REPUBLIC OF GHANA

Good Governance and Accountability

## OUR VISION

Our Vision is to become a world-class Supreme Audit Institution delivering professional, excellent and cost-effective auditing services.

# PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON THE OPERATIONS OF NATIONAL PETROLEUM AUTHORITY

**This report has been prepared in compliance with Article 187(2) of the 1992 Constitution of Ghana and Section 13(e) of the Audit Service Act, 2000 (Act 584) for submission to Parliament in accordance with Section 20 of Act 584.**

**Johnson Akuamoah Asiedu**
**Auditor-General**
**Ghana Audit Service**
**24 June 2026**

**The study team comprised:**
**Ms. Mary Arthur (Team Leader), Mr. Denis Agbleze, and Mr. Kwabena Safoh-Sarkwa under the Supervision of Ms. Hannah Mensah (Director/PSAD), Mr. David Doe Amediku (AAG/PSAD), and Mr. Samuel Frimpong-Manso (DAG, PSAD).**

**This report can be found on the Ghana Audit Service website: https:/audit.gov.gh**

**For further information about the Audit Service, please contact:**

**The Assistant Auditor-General, Public Relations**
**Ghana Audit Service Headquarters**
**Post Office Box MB 96,**
**Accra.**

**Tel: 0302 664928/29/20**
**Fax: 0302 662493/675496**
**E-mail: info@ghaudit.gov.gh**
**Location: Ministries Block 'O'**

**© Ghana Audit Service 2026**

# TRANSMITTAL LETTER

My Ref. No.: **AG.AR/2025/20**

**THE RIGHT HONOURABLE SPEAKER**
**OFFICE OF PARLIAMENT**
**PARLIAMENT HOUSE**
**ACCRA**

## PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON THE OPERATIONS OF NATIONAL PETROLEUM AUTHORITY (NPA)

I have the honour, in accordance with Article 187(2) of the 1992 Constitution of Ghana, Sections 13(e) and 16 of the Audit Service Act, 2000 (Act 584), to submit a Performance Audit Report on the operations of the National Petroleum Authority.

2. The National Petroleum Authority (NPA) is responsible for regulating Ghana's downstream petroleum sector, which plays a vital role in the country's economy. In 2023, it generated over GH¢71 billion. Despite its significance, illegal activities within the sector are estimated to have resulted in government tax revenue losses of approximately GH¢4.7 billion between 2015 and 2019.

3. The audit assessed NPA's regulatory activities relating to the transportation and tracking of petroleum products, product marking, and monitoring of retail outlets from January 2023 to April 2026.

4. The audit identified weaknesses in all three areas reviewed. The NPA did not adequately enforce licensing requirements for Bulk Road Vehicles (BRVs), as only 51.3 percent of registered BRVs held valid licenses. In addition, the Authority failed to track certain petroleum products such as Aviation Turbine Kerosene (ATK). The NPA also did not ensure that the volumes of marked petroleum products

corresponded to the volumes actually distributed, resulting in the distribution of approximately 87 million litres of unmarked petrol.

5. Furthermore, the Authority did not ensure the installation and effective operation of Automatic Tank Gauging Systems (ATGS) at all retail outlets and failed to verify maintenance work performed on installed ATGS before effecting payments.

6. These weaknesses undermine assurance of petroleum product quality, regulatory compliance, consumer protection, and revenue accountability.

7. The audit recommended that the NPA should strengthen enforcement of BRV licensing requirements, track all petroleum products as required by law, improve controls over product marking and distribution, recover identified financial losses, ensure the installation and repair of ATGS at retail outlets, and verify maintenance services before making payments.

Thank you.

