



Lloyd's
Register

Certificate Renewal, Certificate Renewal+Migration, Migration

Report for:

JEL Maintenance Pte Ltd

LR reference:	SNG6013409 / 3153936
Assessment dates:	25-September-2019 - 14-October-2019
Reporting date:	14-October-2019
Client address:	25 Tanjong Kling Road, Singapore 628050, SG
Assessment criteria:	ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, OHSAS 18001:2007
Assessment team:	Tan, Kee Chye Lee, Teik Choon
LR Client Facing Office:	SNG Singapore OU

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Attachments:

SNG6013409_APP_Audit Program and Plan.doc
SNG6013409_Close Out of Previous ISO 9001 Finding.doc
SNG6013409_Next Surveillance 1 Assessment Plan.doc

This report was presented to and accepted by:

Name: Mr S Sudharsanan
Job title: Management System Rep



01. Executive report

Assessment outcome:

Based on the assessment outcome the Assessment Team recommends the ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 certification of JEL Maintenance Pte Ltd for the agreed scope.

Based on the assessment outcome the Assessment Team does not recommend the OHSAS 18001:2007 certification of JEL Maintenance Pte Ltd.

This visit covers integrated certificate renewal for ISO 9001:2015, ISO 14001:2015 and new standard transition (NST) to ISO 45001:2018.

The company's integrated management system and its business processes were reviewed against the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018, and these were found in compliance, and certificate renewal and transition are recommended.

The company operates on one shift. All processes could be audited during the normal work shift.

The company's responsible for occupational health and safety, for monitoring employees' health and the employees' representative has been invited for the closing meeting.

Continual improvement:

The integrated management system was updated and maintained to meet the ISO 9001:2015, ISO 14001:2015 and ISO 45001:2015. The company has implemented the risk assessment processes with actions to address the risks and opportunities were identified and found related to the context of the organisation. The key business processes and performances remained stable with continual improvement being realised through on-going initiative such as digitalisation with use of drone and generation of simulation to perform the maintenance work using virtual reality and augmented reality (VR/AR).



Areas for senior management attention:

The company shall take appropriate correction and corrective actions for the non-conformances and address the opportunity for improvement.

02. Assessment findings

Where scheme requirement differs to the standard definition below, the scheme definition will take preference

Major Nonconformity

The absence of, or the failure to implement and maintain, one or more management system elements, or a situation which would, on the basis of the available objective evidence, raise significant doubt of the management to achieve: The policy, objectives or public commitments of the organisation, compliance with the applicable regulatory requirements, conformance to applicable customer requirements, conformance with the audit criteria deliverables.

Minor Nonconformity

A finding indicative of a weakness in the implemented and maintained system, which has not significantly impacted on the capability of the management system or put at risk the system deliverables, but needs to be addressed to assure the future capability of the system.

Reference number	2602776_SBCKCT01	Assessment Criteria (Clause)	ISO 14001:2015 (6.1.2), OHSAS 18001:2007 (4.3.1)
Grade	Minor NC	Issue Date	16-April-2019
Status	Closed	Process / Aspect	Operations - Workshop
Location(s)	25 Tanjong Kling Road, Singapore, SG		
Statement of Non Conformity	<p>The control measures of deploying banksman to control ongoing vehicle movement and use of strobe light during the operation of the gantry crane (LM 40020V, 10000Kg outside workshop near vehicle driveway) with its protrusion structure that may be hit by moving vehicle.</p> <p>The environmental aspects of water discharging to open drain outside the workshop must be identified as an environmental aspects with appropriate control measures and need for monitoring and measurement. It was explained that the water from the hose connecting to the open drain was used for hydrostatic test..</p>		
Requirement	Clause 6.1.2 (ISO 14001) and 4.3.1 (OHSAS 18001) - Ensure proper control measures and risk assessment of activities		
Evidence	See above statement of nonconformities.		
Proposed correction, corrective action and timescales	To review and update the risk assessment and environmental aspects by Aug 2019.		
Correction	The risk assessment was reviewed and updated		
Root Cause analysis	These activities were overlooked previously to be included in the risk assessment even though control measures were implemented.		
Corrective action	Reviewed that the Risk Assessment was updated on 3 Jun 2019. The company has review and update the key activities for the scope of the integrated management system		
LR has reviewed and verified the implementation of actions taken.	Date of closure	11-October-2019	



Reference number	3153936_SBCKCT01	Assessment Criteria (Clause)	ISO 14001:2015 (6.1.2), ISO 45001:2018 (6.1.2)
Grade	Minor NC	Issue Date	14-October-2019
Status	New	Process / Aspect	Project and Maintenance Sites
Location(s)	25 Tanjong Kling Road,Singapore,SG		
Statement of Non Conformity	The risk assessment and environmental aspects have not covered certain activities and carried out based on the established internal guidelines.		
Requirement	Clause 6.1.2 - Environmental Aspects and Hazard Identification and Risk Assessment		
Evidence	<p>The Risk Assessment has not elaborated the storage activities such as loading/unloading and retrieving of items from the storage rack at the SUT workshop. Most work activities in the RA emphasizes the fabrication and welding works that generally are no longer done at the workshop.</p> <p>The Safe Work Loading of the storage rack was not determined and indicated.</p> <p>The activity with the discharge of water from the high pressure washing of the boiler tubes was not considered in the environmental aspects/impact evaluation at the TIP maintenance site.</p> <p>It was noted that at the EHCP Phase 2 project site, the severity for exposure to radiographic source during NTD was rated as "2" (minor) requiring only first aid treatment only and classified as not significant. This contradicts to the control required to prevent the exposure hazard as given in the risk assessment and the legal requirements on Radiation Protection (Ionising Radiation) Regulations.</p> <p>The criteria for defining the severity score allocation to identify significant environmental aspects implemented at the EHCP Phase 2 project site was different from the corporate procedures (MP-PJT-01 Rev 01)</p> <p>The environmental aspects on the disposal of dye penetrant bottles</p>		



Evidence	and related contaminant wipes (wastes) were not identified on the environmental aspects register maintained at the EHCP Phase 2 project site.	
Proposed correction, corrective action and timescales	To review and update the risk assessment and environmental aspects tables to indicate the activities by Dec 2019.	
Correction	To complete during the next visit	
Root Cause analysis	To complete during the next visit	
Corrective action	To complete during the next visit	
LR has reviewed and verified the implementation of actions taken.	Date of closure	

Reference number	3153936_SBCKCT02	Assessment Criteria (Clause)	ISO 9001:2015 (8.2)
Grade	Minor NC	Issue Date	14-October-2019
Status	New	Process / Aspect	Maintenance site activities @ SUT
Location(s)	25 Tanjong Kling Road, Singapore, SG		
Statement of Non Conformity	The review of customer's requirements for product and service including the need to fulfil customer's HSE requirements was not evidence		
Requirement	Clause 8.2 - The need to review and determine the customer requirements		
Evidence	The client's HSE requirements as stated in their Purchase Order for document no: P2-08-01, HSE Requirements for Contractor was not available for reference at the SUT site office to ensure such requirements are fulfilled.		
Proposed correction, corrective action and timescales	To review and establish processes to ensure customers' requirements are reviewed during the quotation stage and acceptance of customers' order. This corrective action would be completed by Dec 2019		
Correction	To complete during the next visit		
Root Cause analysis	To complete during the next visit		
Corrective action	To complete during the next visit		



LR has reviewed and verified the implementation of actions taken.

Date of closure

Reference number	3153936_SBCTCL01	Assessment Criteria (Clause)	ISO 9001:2015 (8.2)
Grade	Minor NC	Issue Date	14-October-2019
Status	New	Process / Aspect	Contract Review & Proposals
Location(s)	25 Tanjong Kling Road,Singapore,SG		
Statement of Non Conformity	Contract review process (Requirements for products and services) was found to be not fully effective		
Requirement	Clause 8.2		
Evidence	A "Bid & Proposal Document" was referred to for tender reviewing process. This document was not as detailed as the Doc MP-CTR-01 Rev B, Customer Related Processes. This Bid & Proposal Document was uncontrolled and not documented as part of the QMS documentation. The document needs to be appropriately defined as part of the QMS documentation and controlled before it could be appropriately referred to during the tender reviewing process.		
Proposed correction, corrective action and timescales	The bid and proposal process will be reviewed with the customer related process to ensure only one controlled document is used. This will be done by Dec 2019.		
Correction			
Root Cause analysis			
Corrective action			
LR has reviewed and verified the implementation of actions taken.		Date of closure	



Reference number	3153936_SBCTCL02	Assessment Criteria (Clause)	ISO 45001:2018 (7.2)
Grade	Minor NC	Issue Date	14-October-2019
Status	New	Process / Aspect	Organisation Knowledge Competence, Training & Awareness
Location(s)	25 Tanjong Kling Road,Singapore,SG		
Statement of Non Conformity	Competence of personnel not fully adequate.		
Requirement	Clause 7.2		
Evidence	a. Fall arrestor life sheets , including safety harness, SRL inspection forms were signed by a competent person. Competence of inspection personnel needs to be established and records maintained. b. The RA for Workshop activities were conducted by a risk assessment team where only the RA team leader was trained in Risk Management. The other members were not trained.		
Proposed correction, corrective action and timescales	Training will be provided for items a and b to ensure the said personnel are competent by end 2019.		
Correction			
Root Cause analysis			
Corrective action			
LR has reviewed and verified the implementation of actions taken.	Date of closure		

03. Assessment summary

Visit generic objective:

This was a Certificate Renewal, Certificate Renewal+Migration, Migration visit, conducted against objectives previously notified to the client. The objectives of the next visit, including any applicable visit specific objective (theme / focus), are confirmed in the audit plan attached to this report.

