



Marshall's Energy Company Inc.

P.O. Box 1439 | **Majuro** | Republic Marshall Islands 96960

Phone: (692) 625-3827/3828 | Fax: (692) 625-5886 | E-mail: meccorp@ntamar.net

TOR

Petroleum Movement & Accounting Audit

Hydrocarbons, in particular refined petroleum movement and accounting is part of global life and business practice and is no different to Marshall's Energy company Inc (MEC) as a national utility company in the Republic of Marshall Islands. The MEC from its past humble beginning to now have used fuels and lubricants for its power generation operations over the last 40 plus years as a utility organization. The MEC has evolved over the years and its need for business diversification and growth have emerged in recent past. Therefore, MEC's need to visit or check its other business support areas to ensure the level of effectiveness to support its growth, efficiency, and sustainability of the energy supply and demand is high. MEC now seeks a complete and thorough review of its existing petroleum business in particular the inventory movement accountability processes and controls to ensure for any gaps, and or roadblocks could potentially be identified and ensure to plan for remedial by use of industry and business best practice is fully compliant in the utility support business.

By- MEC

July 25th 2023

Terms of Reference

Consultant title	Petroleum Inventory Auditor
Company	Marshall's Energy Company Inc.
Focal report and position title	Chief Executive Officer
Project	Provide a Complete Petroleum Inventory Movements and Accounting Audit Outcome
Project focal report	Chief Executive Officer-Jack ChongGum
Duration period	3 Months
Consultant classification [Consultation & Audit Implementation]:	

Background

The Marshall's Energy Company Inc (MEC) is in Majuro, Republic of Marshall Islands (RMI) is a country in the middle of the Pacific Ocean. It comprises of 29 atolls and five islands with a total land area of 181 square kilometres (km²) located in an exclusive economic zone of 2 million km² in the north Pacific. Gross Domestic Product (GDP) was \$206 million (m) in 2017. The services sector, at 70% of GDP, is driven by government expenditure and grants. Agriculture and fisheries are the second largest sector, at 18%, while construction and utilities dominate the industrial sector at 12%. The population in 2011 was 53,150, of which some 28,000 live on Majuro, the main island.

The MEC uses petroleum products to primarily provide support with the nation's power generation obligation as the nation's State Own Enterprise (SOE) delivering the power services to the people of Marshall Islands.

MEC serves four (4) diesel power generation facilities; one in Majuro, second on Ebeye Island, third on Jaluit atolls and the fourth one on Wotje Island. The diesel and lubricants required for the power utilities and sales to other non-power customers are supplied out of the Majuro supply warehouses using MEC own fuel local coastal tanker, bulk fuel bunkering through two main supply wharves/jetties in Majuro.

Over the years the MEC must evolve and sustain its core purpose to supply power and supplement itself for its general survival as a utility.

The MEC imports and handles as part of the normal business operations varied petroleum products.

Table 1-MEC Majuro Petroleum Storage Capacity

Product	Working Tank Capacity	Remarks
Diesel (ULSD)	2,250,000 gallons	Only at 70% working capacity
LPG-Propane	20,000 lbs	ISO tanks discharged into this tank
Waste Oil	750,000 gallons	Only at 50% working capacity

Table 2: MEC Majuro Average Annual Volume Handled

Product	Imports	Throughput
Diesel (ULSD)	14,400,000 gallons	13,200,000 gallons
ULP/Gasoline	42,000 gallons	34,848 gallons
LPG-Propane	288,000 lbs	144,000 lbs
Lubricants	320,000 gallons	280,000 gallons
Waste Oil	98,200 gallons	

The petroleum products are imported and distributed in various modes of packaging and transportation.

- Diesel ULSD grade- through bulk import tanker, distributed through pipelines, trucks, cubes and local coastal tanker.
- Gasoline -mainly imported in drums and ISO tanks and sold in drums and ISO tanks.
- Liquefied petroleum propane (LPG)- imported through ISO tanks, stored in bulk tanks, and sold in

packaging bottles.