**JOHNSON AKUAMOAH ASIEDU**
**AUDITOR-GENERAL**

# TABLE OF CONTENTS

**TRANSMITTAL LETTER** ..... i
**GLOSSARY** ..... vii
**ACRONYMS AND ABBREVIATIONS** ..... ix
**EXECUTIVE SUMMARY** ..... 1
**CHAPTER ONE** ..... 5
**Introduction** ..... 5
**1.1 Reasons for the Audit** ..... 5
**1.2 Purpose of the audit** ..... 7
**1.3 Scope of the audit** ..... 7
**1.4 Audit objectives** ..... 7
**1.5 Audit questions and assessment criteria** ..... 7
**1.6 Audit standards, methodology, and sampling** ..... 9
**CHAPTER TWO** ..... 12
**DESCRIPTION OF NPA'S OPERATION IN ENSURING QUALITY PETROLEUM PRODUCTS AT THE RETAIL OUTLETS** ..... 12
**2.1 Historical background** ..... 12
**2.2 Vision of NPA** ..... 13
**2.3 Mission of NPA** ..... 13
**2.4 Mandate** ..... 13
**2.5 Functions** ..... 13
**2.6 Funding** ..... 14
**2.7 Organisational Structure** ..... 15
**2.8 Key Players and their Responsibilities** ..... 16
**2.9 Stakeholders and their responsibilities** ..... 16
**2.10 Process description of the operations of NPA** ..... 17
**CHAPTER THREE** ..... 20
**FINDINGS, CONCLUSIONS AND RECOMMENDATIONS** ..... 20
**3.0 Introduction** ..... 20
**3.1 Transportation and tracking of petroleum products** ..... 20
**3.2 Marking of petroleum products** ..... 26
**3.3 Monitoring of the retail outlets** ..... 31
**APPENDICES** ..... 40

# GLOSSARY

**Adulteration:** The addition of inferior, unsuitable, or unauthorised elements or compounds of another product into a marked or unmarked petroleum product.

**Automatic Tank Gauging System (ATGS):** A computerised system used to monitor fuel levels, volume, temperature, and water in underground storage tanks in real-time.

**Bulk Road Vehicles (BRVs)**: These are specialised trucks used to transport petroleum products from depots to retail outlets.

**Bulk road vehicle (BRV) tracking service provider**: A company responsible for the supply, installation, and maintenance of the bulk road vehicle tracking system.

**Bulk road vehicle tracking system:** The complete combination of tracking equipment, volume sensors, other hardware, software, and associated parts employed in the implementation of the bulk road vehicle tracking project:

**Command Centre:** The location within the Authority's head office authorised to control and monitor the fuel monitoring systems at all the retail outlets.

**Diesel additivated:** Diesel fuel blended with chemical additives.

**Dilution:** The unlawful blending of a marked petroleum product with a similar but unmarked petroleum product, so that the marker concentration is lower than the quantity allowed.

**Diversion:** Delivery of petroleum products to unauthorised delivery points or locations.

**Enterprise Relational Database Management System (ERDMS)** – A digital system used by NPA to capture loading transactions and integrate with customs systems for monitoring and tax compliance.

**Electronic Cargo Tracking System (ECTS)** – A monitoring system installed on BRVs to track petroleum product distribution in transit, using electronic seals and sensors.

**Fuel Marker** – A proprietary chemical substance introduced into petroleum products in small quantities to preserve quality and detect adulteration.

**Fuel Marking** – The process of introducing a marker into petroleum products to ensure quality and accountability.

**Gantry:** A specialised structural framework designed for the safe, fast, and accurate loading of petroleum products into BRVs.

**Premix Fuel** – A petroleum product blended for use in outboard motors and fishing vessels.

**Marker:** A special chemical substance for which a petroleum product marking company has proprietary rights, and which is introduced into a petroleum product in small quantities without affecting the quality of the product.

**Marking of petroleum products:** The introduction of a chemical substance in small quantities into a petroleum product.

**Retail outlets**: Delivery points, often referred to as filling stations, where customers purchase petroleum products for their vehicles and machines.

**Uniform Petroleum Pricing Fund (UPPF)** – A scheme established to subsidise transportation costs and ensure uniform petroleum product prices nationwide.

**Underground Storage Tank (UST)** – Tanks located beneath retail outlets used to store petroleum products before sale.

**Volumetric Tracking System (VTS)** – A legacy system used by NPA to monitor petroleum product volumes before migration to the ECTS.