Client attendees at the opening and closing meeting:

Key staff in attendance (Opening Meeting @ 0900 on 25 Sept 2019)

Mr S Sudharsanan (Hd of Quality and Management System Rep), Mr Rajan (Hd of HSE), Mr R. Rameshkumar (Asst Management System Rep)

Key staff in attendance (Closing Meeting @ 1500 on 14 Oct 2019)

Mr Umesh M Deshpande, (General Manager – Operations), Mr S Sudharsanan (Hd of Quality and Management System Rep), Mr Rajan (Hd of HSE), and workers' representatives

Mr Rajan is the company safety committee chairman. He is responsible for occupational health and safety, for monitoring employees' health and the employees' representative

Mr Siva, Mr Jayaganesh and Mr Babuji are responsible for occupational health and safety for monitoring employees' health and the employees' representatives at the assigned project and maintenance sites

Visit specific objective:

This visit is to cover both the Certificate Renewal and Transition:

The re-assessment and transition of the implementation of the management system based on the results of the certificate renewal planning visit. This is to re-confirm conformity with certification requirements such as the assessment criteria and certification scope, any applicable statutory, regulatory and contractual requirements and to ensure that the system is meeting its specified objectives. To address all issues outstanding from previous visits and any changes to the client's organisation or system that impacts on the approval.

The assessor will use the LR Business Assurance methodology to help clients manage their systems and risks to improve and protect the current and future performance of their organisation.

Introduction:

The certificate renewal and new standard transition (NST) commenced with opening and later the closing meeting to highlight audit approaches, audit plan, condition for recommendation and final outcome of the audit. These were explained to the company's top management and key management representatives

The scope of certification has been confirmed without any change for this visit.

<p>Assessment of: Clause 5 - Leadership and commitment, integrated policy, organizational roles, responsibilities and authorities, consultation and participation</p>	<p>Auditee(s): Mr Umesh M Deshpande, (General Manager – Operations) Mr S Sudharsanan (Hd of Quality and Management System Rep), Mr Rajan (Hd of HSE). Mr R. Rameshkumar (Asst Management System Rep)</p>	<p>Assessor: Tan, Kee Chye</p>
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Audit trails and sources of evidence:

Interviewed top management on leadership and commitment towards the implementation of the integrated QOHSE management system in meeting ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018
 Examined the contents of the integrated QOHSE Policy and customer focus
 Reviewed the organizational roles, responsibilities and authorities
 Reviewed the processes for consultation and participation of workers in the integrated management system

Evaluation and conclusions:

Leadership and commitment - Discussed with top management Mr Umesh M Deshpande, (General Manager – Operations) on the changes and the challenges when embarking the integrated management system. He emphasized the important of adopting innovation and technology means to achieve safety and productivity expectations of the client. He shared the innovation initiative taken by the company for digitisation and adopting SMART solution. The company has completed one maintenance work with use of drone to capture the photographic data of the site and generating simulation to enhance training to determine and prepare for the tasks. The use of virtual reality and augmented reality (VR/AR) has helped to reduce the turnaround time of the maintenance work. The company has planned to setup the innovation laboratory and exploring other SMART innovation such as SMART wearable/glasses for remote mentoring, use of additive manufacturing (3D printing), SMART flanges to capture data and history of the flange characteristics installed and RFID tracking with CCTV for confined space entry management.

Top management has actively participated in establishing the QOHSE policy/objectives relating to the context of the organisation. QOHSE requirements from internal requirements and corporate requirements were incorporate in the management system as part of the business processes with regular review demonstrated in the planned operational, safety committee and management review meeting. Customers focus and enhancing customers' satisfaction were demonstrated with relevant monitoring and measurement of customers' satisfaction level.

Integrated QOHSE Policy - The integrated policy has been established, implemented and maintained as



documented information and approved by the CEO, Mr S Nagappan dated 1 Aug 2019

The integrated policy emphasize the need to commitment of meeting customers' quality requirements, protect the environment, provide safe workplace for workers, prevent injury and ill health and commitment to consultation and participation of workers in developing the management system. The company has pledged the commitment to continually improve the management system.

The integrated policy was found relevant to the scope and context of the organisation.

The integrated policy has been communicated to the staff by means of bulletin board, toolbox meeting and operations meeting.

Organizational roles, responsibilities and authorities, consultation and participation – The overall organisation chart and site management organisation site were established. The interface and interaction between various functions were defined and established. The process approach interaction of key functions were established and defined in the integrated manual (MM – Annex 1).

The functions roles, responsibilities and authorities were established and detailed the key management responsibility (MM – Page 16 to 26). Communication, participation and consultation procedures (MP-SMQ-01) were established.

Areas for attention:

Nil

Assessment of:	Clause 4 - Context of Organisation	Auditee(s):	Mr S Sudharsanan and Mr R. Rameshkumar	Assessor:	Tan, Kee Chye
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Audit trails and sources of evidence:

Examined the company in reviewing and monitored the information related to the context of organisation.

Reviewed the identified external/internal issues and the needs and expectations of interested parties.

Reviewed the documented information on scope of the QOHSE Management System.

Reviewed the approaches and methods to design the QOHSE in meeting the requirements of standards and transition to ISO 45001:2018.

Evaluation and conclusions:

Understanding the organization and its context and understanding the needs and expectations of interested parties

- The context of the organisation was identified with the external and internal issues and the needs and expectation of the interested parties. These were identified in the documented information reference document no: MP-SMQ—04 Annex 1. Issues were identified for performance of subcontractors, competency of workers, barrier in communicating hazards/risk and environmental aspects/impacts and understanding of compliance obligation, changes of customers' requirements on quality of works and good safety practices.

Determining the scope of the integrated management system - The scope of the integrated management system

was defined in the latest updated integrated Manual (Ref: MM Page 10 of 26 paragraph 8). The scope reflected the relevant activities, products and services of the organization and consistent with context of the organisation. This was reviewed by the company as part of the implementation of integrated management system and transition to ISO 45001:2018.

Design of the integrated management system – The integrated QOHSE management system was reviewed and established as part of the integration effort and transition to ISO 445001:2018. The Integrated manual has addressed the key processes and functions with the interaction to continually improve the management system. The process approach flow and the key functions tables that describe the key functional areas to meet the requirements of the standards and internal requirements were established.

Areas for attention:

Nil

<p>Assessment of: Clause 6 - Planning for actions to address risks and opportunities, legal and other requirements/compliance obligation, objectives and planning actions</p>	<p>Auditee(s): Mr S Sudharsanan and Mr R. Rameshkumar</p>	<p>Assessor: Tan, Kee Chye</p>
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Audit trails and sources of evidence:

Reviewed the planning for actions taken to address risk and opportunities.
 Reviewed the methodologies for identifying the environmental aspects and hazards identifications and risk assessment
 Reviewed environmental objectives and planning to achieve them

Evaluation and conclusions:

Risk and opportunities - The risks and opportunities management plan was reviewed updated as part of the transition to ISO 45001:2018 process (Ref: MP-SMQ-04 Annex 1). The risks and opportunities consideration relate to the external and internal issues and the needs and expectation of the interested parties. The actions to address the risks were identified and listed in the Issues and Needs & Expectations of Interested Parties tables and the related opportunities when applicable were identified. These were found generally relevant to the context of the organisation affecting the company's quality, occupational health, safety and environmental (QOHSE) management system.