- Lubricants (mainly engine, hydraulic and refrigeration oils) – imported mainly in drums and cubes and sold and transferred in the same mode of packaging.
- Waste oil imports come in various ways; from internal tank water high flash draining, all outer Power Utilities and Majuro utility and others mainly come from shipping industry and land transport garages. It is exported through 6,000 gallons bladder tanks.

Assignment Context and Purpose:

The Marshalls Energy Company (MEC) is seeking the expertise of a petroleum specialist to conduct a comprehensive audit of the company's petroleum inventory movements and accounting. The purpose of this audit is to ensure accurate documentation, accounting, tracking, and management of all petroleum inventory/stocks throughout various stages of procurement to storage, consumption, and distribution.

The audit aims to identify any discrepancies in both physical processes and controls and the documentation and accounting processes and controls, including the authority levels to write off inventory losses at various stages of the inventory movement.

The entire supply, storage and distribution chain shall be audited to see that the people competency and accounting system structures, any discrepancies, inefficiencies, losses, and potential losses in its entirety is reported and recommendations provided for MEC to assess and absorb.

Refer Fig.1 MEC Petroleum supply, Storage and Distribution Chain.

The MEC wants to see the audit centered around the following key areas of its petroleum business.

A. Operations Integrity Audit

- 1) Inventory physical storage and measurement infrastructure and operations integrity Review-eg. Tanks, Meters, weighing scales, quality control.
- 2) Security of inventory
- 3) Stock taking

B. Inventory Movement Documentation and Accounting Processes and Controls Audit

- 1) Movement Documentation and Processing process and controls
- 2) Order Fulfillment Process and controls
- 3) Inventory Reconciliations
- 4) Loss Control Process and Authority
- 5) Reporting procedures

C. People and Systems Audit

- 1) Inventory people are involved with import, storage, distribution, order fulfillment (CSR), inventory movement processing, accounting, and auditing.
- 2) Inventory computer system used in MEC and its relevance, audit process daily, weekly, Monthly and annually.
- 3) Inventory system procedures and controls

Audit Objectives

The objectives of the audit are as follows:

- a) Assess the effectiveness of various petroleum product storage practices, including tank and meter calibration, measurement systems for varied petroleum, and fuel sampling and testing methods.
- b) Assess the effectiveness of people working in ensuring the petroleum practices and procedures are met.
- c) Verify the accuracy of all petroleum inventory records, including receipts, storage*, deliveries, transfers, and consumption.
- d) Identify any unauthorized or unaccounted-for petroleum products movements that may indicate potential losses or pilferage.
- e) Evaluate the adequacy of internal controls and procedures related to petroleum inventory management, highlighting any areas of improvement or potential vulnerabilities.

- f) Provide recommendations for enhancing the efficiency, accuracy, and accountability of diesel fuel inventory management systems and processes.

*Stock takes at weekly, monthly & annual audit

Audit Review Scope of Works

Specific Outputs to be delivered by the Inventory Audit Consultant include but not limited to the following.

A. MEC MAJURO FUEL TANK FARM

- 1) Review and analyze existing petroleum products procurement, storage, and consumption procedures, including relevant documentation and records.
- 2) Conduct physical inspections of petroleum storage tanks, measurement systems, and related infrastructure.
- 3) Verify the accuracy of petroleum products inventory records through reconciliations with invoices, receipts, delivery notes, and consumption data.
- 4) Review the process for recording and reconciling petroleum movements of various products, including transfers between storage locations or distribution to end-users.
- 5) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage of diesel fuel, propane, and gasoline.
- 6) Collect and analyze data on diesel and gasoline consumption patterns, usage trends, and losses, if any.
- 7) Interview relevant personnel involved in petroleum products procurement, storage, and distribution to gather insights into existing practices and potential areas for improvement.
- 8) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