# ACRONYMS AND ABBREVIATIONS

| Acronym | Full Form | Description |
|---|---|---|
| **ACEP** | Africa Centre for Energy Policy | Policy think-tank focused on energy governance and accountability. |
| **AGO** | Automotive Gas Oil | Commonly referred to as diesel fuel. |
| **ATGS** | Automatic Tank Gauging System | Computerised system for monitoring fuel levels, temperature, and water in underground storage tanks. |
| **ATK** | Aviation Turbine Kerosene | Fuel used in aircraft engines. |
| **BRV** | Bulk Road Vehicle | Specialised truck used to transport petroleum products. |
| **BRVs** | Bulk Road Vehicles | Plural form of BRV. |
| **CBOD** | Chamber of Bulk Oil Distributors | Industry association representing bulk oil distributors in Ghana. |
| **CEO** | Chief Executive Officer | Head of an organisation. |
| **COPEC** | Chamber of Petroleum Consumers | Advocacy group for petroleum consumers in Ghana. |
| **ECTS** | Electronic Cargo Tracking System | Monitoring system installed on BRVs to track petroleum product distribution in transit. |
| **ERDMS** | Enterprise Relational Database Management System | Digital system used by NPA to capture loading transactions and integrate with customs systems. |
| **GDP** | Gross Domestic Product | Measure of the total economic output of a country. |
| **GRA** | Ghana Revenue Authority | National tax administration body. |
| **HR** | Human Resources | Department responsible for staffing and personnel management. |
| **ICUMS** | Integrated Customs Management System | Customs platform integrated with ERDMS for monitoring and tax compliance. |
| **ISSAI** | International Standards of Supreme Audit Institutions | Standards guiding public sector auditing. |

| Acronym | Full Form | Description |
|---|---|---|
| **L.I.** | Legislative Instrument | Subsidiary legislation enacted under Ghanaian law. |
| **NPA** | National Petroleum Authority | Regulator of Ghana's downstream petroleum sector. |
| **NTL** | Nationwide Technologies Limited | Service provider contracted by NPA for fuel marking. |
| **OMCs** | Oil Marketing Companies | Companies licensed to sell petroleum products at retail outlets. |
| **PPMS** | Petroleum Product Monitoring and Surveillance | Department responsible for monitoring petroleum product quality. |
| **PMS** | Premium Motor Spirit | Commonly referred to as petrol. |
| **QAD** | Quality Assurance Directorate | NPA department responsible for ensuring petroleum product quality. |
| **QCU** | Quality Control Unit | Sub-unit responsible for technical validation of petroleum product quality. |
| **RASL** | Rock Automation Solutions Limited | Service provider contracted by NPA for ATGS installation and maintenance. |
| **RON** | Research Octane Number | Measure of petrol's resistance to knocking. |
| **SOP** | Standard Operating Procedure | Documented process for consistent operations. |
| **UPPF** | Uniform Petroleum Pricing Fund | Scheme established to subsidise transportation costs and ensure uniform petroleum product prices nationwide. |
| **USD** | United States Dollars | Official currency of the United States, used in international transactions. |
| **UST** | Underground Storage Tank | Tank located beneath retail outlets used to store petroleum products. |
| **VTS** | Volumetric Tracking System | Legacy system used by NPA to monitor petroleum product volumes before migration to ECTS. |

# EXECUTIVE SUMMARY

The downstream petroleum sector plays a key role in Ghana's economy, providing fuel for transportation, power generation, and industrial activities. The National Petroleum Authority (NPA) was established under the National Petroleum Authority Act, 2005 (Act 691), to regulate the downstream petroleum industry through licensing, monitoring, and enforcement of operational standards among petroleum service providers.

2. The sector generated an average annual value of approximately GH¢35 billion over the past seven years. In 2023, the industry recorded a monetary value of over GH¢71 billion, representing approximately 8.4 percent of the country's GDP. Despite the sector's significant contribution to revenue generation, it is estimated that between 2015 and 2019, the Government of Ghana lost approximately GH¢4.7 billion in tax revenue due to illegal activities within the petroleum sector.

3. In view of the strategic importance of the sector, as well as the associated risks, the Auditor-General commissioned an audit into the operations of the National Petroleum Authority, in accordance with Sections 13 (e) and 16 of the Audit Service Act, 2000 (Act 584).

**What we did**

4. The audit assessed NPA's regulatory activities relating to the transportation and tracking of petroleum products, product marking, and monitoring of retail outlets to ensure the quality and integrity of petroleum products supplied to consumers. The audit covered the period from January 2023 to April 2026.

5. Specifically, we examined whether the NPA:

   a) ensured effective transportation and tracking of petroleum products,

b) effectively marked petroleum products to safeguard product quality and facilitate accountability, and
c) adequately monitored retail outlets to prevent fuel adulteration and the sale of substandard products.

6. To achieve the audit objectives, we reviewed relevant records and reports, interviewed key officials, inspected selected retail outlets and depots, and observed processes involved in loading, marking, and tracking of petroleum products at the depots.