Methodologies for hazard identifications, risk assessment and environmental aspects/impacts - The methods adopted for the hazard identification, risk assessment and environmental aspects/impacts were defined in MP-PJT-01. The risk assessment was done using the 5X5 matrix. The Risk Assessment Registers and the Environmental Aspects/Impacts Registers were established. The methodologies and criteria for assessing significant OHSE risks were established. It was noted that the approach to prevent work injury and ill health were adopted with identified safe work procedures and control measures identified. The environmental aspects/impacts assessment has taken the life cycle perspective. The RA and environmental aspects/impacts have taken into consideration any change of activities, abnormal conditions and reasonably foreseeable emergency situations using the activities based approach, past relevant incidents, changes in activities, products and services and people that potentially expose to the hazards (such as visitors and clients' employee while working on site). The planning for actions to address the identified risks and opportunities, legal and other requirements and potential emergency situations were identified and considering the hierarchy of controls approach.

Legal and other requirements/Compliance obligations - Legal and other requirements/compliance obligations of the organisation were identified and documented in the legal register. The register and evaluation of compliance was last done. The changes were recorded and register was updated accordingly. This will be audited separately in detail.

QOHSE Objectives and Planning actions to achieve the objectives - The integrated objectives/targets were established and communicated to the workers. Management programmes outline that activities and action plan to achieve the objectives and targets were also in place. The programmes covered what the actions to be taken, the resource needed, the responsibility of the project personnel, timeline and the records of monitoring charts were reviewed.

Areas for attention:

Nil

<p>Assessment of: Project site activities @ EHCP Phase 2 project (Project Numbers: 202010-00059)</p>	<p>Auditee(s): Mr Saravanan Elhnalai (Project Manager) Mr Nvs Naidu (OHSE Rep) Mr Vivek R (Quality Rep)</p>	<p>Assessor: Tan, Kee Chye</p>
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Audit trails and sources of evidence:

Reviewed the environmental aspects and occupational health and OH&S risk assessments and appropriate control actions.

The sampled activities covered general handling/lifting, pre-fabrication pip fit-up, piping spool installation, fire proofing work, NDT use of radiographic ionizing source, chemical cleaning operations

The passageway was clearly marked. Generally escape routes direction were posted and found unobstructed Floors were generally dry to minimise slip and fall hazard. Potential trip and fall hazard warning signs were posted due to formwork and scaffolding structures

Scaffolds were erected by an MOM approved scaffold contractor. The training certificates for the scaffold supervisors and scaffold erectors were maintained.

Electrical temporary installation and standby generator were approved by appointed LEW
EMA Electrical Installation Licence (22331) was found valid

Generator location was barricaded and fire extinguishers were allocated

There was no sign of spillage/leakage of chemical/diesel during the site tour

SDS were maintained and found traceable

Chemical List was found updated and approved by the client on site

Chemical cleaning with use of drip tray to contain any spill and disposal of contaminated wipes/empty containers were collected and disposed by appointed licence chemical wastes collector

Consultation and participation such as role plays, toolbox meeting, RA/environmental aspects training were carried out daily and during every Tuesday mass gathering led by the Construction Manager (top management)

Workers welfare were considered with proper resting shed, supply of drinking waters and provision of sanitary facilities

OH&SE bulletin board was posted and generally found updated with the company's integrated policy, objectives and general rules and regulations

Sampled training programs were found updated and training attendance/certificates were retrievable for workers including appointed contractors

Training on Chemical Cleaning (was last done on 28/9/19), SDS training (was last done on 6/8/19) and SIC certificates were traceable (for Mr Woon Tac Goun, contractor and Jalali Ramboby), confined space rescue training certificates (for Kumar Ranul and Yadav) and Banksman and Escort Man training attendance (for K Babani and K Suresh)

PTW was found approved by the client representative prior to commencement of work and daily validation was done. Gas check results and relevant RA, Job Site Evaluation Checklists were attached with the PTW for installation of equipment and pumps and alignment work done at HT area and pipe spools chemical cleaning done at Laydown area

Sampled lifting gear LGVH8065061 and LG28/63 (beam clamp), LG180G702 (shackle) and LA3394286 (chain block) were found with valid inspection/examination certificates according to regulated requirements

Emergency drill was conducted by the client and participated by company's workers and contractor workers on 14 Jun 2019. Emergency Drill Report was maintained.

Project Master Schedule was maintained and updated

Weekly Construction Progress reports were sampled and found progress were updated. KPIs and completion progress, man-hours commitment and training provided were tracked

General layout drawings, equipment list and relevant documents were reviewed and approved by client

Inspection and test plan (ITP) were sampled for fabrication and installation work (JML/WP/EHCP2/QC/005) and Rotating equipment and installation work (JML/WP/EHCP2/QC/004). Inspection and test criteria were defined and hold points when applicable were identified

Sampled the inspection carried out for the completed equipment installation done for P-135 Installation and pre-coupling alignment and piping work on field joint for pipe & support.

Relevant test packs were maintained and inspection records such as Pump Alignment Report, Equipment Installation Report/Levelling, Flange Make-Up Checklist, Welding Inspection Summary Report, NDT reports, WPS and qualified welders records and test equipment such as torque wrench (PN629090) calibration certificates were maintained

There were 1 NCR reported and closed out since the commencement of the project. There were 6 Quality Observation Reports (QOR) for improvement were noted during this project stage.

Evaluation and conclusions:

The above were reviewed and generally found in order except for the minor NC.

Areas for attention:

Minor NC

The following operational controls were noted at the EHCP Phase 2 project site:

The severity for exposure to radiographic source during NTD was rated as "2" (minor) requiring only first aid treatment only and classified as not significant. This contradicts to the control required to prevent the exposure hazard as given in the risk assessment and the legal requirements on Radiation Protection (Ionising Radiation) Regulations.

The criteria for defining the severity score allocation to identify significant environmental aspects implemented at the EHCP Phase 2 project site was different from the corporate procedures (MP-PJT-01 Rev 01)

The environmental aspects on the disposal of dye penetrant bottles and related contaminant wipes (wastes) were not identified on the environmental aspects register maintained at the EHCP Phase 2 project site.

<p>Assessment of: Maintenance site activities @ Tuas Incineration Plant (TIP Project: NEA000ETT17300 017)</p>	<p>Auditee(s): Mr B Prabahar (Site Manager) Mr K Babosi (WSHC)</p>	<p>Assessor: Tan, Kee Chye</p>
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Audit trails and sources of evidence:

Reviewed the environmental aspects and occupational health and OH&S risk assessments and appropriate control actions.

Sampled activities for maintenance of boiler, scaffold erection & dismantling, refurbishment of boiler tubes
PTW was implemented using the client PTW system.

Verified the system isolation done by the client before commencement of work by issuing of Job Card

Scope of work and method statement (activity based) were covered in the sampled RA

Gas checks done both internally and by the client

Gas checks results were recorded on the confined space entry permit

Periodic gas checks were conducted and confined space entry log (sign in/out) were updated

Mandatory training records such as scaffold erectors, lifting supervisor, working at height were maintained and traceable

Skill Evaluation Certificate

Expiry and validity dates of trainings were maintained and tracked

Contractual requirements for maintenance works were defined in the contract

Scope of work and supply of parts/materials were defined

Schedule rates were established

Job cards were initiated by client upon work confirmation, their schedule and isolation completion

Service Reports were sampled and found with detailed description of the work done

Quality inspections and acceptances were verified by client's appointed representative before endorsing on the service reports

Monitoring of service work status were monitored using Work Service Report

Evaluation and conclusions:

The above were reviewed and generally found in order except for the opportunity for improvement and minor NC

Areas for attention:

Opportunity for improvement

The computation of the chargeable rate based on the agreed contractual schedule could be improved by establishing the rates database as pre-set information in the spreadsheet. This will reduce the laborious task to key in the rate individually and the tendency to make human error when invoicing for the work done at the TIP maintenance site.

Minor NC

The activity with the discharge of water from the high pressure washing of the boiler tubes was not considered in the environmental aspects/impact evaluation at the TIP maintenance site.

Assessment of:	Maintenance site activities @ SUT	Auditee(s):	Mr B. Vetrivel Mr Ramamirtham Sathia Kumaran	Assessor:	Tan, Kee Chye
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Audit trails and sources of evidence:

Reviewed the environmental aspects and occupational health and OH&S risk assessments and appropriate control actions. Maintenance activities are restricted to meet client's requirements for mechanical work only. Workplace are controlled by the client's HSE requirements. The company is a resident contractor at client's locations and all subcontractors (if required such as scaffold erection service) were client's appointed other resident contractor

Sampled activities for maintenance work for replacement of mechanical fans and dismantling of belt press, air receiver, sludge tank and blowers

PTW was implemented using the client's PTW system.