B. MEC POWER PLANT

- 1) Verify the adequacy of Majuro power utility Diesel fuel and lubricants inventory records through reconciliations with transfers and power generation consumption.
- 2) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage of diesel fuel.
- 3) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

C. MEC WAREHOUSE

- 1) Verify the adequacy of warehouse and procurement lubricant oils inventory records through reconciliations with purchase orders, actual import receipts and release of the lubricants to consumptions.
- 2) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage.
- 3) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

D. LOCAL COASTAL TANKER

- 1) Verify the adequacy of LCT petroleum inventory records through reconciliations with bunker orders, actual loaded products volumes, treatment of return on board (ROB) petroleum cargoes and the release of the products to consumptions.
- 2) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage, and the control of return on board (ROB) cargoes.

3) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

4)

E. OUTER ISLANDS POWER PLANTS-JALUIT AND WOTJE UTILITIES

- 1) Verify all transfers of fuel, gasoline and lubricants transferred from Majuro Tankfarm into both MEC Power utilities.
- 2) Verify the adequacy of Jaluit and Wotje power utility Diesel fuel and lubricants inventory records through reconciliations on sales and power generation consumption.
- 3) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage of diesel fuel.
- 4) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

F. KAJUR POWER PLANT -EBEYE ISLAND

- 1) Verify all transfers of fuel, gasoline and lubricants transferred from Majuro Tankfarm into both MEC Power utilities.
- 2) Verify the adequacy of KAJUR power utility diesel fuel, gasoline and lubricants inventory records through reconciliations on sales and power generation consumption.
- 3) Assess the adequacy of internal controls and security measures in place to prevent unauthorized access, theft, or pilferage of diesel fuel.
- 4) Prepare a comprehensive report summarizing findings, observations, and recommendations based on the audit.

Reporting and Deliverables

The Activity to provide the complete audit of the petroleum inventory movement and accounting processes and controls should include, but not limited to, the following:

Task 1-Inception Meeting & Inception Report-Deliverable 1

- a) An inception report outlining the proposed approach, methodology, and work plan for the audit.
- b) Meet virtually where the need presents to outline your plans.
- c) Your plans need to confirm acceptance, limitations, and any additions to MEC objectives and scope of work for the audit.
- d) A final audit plan and approach is written and presented to MEC.
- e) Both parties work to work for full audit process to proceed and achieved.

Task 2- Conduct Full Audit of Petroleum Movement and Accounting

The completion of the MEC petroleum audit covers the purpose, objective and delivers the full scope of the petroleum audit. The audit shall provide all audited petroleum movement processes, controls and identified gaps and their respective impacts on the business physical infrastructures, people, administrative procedures, and systems.

Task 3-Presentation of Audit Findings and Draft Audit Report: Deliverable 2

Presentation of the audit findings and recommendations to the management team, including a question-and-answer session to address any clarifications or concerns and a detailed summary of each finding rated under the suggested gaps and risks rating process.

As a process for the audit outcome reporting, the MEC would require the audit to conclude in its findings to be able to rate the audit outcome in each audit area reviewed by process and controls strengths and weaknesses.

Per the oil industry typical scorecard, the rating criteria will be: Operational + a Quality Rating i.e.

- a) **High** Indicates there is little cause for concern at all levels of the organization. All aspects of the process and controls are being followed in all the MEC supply, storage, and distribution chain, and all of the relevant staff understand the petroleum inventory management process. Any further follow-up is minimal and should be tracked by the MEC focal point.
- b) **Good** Indicates that there is some room for improvement at the various MEC supply, storage, and distribution chain. Most aspects of the processes and controls are understood and are being followed in most of the inventory movement chain. It will be appropriate to take remedial action and be tracked by the Chief Petroleum Officer/Manager.
- c) **Fair** Indicates that there is room for improvement at all levels of the organization. Basic petroleum movement standards such as reconciliation at standard have been implemented. Not all aspects of the process and controls that are being followed in all the MEC supply, storage and distribution chain are understood and it will be appropriate to take some remedial action and be tracked by the Chief Executive Officer of MEC.
- d) **Poor** Indicates there is great cause for concern at all levels of the organization. Implementation is poor and patchy across the whole company. Staff do not understand business requirements for petroleum inventory management process nor the impact of their actions on others. Need to determine an action plan for follow-up on urgent basis and be tracked by the MEC Chief Executive Officer

