities progressively and shall record all deviation from the specification in a form of snags or further as non-conformance notification.

7. Material Inspection / Storage

- The Diesel Generator is enclosed type, Cummins, Model- [00000], 00KV, 3phase, 4 Wire, 50Hz at 1500 pm.
- The trailer with the Diesel Generator should enter through the north/west/east/south etc road of the project.
- Road closure permits are to be obtained from the municipality before the arrival of the Generator presuming the timing of arrival. Set off Road with required barrier and signage.
- Use the mobile crane to off-load Generators. Make sure that the capacity of the mobile crane can carry the weight of the Generator.
- The mobile crane and the trailer should be placed in certain locations which make easy access to the Platform.
- Use a mobile crane to off-load the generator. Make sure that the capacity of the mobile crane can carry the weight of the generator.
- Ensure that the generator is properly protected and covered by a tarpaulin.

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- Before acceptance, an inspection regarding the physical condition shall be conducted to ensure that the materials are following the approved material submittal.
- Submit Material Inspection Request to the consultant for their inspection and approval.
- (Refer to attached Lifting Plan & Drawings for more detailed off-Loading Procedures).

8. Construction Sequence and Methodology

- Preparation before Installation
- Ensure that Drawings for Installation are approved & coordinated with other services.
- The Diesel Generator, Enclosure and other accessories to be used must be inspected and approved.
- Ensure that the material is free from damage before shifting to the areas of work. Any discrepancies, damages etc. shall be notified and reported for further action.
- Before starting the work, check that proper access to execute the works is in a suitable condition and free from obstruction.
- Ensure concrete foundation is ready and equipped with foundation bolts as per the approved detail drawing before installation of the generator.
- Cables shall be checked for continuity and insulation resistance and records shall be kept for future reference.
- Ensure that all safety precautions are in place.

9. Installation Procedure

- It has been presumed that all related civil works have been completed before installation.
- Before the generator will be delivered to the site, check that the generator Plinth is ready for installation and painted with Epoxy coating.
- Move the generator from the storage area using the crane and/or trailer and set them in position near the generator room. Make sure that the orientation of the generator with regards to the position of cable entries, exhaust system and ventilation system is correct.
- Check mechanical operation of off-loading. Verify that the movement is positive.
- Set the packaged generator on its final position on the concrete base.
- Mount packaged engine generators on restrained spring isolators.
- Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.

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- Dress and terminate the incoming and outgoing cables on the generator. Ensure that the cables are supported properly as per the approved details. Cable glands and lugs shall be from an approved manufacturer.
- After termination works have been completed, clean the generator cable box and ensure that it is free from foreign materials. Ensure that all the connections are properly tight through the use of a torque wrench.
- Cover the cable boxes. Bolts and nuts must be tightened properly. Make sure that the generator room is clean and free from foreign materials.
- The generator will be connected to the designated earthing point using the earthing cable.
- Use lettered or numbered ferrules or sleeves to mark each auxiliary conductor or control cable core with the identity of the terminal to which it is connected and the reference of plant or equipment to which it is connected and the identity of the terminal at the remote end as per the approved material submittal.
- Ensure that workmanship is neat and clean and complying with good construction practices.

10. Inspection and Testing

- After completion of the work, the Site Engineers who perform an activity are required to raise a Request for Inspection and Approval (RFIA) with complete information regarding the scope of the inspection, including a Test Report & necessary drawings highlighted to show the scope of the inspection. He shall systematically check and inspect their work. The inspection shall be performed according to a typical checklist and approved Inspection and Test Plans (ITP).
- After Site Engineer's completed their inspection, a Request for Inspection and Approval (RFIA) with duly filled Inspection Check List shall be submitted to the Quality assurance/quality control (QA/QC) Department who after internal inspection shall process the documents to have completed work inspected by Supervision Consultant for their approval.
- After satisfactory inspection by Supervision Consultant, completed work shall be subject to testing and commissioning.
- Testing and commissioning of the Generator shall be done under the supervision of the manufacturer representative as per manufacturer requirements. A testing report is to be submitted to the consultant for Inspection and approval.

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Note: A Request for Inspection and Approval (RFIA) must be processed and submitted to Supervision Consultant 24 hours before the actual inspection and/or witnesses.

- The preparatory meeting shall be carried out to the execution team as per method statement, material submittal & shop drawings before the start of work on-site (by QA. QC Personal).

11. Health, Safety and Environment

Safety of all personnel and equipment is the highest priority of ETA-Debbas JV during the execution of the Works.

Personnel Protective Equipment

- Safety Helmet
- Safety Goggles (during drilling and use of grinders)
- Face shield (during grinding)
- Safety Footwear (steel toes)
- Safety Gloves (for material handling)
- Coverall (as protective clothing)
- Full Body Harness
- Respiratory Mask (if require)
- Road Barriers & Signage

Tool Box Talk (TBT)

- Safety Tool Box Talk shall be given by the site supervisor every week and/or as deemed necessary.
- Safety tool Box Talk shall brief the task/subject and shall be given in languages understandable by the multinational workforce.
- Safety Tool Box Talk attendance shall be recorded on a sheet and signed by attendees.

Housekeeping

- Housekeeping shall be maintained by all personnel working at the site.
- Housekeeping for fabrication and installation shall be as per the project safety plan and Safety Manual.

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Signage

- All necessary safety warnings and caution signs shall be displayed at work locations.

12.QC Approval and Other Documentary Requirements (Attachment)

- Material Technical Submittal Approval
- Shop Drawing Approval
- Material Inspection Report (MIR) approval
- Installation Request for Inspection & Approval (RFIA)