Verified the application of PTW and submission of the Method Statement and Risk Assessment (MSRA).

MSRA were detailed with the roles and responsibilities of key personnel (lifting supervisor, welder, rigger man, signaller etc), PPE requirements, preparation of work sequence and methodology and RA results.

Sampled trainings were found with valid certificates for manhole access/confined space, lifting supervisors, SOC, Client SIC. If applicable the expiry date of the trainings were tracked using the spreadsheet

[Sampled training records: Tharmalingam Porselvam, Kannan Sankar, Beleena Kondala Rao]

Workshop was currently used mainly as store and consolidation of incoming items/equipment

Sampled lifting gears were found with valid examination/inspection certificates

[Sampled lifting gears (LG18DL392, LG18DK1113 and shackle LG18DKDK1430)]

Reviewed contractual work to meet client's request for quotation for the given scope of work

Verified the costing and materials requirements determination

Quotations were prepared and defined with the maintenance works, costing, supplies of materials/equipment (if applicable), validity and exclusion work. These were reviewed and found relevant.

Quotations were reviewed and approved by authorised person stated in document MP-CTR-01 Rev B, paragraph 2g

Relevant quality records were maintained and traceable for the job done such as General Arrangement drawings, Materials Receiving Inspection Record (Mill Certificates), weld maps, welding inspection summary records/NDE for radiographic inspections report, magnetic particles reports, punch list and DFT (for painting thickness) etc

Welders were qualified according to the Singapore Welding Society – Common Welder Qualification Scheme (SWS-CWQS)

Welders' qualification records were sampled and found traceable for Thangaiah Nadar Jayakumar and Kannan Sankar. WPS were established.

All completed jobs were inspected and witnessed by client with their signatory of Job Completion Certificate

[Sampled quotation process and maintenance work done for : JML-QT/M6/SCI/2019/085 and JML-

QT/M6/SCI/2019/033]

[Sampled Purchase Orders given by client for the work done for PO No: 406099291 and 4062016431]

Evaluation and conclusions:

The above were reviewed and generally found in order except for the opportunity for improvement and minor NC.

Areas for attention:

Opportunity for Improvement

The training matrix could be expanded to include other mandatory training such as lifting supervisor, rigger and signalman. Currently the information on the matrix covered those trainings with expiry dates only.

Minor NC

The client's HSE requirements as stated in their Purchase Order for document no: P2-08-01, HSE Requirements for Contractor was not available for reference at the SUT site office to ensure such requirements are fulfilled.

The Risk Assessment has not elaborated the storage activities such as loading/unloading and retrieving of items from the storage rack at the SUT workshop. Most work activities in the RA emphasizes the fabrication and welding works that generally are no longer done at the workshop.

The Safe Work Loading of the storage rack was not determined and indicated.

<p>Assessment of: Control of fabrication processes @ workshop</p>	<p>Auditee(s): Mr S Sudharsanan Mr Santhoshkumar K</p>	<p>Assessor: Tan, Kee Chye</p>
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Audit trails and sources of evidence:

Reviewed the project requirements for the fabrication and welding done at workshop prior to delivery to project sites

Verified the current fabrication and welding works for PG2LS project done at the workshop

Verified the inspection and test plan (ITP, document no: JML/CSL/PG2LS/QC/003 Rev 02) established and approved by the customer

ITP covered the scope of work, acceptance criteria, Document reference, inspection/test records and inspection hold point, witness point etc

Drawings were maintained and control stamp approved for construction were indicated on the sampled drawings for the sampled ISO pack/spools numbers

Sampled WPS for the piping and steel structure and bracing design for structure support

Work in progress status were indicated on the pipe fit up indicated with the details on drawing numbers, joint numbers, fit-up date, WPS numbers and welder ID

Spool numbers were tagged on the physical parts

Verified the qualification of the welders. The Qualified Welders Registers were sampled and found updated. The welders process qualified and the validity were updated

Qualification were based on PRIMOS and ASME IX

Welding machines checks were conducted monthly. Gantry crane (LM40020V) was found with valid

inspection/examination certificate in accordance with regulated requirement.

Calibration Register and Certificates were updated

Sampled certificates were found traceable

[Sampled Pressure Gauges: 0495PG130256, D21200 and E150574302 and torque wrench: 408-292-2214]

Verified the Welding Inspection Summary Records. Sampled welding NDT results for radiographic inspections report, magnetic particles reports were traceable in the ISO pack

Quality acceptance standards were based on ASME B31.3 requirements as agreed with customer

[Sampled work done and inspection records for line no: P-372560-24"-AAA3-NI-0MM and P-372542-14"-ACA3-NI-0MM]

Evaluation and conclusions:

The above were reviewed and generally found in order.

Areas for attention:

Nil

Assessment of:	Clause 7 & 8 - Support and Operation	Auditee(s):	Mr S Sudharsanan Mr Rajan	Assessor:	Tan, Kee Chye
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Audit trails and sources of evidence:

Reviewed competence, training and awareness requirement of employees.

Reviewed the method of communications.

Reviewed the control of documented information

Reviewed the operational planning and control processes

Reviewed the control of contractors and outsource processes

Reviewed the processes for management of change

Reviewed the emergency preparedness and response

Evaluation and conclusions:

Competence and awareness - The procedures for competence, training and awareness was established and documented (ref: MP-HRD-01 Rev B). Worker Competency Level of Manpower defined the requirements. The critical implementation plan where job training were conducted by respective HODs including induction awareness, OJT programs and specific training including mandatory trainings specified legislated requirements were identified and updated to assure competency, awareness for proper management of QOHSE issues. Awareness include the consequence of deviation and non-conforming with the management system, RA hazard communication, protecting workers from work situations with consideration any imminent danger including taking appropriate control measures/SWP.

Relevant training records of OJT training and QOHSE awareness training were maintained.

Communication - The processes and related requirements for internal and external communications were stipulated in the communication procedures (MP-SMQ-01). Communication records about QOHSE matters were maintained for employees and interested parties, including suppliers and contractors. The communication plan defined the matrix to adequately defined the requirements on what, whom, when and person in-charge of the relevant QOHSE issues. Communication consider the views of external interested parties (contractual and site management) and legal requirements and other requirements. Sampled documented information were maintained, e.g. for workers that are appointed contractors and suppliers/external providers.

Documented Information - Documented information include integrated manual, procedures and operational controls were established. Relevant procedures were reviewed and updated during the transition to ISO 45001:2018. The list of applicable QOHSE procedures and operational controls were defined in the integrated manual. The control of documented information was stipulated in the relevant procedures.

Operational planning and control - Reviewed the handling for management of change. The control planned changes were reviewed and possible consequences of unintended changes were considered with updating of the risk assessment, environmental aspects and impact register. Changes were reviewed and approved. This will be further audited during site visit for any changes that were implemented.

Reviewed the control measures and operational controls were defined in the OHS risk assessment and environmental aspects and impacts register. The sampled controls were found appropriate including considering the prevention of injury / ill health and life cycle perspective that were identified and the company conducted regular planned safety inspection/walk to review implementation of control measures.

The processes for the effective implementation of the integrated management system have been established and the integrated manual and procedures were updated for transition to ISO 45001:2018 to meet the requirements. The control of the outsourced processes and external providers were identified. This will be further audited for control of external providers/contractors including site activities with implementation of PTW/LOTO.

The operations planning and controls would be further audited at the respective sampled project and maintenance sites.

Emergency Preparedness and Response - Potential emergency preparedness and response plan were defined covering such as project/maintenance site evaluation drill, CERT drill, confined space rescue, oil spillage/diesel leakage, rescue at height and gas leak (at project/maintenance sites) etc. Emergency exercise and fire drill were conducted together at client's sites. This would be verified during the site visits that was commonly conducted jointly with the clients. Visitors and workers were briefed on emergency preparedness and response procedures and assembly points. Training for emergency preparedness and response for ERT members, fire fighters, fire watch men were conducted.

Areas for attention:

Nil

Assessment of:	Clause 9 & 10 - Performance Evaluation and Improvement	Auditee(s):	Mr S Sudharsanan Mr Rajan	Assessor:	Tan, Kee Chye
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Audit trails and sources of evidence:

Reviewed the QOHSE performances have been defined and the processes to monitor, measure, analyse and evaluate the results.