Task 4-Provide Full Audit Report with Recommendations-Deliverable 3

A detailed audit report containing findings, observations, recommendations, and a summary of the audit process undertaken.

Audit Timeline and Payment Schedule

This assignment is an important part of MEC doing business to stay efficient and sustainable. The assignment will need to commence within 2 weeks of the contract and be completed within 3 months of contract signing.

The following documents be prepared by the Petroleum Inventory Auditor:

Deliverables	Output	Timeframe	Payment Schedule
Task 1	Inception Report	2 weeks from contract signing	10%
Task 3	Draft Inventory Movement & Accounting Audit Report	12 weeks from contract signing	75%
Task 4	Final Inventory Movement & Accounting Audit Report	16 weeks from contract signing	15%

NOTES:

- 1) Each deliverable listed above should be presented by the Consultant for discussion in a meeting with the MEC CEO and MEC Management team composing of CCO and CFO and others the MEC will nominate as part of the petroleum Inventory Audit process.
- 2) Allow two weeks for MEC CEO and the management team to provide feedback. They may be MEC Board input required which allows for a further two weeks for review before responding.
- 3) All documents are to be submitted legibly for ease of review and understanding.
- 4) Number of copies of each deliverable: one (1) electronic

Person criteria: Qualifications and Experience

Qualifications:

- Bachelor's degree in business, Economics, Energy or
- Relevant post graduate qualifications would be advantageous.

Experience and knowledge:

- Have more than 10 years of petroleum inventory audit and financial experience in the Pacific Region
- Have conducted downstream petroleum operational integrity audits.
- Have worked and experienced similar audit work in other Pacific Island countries.
- Have experience in working with Energy Utilities and petroleum downstream companies.
- Significant experience in the Oil Trading, Import, Terminals, Distribution, Marketing of Petroleum products in Pacific Island countries and in the Asia Pacific Region
- Demonstrated appropriate interpersonal communication skills to relate and negotiate effectively, including the ability to convey concepts clearly and concisely, with a diverse range of people and cultures, client organizations, governments, agencies, and other key stakeholders.
- Ability to undertake activities in a participative and consultative manner, ensuring counterparts and stakeholders actively participate and develop understanding and ownership.
- Experience in energy system reforms and economic development.

Other:

- Output focus, a record of delivering quality results, with urgency on time, in a developing country environment.
- Ability to apply independent judgment and the ability to influence, and develop consensus on difficult and controversial issues, balancing multiple stakeholder expectations and objectives.
- Ability to effectively communicate (orally and in writing) on complex issues and positions to a range of stakeholders including government officials, clients, and other stakeholders.
- Ability to maintain high ethical standards when representing the MEC in any capacity in accordance with relevant codes of

INSTITUTIONAL AND ORGANIZATIONAL ARRANGEMENTS

The Consultant will report directly to the Chief Executive Officer (CEO) of MEC and work collaboration with MEC -Chief Commercial /Petroleum, MEC -Chief Finance Officer, and any other parties within MEC the CEO shall delegate for the purposes of effective collaboration and attention in every aspect of the petroleum inventory audit priority. The MEC delegate will provide background information and all existing reports and materials related to the effective delivery of the audit assignment.

Contract Type, Duration, Location and Condition

Contract type will be lump sum. The assignment will be done on site for most tasks from 1 to 3 and task 4 may be done offsite. The Assignment will need to commence within 2 weeks of contract signing and be completed 4 months of contract signing.