Reviewed the documented information as evidence of monitoring, measurement, analysis and evaluation of the results

Reviewed the processes for evaluation of compliance with legal and other requirements

Reviewed the internal audit processes

Reviewed the management review consideration that adequately addressed the requirements

Reviewed the results of the management review outputs and documented information

Evaluation and conclusions:

Monitoring, measurement, analysis and evaluation - OHSE indicators and objectives were established with parameters/limits/targets. These were monitored and supported with performance charts/tables and relevant reports with regards to compliance obligation.

Performance indicators tabulated covered customer satisfaction level, meeting project schedule, defect free products/services based on NDT results, lost time incident, zero incident, training commitment and generation of wastes at project sites. Analysis and evaluation were made during the management review meeting

Evaluation of Compliance - Evaluation of compliance was conducted during the internal audit and planned safety walks. The status of compliance obligation and evaluation of compliance would be verified during the project/maintenance sites visit.

Internal Audit and Management Review - The last internal audit was carried out on 19 Sept 2019. The internal Audit Checklists were prepared and completed by the trained auditors. The internal audit covered all elements of the requirements of the standards.

The management review was held on 23 Sep 2019. The management review adequately addressed the requirements of the ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. The agenda have covered adequately the requirements of the standards. The minutes of meeting was maintained as documented information. The meeting was attended by the top management and project managers from the respective sites.

The management review has concluded that there was no systemic issue of the integrated management system and consistent with the context of the company and its strategic direction.

The outputs of the internal audit and management review were shared with the workers in particular the project and maintenance sites managers.

Improvement - The company has completed one maintenance work with use of drone to capture the photographic

data of the site and generating simulation to enhance training to determine and prepare for the tasks. The use of virtual reality and augmented reality (VR/AR) has helped to reduce the turnaround time of the maintenance work. The company has planned to setup the innovation laboratory and exploring other SMART innovation such as SMART wearable/glasses for remote mentoring, use of additive manufacturing (3D printing), SMART flanges to capture data and history of the flange characteristics installed and RFID tracking with CCTV for confined space entry management.

Areas for attention:

Nil

Assessment of:	Assessment of Workshop activities	Auditee(s):	R. Rameshkumar Head, QC	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Environmental aspects, Risk assessment, Operational control, Project Management, Operational planning and control, Release of products and services (Quality and Inspection Test Plan)
 Control of monitoring and measurement - measuring equipment etc. Control of contractors
 RA team leader trained in Risk Management - Members were not trained
 Ladder access to platform of overhead crane LM40020V not in use but access not blocked off
 Fire extinguisher maintained - expiry date 4/2020
 Safe Work Procedures for various workshop activities posted on communication board - respiratory protection, grinding, drilling, eye protection, welding, lifting
 Toolbox meeting attendance list for subcontractor workers with discussion topics
 PTW weekly permit JML-002 with proper endorsement - Subcontractors' work requires PTW with controls specified. RA of JML followed accordingly by subcontractors
 Pesek Group ii Lubes Storage Project - QC Information Board, Welding procedure WPS-501
 Specs for Base Material -QW-403 and Filler - QW404
 Welder Register updated to 14/8/2019 - sampled welders certificate expiry dates
 Live cables in the Weld Rods Centre - not on insulated stands and overlaid across metal structures; sandwiched between Holding Ovens. Immediate actions were taken to properly overlay the live cables on insulated stands.
 Live cables from Workshop to containers store to be properly tied with flexible cable.
 No physical maintenance work requiring LOTO
 Control of monitoring - Instrument/equipment/gauge calibration register and certificates - temperature gauge, temperature controller, weld rods holding ovens listed with valid dates
 Quality and Inspection Test Plan in Project Quality Plan JML/CSL/PG2LS/QC/001 Rev 01

Evaluation and conclusions:

Generally workshop activities were conducted meeting QMS and EMS requirements. However Minor NC was



raised on operational controls of cable overhang and placement between holding overs

Areas for attention:

See Minor NC Log
RA team leader trained in Risk Management - Members were not trained

Assessment of:	Communication - Consultation and Participation	Auditee(s):	Rajandran, HSE Manager	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Procedure MP-SMQ-01 Rev B, Communication, participation and consultation
Communication Plan for internal and external communication with staff, suppliers, subcontractors. What, whom, how and when to communicate were defined.
Sample the means of communication - WSH committee meetings, toolbox meetings and correspondence with clients and subcontractors for project sites and workshop.
Participation of workers on HSE site inspection at SMUF plant - safety observations recorded with attendance list.
HSE Committee Minutes of meeting with client, subcontractors for the SMUF Decoupling project

Evaluation and conclusions:

Communication, consultation and Participation processes were found to be satisfactorily implemented

Areas for attention:

Nil



Assessment of:	Control of Monitoring and Measurement Equipment	Auditee(s):	Ray Goh (NCCS Site Manager R. Rameshkumar Head, QC	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Audit on Control of monitoring and measurement equipment was conducted at the NCCS-PBT project site and at the Workshop for the Petek Group II Lupes Storage project.
Please see the audit summary for details

Evaluation and conclusions:

Control was effectively implemented and records properly maintained.

Areas for attention:

Nil

Assessment of:	Assessment at project site activities - NCCS project	Auditee(s):	Ray Goh, site Manager C Siva, WSHC Sri, QC	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

- Environmental aspects
- Risk assessment
- Operational control
- Project Management
- Operational planning and control
- Release of products and services (Quality and Inspection Test Plan)
- Control of monitoring and measurement - measuring equipment etc.
- Control of contractors
- PTW and LOTO
- Emergency preparedness & Response

Evaluation and conclusions:

Environmental aspects/impacts table - RA-MR-03B-R1 risk assessment form had been conducted for office activities, site activities

The aspects were generally on solid and wastes. No wastewater, toxic industrial wastes and hazardous air pollutants generated

Risk assessments sampled:

- Installation of electrical panel works
- lifting and installation of equipment, piping and other accessories using crane
- Installation of cable trays/ladders, conduit and support
- Loading/unloading of tool box, equipment, materials and shifting of steel plates by forklifts, lorry cranes and mobile cranes

These RAs were part of the Method Statements submitted to client and are consistent o the scope of work at the project site

Operational controls as defined in the risk Assessments were verified - competence of workers, lifting plans, toolbox meeting topics and attendance.

Project Management - Operational Planning and Controls vide :-

- HSE plan NCCS-PBT-Hitachi-JML-HSE-SP-001 where requirements for competence/training, inspection processes for gears, machines, equipment, toolbox meetings
 - Project Quality Plan NCCS-PBT-Hitachi/JML/QC/PQP/001 R1. Reviewed and approved by client on managing project quality for equipment installation, piping and E&I,
- Inspection and Test Plan for Equipment Installation works

JML Form Ref: JML-PQ-HSE-039 Rev 1 and Document NCCS-PBT/Hitachi/JML/QC/ITPE/003 R2

List of Measuring Instruments - gauges, tools, precision level, auto level, theodolite, micrometers, dial gauge and torque wrench where the dates of expiry are monitored. Calibration certificates were maintained.

Material Receiving Reports, Equipment Alignment Report and Installation Inspection Reports - maintained

Material receiving inspection for packing list NCCS-HTC -68 with photographs and approval by client for lower base for mount

Application for resin anchor bolt setting inspection with the setting record according to client inspection form and approval.

Contract Agreements with two subcontractors for Cable and Cable Tray Installation and Installation of Gantry (PBT0 Equipment where quality and safety and environmental requirements were defined.

Method Statements for the works submitted by the subcontractors

Samples of toolbox meetings on 23/9/2019 and 24/9/2019 were reviewed. Topics discussed were on emergency evacuation drill, workers' feedback to Workers' Representative, incident sharing, falling object and fall from height hazards.

Daily health condition of workers were also check and recorded in the attendance list.

Permit to work system was implemented and sample of PTW LO-111 for Lifting Operations for week from 16/9/2019 was reviewed:

- Inspection and application by lifting supervisor, certification by Safety officer/coordinator, approval by JML Site Manager and approval by Client site Manager were appropriate endorsed.
- Daily extensions of the permit also had the necessary endorsements
- Attachments were the daily checklist by the lifting supervisor, crane operator and the appropriate lifting plan with loading calculations and drawings

Other samples reviewed - CW-143 Cold Work, HW-62 Hot work, HW-59 were also found in order.

There were no site activities that require LOTO

Emergency evacuation drills are planned by the site owner and JML personnel participated in the drill conducted in Sep 2019.

Site audit on cable pulling and lifting activities.

PTW LO-116 dated 23/9/2019 available for inspection. Lifting plan with calculations on the safety factor in place. Lifting gears - Webb slings and shackled in order. Area barricaded. Trailer wheels were choked. It was observed that a forklift was in the vicinity of the lifting activity but finally removed.

Forklift with photo of authorized driver and maintenance checklist sighted.

PTW CW-149 and WAH-137 for cable pulling in place

Scissors lift was duly inspected and within the validity period - LP858476K. Authorized operators photos were displayed and area where the scissors lift is operating barricaded.

Areas for attention:

Nil

Assessment of:	Control of External Providers / Purchasing	Auditee(s):	Mastan Saji Monoris Vino soloman	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Purchasing, Control of Contractors/PTW & LOTO
Outsourcing
Control of externally provided processes, products and services
Type and extent of control
Information for external providers
PTW and LOTO

Evaluation and conclusions:

Outsourcing, control of contractors/suppliers processes are under the purview of Purchasing Dept. Evaluation, selection, monitoring of performance and re-evaluation processes were audited for subcontractor for pipe fabrication and fabrication work - subcontractor Evaluation and Maintenance Form. Information for external providers were given in the application form. Evaluation Factors include HSE, Quality, manpower, scheduling performance - list of recommendations and approval by top management
Other criteria - certification to OHSAS, BizSAFE
For new contractor/supplier, pre-qualification evaluation is done through " Contractor/supplier Pre-Qualification Evaluation Form" Requirements include certification to management systems. Sample - Maintenance of Tuas Incineration Plant
Sample of Purchase Order for material requisition PR#35014969 to Steelaris
Control of externally provided processes, products and services and the type and extent of control was audited at Project Site - NCCS-PBT Project at SGH. Please see report at Assessment Summary "Assessment of Project Site NCCS- Project which also reported on PTW and LOTO.

Areas for attention:

Nil

Assessment of:	Contract Review & Proposals	Auditee(s):	Vino Soloman Monoris	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

- Requirements for products and services
- Customer Related Processes

Customer communication
Determining the requirements for products and services
Review of the requirements for products and services
Changes to requirements for products and services
Sample Project: PESEL Group II Lubes Storage as subcontractor for Mecanical Works comprising fabrication, Installation, Painting, Insulation and Erection
Bid and Proposal process flow:
RFQ/RFP - Meeting Attendance List of Top Management to review, decide on taking the project - risk analyses - CA Department commercial Review - Approval by CEO- service providers/subcontractors - review and evaluation of quotations - tender review meeting - submission of tender
Doc MP-CTR-01 Rev B, Customer Related Processes, Reviewed and Approved on 1 August 2019. Processes for:

- Determining the requirements for products and services
- Review of the requirements for products and services
- Changes to requirements for products and services

Sales Enquiry Form to CA; Summary of Project Tender Review/Execution
Technical Proposal and Technical Offer Document ML-QT/M5/CSL/2018/370/0 Rev 00 with Table of contents complying with client's requirements.
Clarification List - Specific Deviations & Clarifications
Quality Plan, HSE Plan were sighted - common documents for tendering
Risk Assessment - HSE-01 - Hazard Identification, risk assessment and determining controls

Evaluation and conclusions:

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Areas for attention:

Bid & Proposal Document was referred to for tender reviewing process and this document was not as detailed as the Doc MP-CTR-01 Rev B, Customer Related Processes. This Bid & Proposal Document was uncontrolled and not documented as part of the QMS documentation. The document needs to be appropriately defined as part of the QMS documentation and controlled before it could be appropriately referred to during the tender reviewing process.

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Assessment of:	Project Site - Installation of Solar Panels at HDB	Auditee(s):	S. Rajandran R. Ganesh WSHC	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Supply and Installation of Solar Panels at rooftop of HDB blocks

Company is subcontractor to Sembcorp

Daily Toolbox meeting records for Sep 2019 - use of dusk mask (haze level > 100), medical fitness for the day, tools tied to lanyards, etc

Records of competence, training for lifting supervisors, rigger/signalman, electricians, Building Construction Supervisor Safety Course, WSQ Supervise Safe Lifting Operations,

Project Safety Committee Meetings - Solar Nova - 3 project. Safety statistics, monthly equipment inspection, unsafe acts and HDB inspection of site. Incidents and warning letters for unsafe behaviour.

Workers' representative feedback forms

Safety promotion and best safety conscious workers - monetary incentives given

RA - climbing up fixed vertical ladder to rooftop, method of climbing

- lifting of solar panels by mobile crane

- safety precautions taken to prevent falling of edge of roof - edge cordoned off with netting 1 meter from edge to prevent access.

- communication board with HSE information

Electrical wiring to solar panel.

Structure erection completed and only general works - cleaning up of site.

Aspect & impact risk assessment - 001 low risk level

No air emissions, wastewater or toxic industrial wastes generated.

Maintenance - LM352499B mobile crane inspection valid till 17/2/2020; Certificate of Registration of Crane Operator and Types of crane - crawler, mobile crane expiring 31/5/2020

Maintenance regime - crane service reports, fall arrestor life sheets, SRL inspection forms and signed by competent person, safety harness inspection, PPE inspection, life line certified by PE, LEW inspection of equipment

TSA - Task Safety Analysis - RA 1, Daily briefing record

Method Statements for PV Solar Installation at HDB Blocks, RV-01, 02, 03 and 04

Comments by Client for review of method statements - re-submitted method statement accepted by client.

Evaluation and conclusions:

Project on Installation of solar Panels were audited and found to have been implemented satisfactorily in accordance to the requirements of client from the audit trails and documentary evidence recorded above.

Areas for attention:

See Minor NC on competence, training and awareness



Assessment of:	Legal and other requirements & Evaluation of compliance	Auditee(s):	S Rajandran	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Applicable legislation and codes of practice were registered in the Register of Legal and other requirements and updated through a service provider contracted by Jurong Engineering, a sister company. Evaluation of compliance to legal and other requirements of the Ministry of Manpower and the National Environment Agency were conducted during HSE inspections and internal audits at project and maintenance sites and records kept.

Monitoring of incidents both for environment and OHS. No incidents reported for Solar Panel Installation Project Site.

Monitoring of HSE performance at project and maintenance sites – records maintained and hours without reportable injuries posted on communication chart at project site.

Safe Work Procedures – monitoring of availability of mandatory SWP at project sites including statutory requirements on training – WAH, confined space, lifting, scaffold erection.

Achievements of objectives and targets and management programmes

Monitoring Regime in place for PPE, lifting gears and machines, servicing of mobile crane, life line on roof top and other inspections to ensure availability and appropriateness including statutory training for workers. Plant and equipment used maintained by LEW

No trade effluent, air emissions or toxic industrial wastes to be monitored.

Construction wastes disposal records were monitored through contractor's submission of disposal records.

Evaluation and conclusions:

Determination of applicable legislation appropriate to projects were clearly documented in the Method Statements approved by client. Register of applicable legislation was deemed satisfactorily.

Evaluation compliance to legal requirements were evident from safety inspections conducted at project sites and from constant review and monitoring of validity of valid inspection dates of plant/equipment/lifting gears.

Areas for attention:

Nil



Assessment of:	Emergency preparedness and response	Auditee(s):	S. Rajandran	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Emergency drill conducted by Jurong Engineering Ltd's FSM with participation by JML staff and subcontractors workers on 15/6/2019.
 Drill report, attendance records and photographs seen. Fire fighting demo by JML on use of fire extinguisher for subcontractors on 24/6/2019 maintained on file. Photos depicting the demo were maintained.
 Emergency evacuation drills are planned by the site owner at project site (NCCS) and JML personnel participated in the drill conducted in Sep 2019

Evaluation and conclusions:

Fire evacuation drill for the Site is under the responsibility of Jurong Engineering Ltd/main contractor at project site who had conducted the drill with participation from JML staff and subcontractors.

Areas for attention:

Nil

Assessment of:	Organisation Knowledge Competence, Training & Awareness	Auditee(s):	S. Rajandran	Assessor:	Lee, Teik Choon
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Audit trails and sources of evidence:

Project site at NCCS
 Authorized and trained operators photos were displayed and area where the scissors lift is operating barricaded. Samples of toolbox meetings on 23/9/2019 and 24/9/2019 were reviewed. Topics discussed were on emergency evacuation drill, workers' feedback to Workers' Representative, incident sharing, falling object and fall from height hazards.
 Daily health condition of workers were also check and recorded in the attendance list.

Workshop Activities at 25 Tanjong Kling Road



Welder Register updated to 14/8/2019 - sampled welders certificate expiry dates

Solar Panel Project

Fall arrestor life sheets , SRL inspection forms and signed by competent person including safety harness.
Competence of inspection personnel needs to be established and records maintained.

Evaluation and conclusions:

A Minor NC was raised on inspection of fall arrestor, SRL by non competent personnel

Areas for attention:

Minor NC

Fall arrestor life sheets , SRL inspection forms and signed by competent person including safety harness.
Competence of inspection personnel needs to be established and records maintained.

04. Next visit details

Theme(s) for Next Visit

Surveillance Visit 1:

To determine that the client's system continues to meet the assessment criteria and certification scope, any applicable statutory, regulatory and contractual requirements, and to ensure that the system is meeting its specified objectives. To address all issues outstanding from previous visits and any changes to the client's organisation or system that impacts on the approval.

The assessor will use the LRQA Business Assurance methodology to help clients manage their systems and risks to improve and protect the current and future performance of their organisation.

Standard(s) / Scheme(s)	ISO 9001:2015	Visit type	Surveillance 1	
Audit days	1.00 DAY	Due date	April, 2020	
Team				
Site		Audit days	Activity codes	
25 Tanjong Kling Road,Singapore,SG		1.0 DAY	107202,109015	

Standard(s) / Scheme(s)	ISO 14001:2015	Visit type	Surveillance 1	
Audit days	1.00 DAY	Due date	April, 2020	
Team				
Site		Audit days	Activity codes	
25 Tanjong Kling Road,Singapore,SG		1.0 DAY	280101,415001,066302	



Standard(s) / Scheme(s)	ISO 45001:2018	Visit type	Surveillance 1	
Audit days	1.00 DAY	Due date	April, 2020	
Team				
Site		Audit days	Activity codes	
25 Tanjong Kling Road,Singapore,SG		1.0 DAY	280101,415001,0663 02	



05. Change to certification details

Customer has requested the following changes.

A consolidated certificate, listing all integrated products has been requested.

Client Address Change 25 Tanjong Kling Road, Singapore 628050, Singapore

It is confirmed that the changes to certificate requirements agreed at this visit are as detailed below:-

Main certificate

Product	Language	Accreditation	Action
OHSAS 18001:2007	American English	UKAS	Remove



Lloyd's
Register

06. Appendix

1. Audit Programme/Plan

Both the audit plan and the programme are dynamic and must be in line with the client's developments. Any (last minute) changes are possible with valid reasons e.g. organisational changes, processes, management review results etc. Prior to the closing meeting the audit team should (re)confirm the programme and identify any changes, E.g. to the management system, extent, time or dates of the audit, competences.

Visit Type	Certificate Renewal + NST	SV1	SV2	SV3	SV4	SV5	Certificate Renewal
Due Date	10/2019	04/2020	10/2020	04/2021	10/2021	04/2022	10/2022
Start Date	25 Sep 19						
End Date	14 Oct 19						
Audit Days	13+1 NST	03	03	03	03	03	TBC
Separate assessment plan?	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Any change in workforce numbers that may impact visit duration (if yes add new number)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Where identified above see separate current assessment plan for further detail.							
Process / aspect / theme / location							
<i>Final selection will be determined after review of management elements and actual performance</i>							
Opening meeting	X	X	X	X	X	X	X
Closing meeting (H&S Rep invited for attendance)	X	X	X	X	X	X	X
Changes to organizational context	X	X	X	X	X	X	X
Management Review	X		X		X	X	X
Internal Audits	X		X		X	X	X
Continual Improvement	X		X		X	X	X
Management of change	X		X		X	X	X
Corrective action	X		X		X	X	X
Complaint Management	X		X		X	X	X
Use of Logo (LRQA & Accreditation Marks)	X		X		X	X	X
Performance against the client management system objective	X		X		X	X	X
Legal and other requirements / Evaluation of compliance		X		X			
Note: One shift only and not require to audit outside normal working hours							
(1)							
Contract Review - Customer-Related Processes	X		X				X
Control of External Providers Control of Contractors (PTW & LOTO) and Outsourcing	X		X			X	X
Control of Maintenance Site Activities (see note 1) - Electrical & Instrumentation, mechanical & shutdown maintenance	X	X		X			X
Control of Project Management and Site Activities (see note 1)	X	X		X			X
Control of Workshop Fabrication Activities (see note 1)	X		X			X	X
Communication, Consultation	X	X			X		X

Visit Type	Certificate Renewal + NST		SV1	SV2	SV3		SV4	SV5	Certificate Renewal
and Participation									
Organisation Knowledge, Competence, Training & Awareness	X						X		X
Monitoring and measurement	X				X		X		X
Evaluation of compliance	X						X		X
Emergency preparedness and response	X							X	X
<p>*Note 1: where applicable to cover site activities for environmental aspects, OH&S risk assessment, operational control, project management, operational planning and control, release of products and services (Quality and Inspection Test Plan), control of contractors/PTW and LOTO and emergency preparedness & response, control of documented information, infrastructure, environment for operations, control of production and service provision, identification & traceability, customer/external provider property, calibration control, and control of non-conforming product/service</p>									

1: Complete the list of organisation (parts), departments and/or processes of the different locations

Scope

Any revised scope will be as agreed in formal correspondence between LRQA and the client or defined in section 4 of the previous LRQA visit report.

Scope	Plant maintenance, project management and plant construction associated with mechanical equipment & pipeline installation, electrical & instrumentation, and related fabrication works.
Exclusion	For ISO 9001:2015 Clause 7.5.3 - Design and Development

Visit start time (approximate)	0900	Visit end time (approximate)	1700
The actual start and finish times for the visit will be agreed at the pre-visit contact with the assessor and recorded in the report introduction.			

Additional information

Opportunities for improvement

If we identify opportunities to improve your already compliant system, we will either record them in the process table applicable to the area being assessed or in the Executive summary of the report if they can deliver improvement at a strategic level.

Confidentiality

We will treat the contents of this report, together with any notes made during the visit, in the strictest confidence and will not disclose them to any third party without written client consent, except as required by the accreditation authorities.

Sampling

The assessment process relies on taking a sample of the activities of the business. This is not statistically based but uses representative examples. Not all of the detailed nature of a business may be sampled so, if no issues are raised in a particular process, it does not necessarily mean that there are no issues, and if issues are raised, it does not necessarily mean that these are the only issues.

Legal entity

The accredited legal entity and client facing office that has provided the assessment service in this report is referenced in the applicable agreement for this service.

Generic audit objectives and team responsibilities

The generic audit objectives and team responsibilities are included in the Client Information Note 'Assessment Process'. Any visit specific objectives for the next visit will be recorded in the report of the previous visit and will be addressed through the visit plan for that visit. The assessment standard and roles of the audit team are defined in the assessment visit confirmation sent to the client.

Audit Criteria

The audit criteria consist of the assessment standard and the client's management system processes and documentation.

Additional observers

Any additional observers will be as formally communicated to the client.

2. Separate Assessment Plan

Note: if the visit involves more than one team member and/or is more than one day duration, an additional plan detailing the activities of each member of the team on each day will be required.

Assessment type Re-certification & Transition	Assessment criteria ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018	
Assessment team Tan Kee Chye and Lee Teik Choon	Assessment dates As scheduled	Issue date 10 Sep 2019

(Day 1 – 25 Sep 2019)

0900 Introductory meeting with management to explain the scope of the visit, assessment methodology, method of reporting and to discuss the company's organisation (approximately 30 minutes). The Team Leader will agree a time to meet with top management to discuss policy and objectives for the management system.

LRQA team briefing for a team of two or more assessors or (experts).

<Tan KC> (Lead Assessor)

<Lee TC>

0930 Discussion of all outstanding issues from previous visits and closing of the minor NC.

Contract Review & Proposals

- Requirements for products and services
- Customer Related Processes

Leadership and commitment
Documentation and Integration
Context of Organisation
Risks and Opportunities

1200 Lunch.
Continues from morning

Lunch.
Control of External Providers / Purchasing
Control of Contractors/PTW & LOTO
Outsourcing

1530 Report writing.
Close.

Report writing.
Close.

(Day 2 – 26 Sep 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	
	Assessment at project site activities*	Assessment at project site activities*
	Environmental aspects	Environmental aspects
	Risk assessment	Risk assessment
	Operational control	Operational control
	Project Management	Project Management
	Operational planning and control	Operational planning and control
	Release of products and services (Quality and Inspection Test Plan)	Release of products and services (Quality and Inspection Test Plan)
	Control of contractors	Control of contractors
	PTW and LOTO	PTW and LOTO
	Emergency preparedness & response	Emergency preparedness & response
1200	Lunch	Lunch
	Continue from morning	Continue from morning
1530	Report writing.	Report writing.
	Close	Close

(Day 3 – 27 Sep 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	
	Migration Audit To ISO 45001:2018	Communication Consultation and Participation
1200	Lunch	Lunch
	Migration Audit To ISO 45001:2018	Control of Monitoring and Measurement Equipment
1530	Report writing.	Report writing.
	Close	Close

(Day 4 – 30 Sept 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	<p>(Mr TC Lee)</p> <p>Assessment at Fabrication workshop activities*</p> <p>Environmental aspects</p> <p>Risk assessment</p> <p>Operational control</p> <p>Control of contractors</p> <p>PTW and LOTO</p> <p>Emergency preparedness & response</p>
1200		<p>Lunch</p> <p>Continue from morning</p>
1530		<p>Report writing.</p> <p>Close</p>

(Day 5 – 4 Oct 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	<p>Assessment at project activities*</p> <p>Environmental aspects</p> <p>Risk assessment</p> <p>Operational control</p> <p>Project Management</p> <p>Operational planning and control</p> <p>Release of products and services (Contractual Quality and Inspection requirements)</p> <p>Control of contractors</p> <p>PTW and LOTO</p> <p>Emergency preparedness & response</p>	<p>Assessment at maintenance site activities*</p> <p>Environmental aspects</p> <p>Risk assessment</p> <p>Operational control</p> <p>Project Management</p> <p>Operational planning and control</p> <p>Release of products and services (Contractual Quality and Inspection requirements)</p> <p>Control of contractors</p> <p>PTW and LOTO</p> <p>Emergency preparedness & response</p>
1200	Lunch	Lunch	Lunch
	Continue from morning	Continue from morning	Continue from morning
1530	Report writing.	Report writing.	Report writing.
	Close	Close	Close

(Day 6 – 8 Oct 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	
	Assessment at maintenance site activities*	Legal and other requirements
	Environmental aspects	Evaluation of compliance
	Risk assessment	
	Operational control	
	Project Management	
	Operational planning and control	
	Release of products and services (Contractual Quality and Inspection requirements)	
	Control of contractors	
	PTW and LOTO	
	Emergency preparedness & response	
1200	Lunch	Lunch
	Continue from morning	Monitoring and measurement
1530	Report writing.	Report writing.
	Close	Close

(Day 7 – 11 Oct 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day. (Tan KC)	
	Assessment at Fabrication workshop activities	
	Control of fabrication processes	
	ITP	
	Qualification of welders	
	NDT	
	Control of nonconformance	
	Plant Equipment Maintenance	
1200	Lunch	
	Storage and preservation of products	
1530	Report writing.	
	Close	

(Day 8 – 14 Oct 2019)

0900	Review of findings from previous day. Review of the assessment plan for the day.	
	Management System Elements#	Emergency preparedness
		Management of change
1200	Lunch	Lunch
	Continue from morning	Organisation Knowledge Competence, Training & Awareness
1530	Review of day's findings	Review of day's findings
	Preparation of final report	Preparation of final report
	Closing meeting with management to present a summary of findings and recommendations.	

*Note 1: where applicable to cover control of documented information, communication, infrastructure, environment for operations, operations planning and controls, control of production and service provision, identification & traceability, customer/external provider property, calibration control, release of products/services and control of non-conforming product/service.

#Note 2: To cover management responsibility, QOH&S objectives/KPIs/Analysis and evaluation of data, internal audit & management review, corrective action/customer feedback/complaints, customer satisfaction, continual improvement, statutory & regulatory requirement and use of UKAS accreditation marks & LRQA QMS logo

Note; Information on the objectives of the various visits can be found in the Client Information included in the report or on our website www.lrqa.com. Furthermore on the website there are Client Information Notes available for the various visit types. The audit criteria and team members date and locations are also stated on the front page of the report. Scope of certification and roles and responsibilities of the audit team members are expressed in the Audit Program Plan.

3. Report Considerations

LRQA Report considerations		
Have there been any deviation from the original assessment plan:	Yes/No	If yes detail these in the introduction section of the report along with the reasons for the deviations
Have there been any significant issues impacting on the audit programme:	Yes/No	If yes detail these in the introduction of the report and amend the APP
Have there been any significant changes that affect the management system of the client since the last audit took place:	Yes/No	If yes detail these within the executive summary section of the report
Have any unresolved issues been identified during the assessment:	Yes/No	If yes detail these within the executive summary section of the report
Was the audit undertaken a combined or integrated audit:	Yes/No	If yes confirm what type of audit and the standards covered in the introduction to the report. [Integrated for ISO 9001, ISO 14001 and ISO 45001]
Was the organisation effectively controlling the use of the certification documents and marks:	Yes/No	If no document within the reporting table covering the mandatory elements
If applicable has the organisation taken effective corrective action regarding previously identified nonconformities:	Yes/No	Record outcome in the findings log against the relevant findings.
Does the management system of the organisation continue to meet the applicable requirements and meet the expected outcomes:	Yes/No	If no details reasons within the executive summary of the report
Does the scope of certification continue to be appropriate to the activities/products/services of organisation:	Yes/No	If no then document the actions necessary in relation to the scope in the executive summary of the report and amend the APP as required.
Were the objectives of the visit as defined in the APP fulfilled during the visit:	Yes/No	If no detail the reasons and any necessary actions in the executive summary of the report and amend/update the APP

Closed Out of Assessment Finding from last Visit (Focus) - ISO 9001

Grade 1	Status 2	Finding (including location if applicable) 3	Correction, root cause & corrective action review 4	Process / aspect 5	Date 6	Reference 7	Clause 8
Minor	Closed	<p><u>Statement of Non-Conformity:</u> It was noted that the Competency Level of Manpower (Annex 1, MPHRD-01 Rev A) required a minimum of secondary education level for all personnel. This was not correct for General Workers sampled (employees no: 3117 and 3275). The Training Record was completed repeatedly for every course that the nominated employees have completed the training instead of progressively updating the record to serve as individual record to capture the history of trainings an employee has completed. [Note: The HR has implemented the HR database to capture all training attended by the employee. Hence the need for the hardcopy Training Record should also be further reviewed]</p> <p><u>Requirement:</u> Clause 7.1.2 and 7.2 - To implement the competency and training requirements according to documented procedures MP-HRD-01 Rev A</p> <p><u>Evidence of Non-Conformity:</u> See above statement of nonconformity</p>	<p><u>Proposed Correction, Corrective Action and Timescale:</u> To review and align implementation with the established procedures by July 2019</p> <p><u>Correction:</u> The Competency Matrix was reviewed and updated on 1 Aug 2019.</p> <p><u>Root Cause:</u> This was a lapse in defining the competency requirements.</p> <p><u>Corrective Action Review:</u> The competency requirements were update on 1 Aug 2019. The training records were uploaded and managed as softcopies for easy management.</p>	Organisation Knowledge, Competency, Training	12 Mar 2019	802564_SB CKCT01	7.2



1. Assessment plan (Next Surveillance Visit 1)

Assessment type Surveillance Visit 1	Assessment criteria ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018	
Assessment team TBC	Assessment dates Due in Apr 2020	Issue date 14 Oct 2019

(Day 1)

Introductory meeting with management to explain the scope of the visit, assessment methodology, method of reporting and to discuss the company's organisation (approximately 30 minutes). The Team Leader will agree a time to meet with top management to discuss policy and objectives for the management system.

LRQA team briefing for a team of two or more assessors or (experts).

<Name> (Team Leader)

<Name> (Member)

Discussion of all outstanding issues from previous visits.

Assessment at project site activities*

Environmental aspects

Context of Organisation

Risk assessment

Legal and other requirements / Evaluation of compliance

Operational control

Project Management

Operational planning and control

Release of products and services (Quality and Inspection Test Plan)

Control of contractors

PTW and LOTO

Emergency preparedness & response

Lunch.

Lunch.

Continue from morning

Continue from morning

Report writing.

Report writing.

Close.

Close.



(Day 2)

Review of findings from previous day. Review of the assessment plan for the day.

<Name> (Team Leader)

Assessment at maintenance site activities*

Environmental aspects

Risk assessment

Operational control

Project Management

Operational planning and control

Release of products and services
(Contractual Quality and Inspection requirements)

Control of contractors

PTW and LOTO

Emergency preparedness & response

Lunch

Continue from morning

Preparation of final report

Closing meeting with management to present a summary of findings and recommendations.

Note; Information on the objectives of the various visits can be found in the Client Information included in the report or on our website www.lrq.com. Furthermore on the website there are Client Information Notes available for the various visit types. The audit criteria and team members date and locations are also stated on the front page of the report. Scope of certification and roles and responsibilities of the audit team members are expressed in the Audit Program Plan.