**What we found**

**Transportation and tracking of petroleum products**

7. The Licensing Department of NPA did not adequately enforce licensing requirements for Bulk Road Vehicles (BRVs) involved in the transportation and distribution of petroleum products. As of 9 April 2026, only 2,514 out of the 4,904 BRVs, representing 51.3 percent, had valid licenses to distribute petrol and diesel across the country. Also, the Uniform Petroleum Pricing Fund (UPPF) Secretariat of NPA did not track the distribution of Aviation Turbine Kerosene (ATK). Therefore, there was no assurance that all petroleum products were transported by authorised operators under conditions that promote safety, accountability, and product quality.

**Marking of petroleum products**

8. The NPA did not ensure consistency between the volumes of petroleum products marked and those ultimately distributed. We also identified the distribution of approximately 87 million litres of unmarked petrol. This weakened assurance over fuel quality and created a risk that petroleum products may be distributed outside regulatory controls, potentially resulting in revenue losses to the State.

**Monitoring of the Retail Outlets**

9. Although the NPA monitored retail outlet operations, it did not ensure the installation and effective functioning of Automatic Tank Gauging Systems (ATGS) at all retail outlets. As a result, consumers were left exposed to the risk of purchasing substandard petroleum products from outlets where product quality could not be effectively monitored. In addition, the Authority did not independently verify maintenance activities performed on installed ATGS before making payments to the service provider, raising concerns about value for money.

**What we recommended**

10. We recommended that Management of the NPA should ensure that:

a) the Director of Licensing deactivates from the Enterprise Relational Database Management System (ERDMS), all BRVs whose licenses expired after the 31 March annual renewal deadline,

b) the UPPF representatives stationed at depots must verify the validity of BRV licenses before permitting vehicles to load petroleum products,

c) the UPPF Secretariat tracks all petroleum products, including Aviation Turbine Kerosene (ATK) and Naphtha, in accordance with L.I. 2251,

d) the Quality Assurance Directorate and the UPPF Secretariat collaborate to ensure consistency between the volumes of petroleum products marked and those distributed,

e) the NPA must refund US$2,688.09 relating to 638,500 litres of petrol that were marked but not distributed into the Auditor-General's Recovery Account by 31 December 2026 and submit evidence of payment for audit verification,

f) the NPA identifies, repairs, and restores all non-functional ATGS by September 2026 and expedite the installation of ATGS at all remaining retail outlets by the end of 2026, and

g) the Finance Directorate verifies maintenance work performed on ATGS before processing payments to service providers to ensure that payments reflect actual services rendered.

**Management Response**

11. Management of NPA acknowledged the audit findings and has taken steps to implement the recommendations. The response is attached to this report as Appendix 'H'.

# CHAPTER ONE

## Introduction

### 1.1 Reasons for the Audit

The oil and gas sector is one of the largest and most complex sectors in Ghana. The sector comprises the upstream (exploration and production), midstream (transportation and storage), and downstream (refining, distribution, and sale of petroleum products). The downstream petroleum sector plays a critical role in supplying fuels for transportation, power generation, and industrial use, among others. The sector involves key players, including oil marketing companies, bulk petroleum distributors, and retail outlets. Given its importance to economic activity and energy security, effective regulation is essential to ensure product quality, pricing compliance, and uninterrupted supply of petroleum products. In Ghana, the National Petroleum Authority (NPA) regulates the downstream sector and is responsible for licensing, monitoring, and enforcing compliance among industry players.

2. A report published on the NPA's website on 25 July 2024 indicates that the industry generated an average annual value of GH¢35billion over the past seven years. In 2023, the industry recorded a monetary value of over GH¢71billion, representing approximately 8.4 percent of the country's GDP[1].

3. Despite the sector's substantial contribution to revenue generation, it is estimated that between 2015 and 2019, the Government lost GH¢4.7billion in tax revenue due to illegal activities in the petroleum sector, such as unauthorised third-party deliveries, fake

[1] www.npa.gov.gh/ghana-increases-export-of-petroleum-products-to-neighbouring-countries/ (Date accessed: 17 March 2026 @ GMT 21:40)

receipts, and smuggling[2]. Furthermore, in January 2025, the Africa Centre for Energy Policy (ACEP) reported that weak accountability in the management of funds such as the Unified Petroleum Price Fund (UPPF) had contributed to these challenges[3].

4. The Chamber of Bulk Oil Distributors (CBOD) has also reported instances of fuel adulteration by some petroleum service providers. This malpractice not only deprives consumers of value for money but also causes damage to vehicle engines and industrial machinery. Although the NPA reported a decline in retail outlet failure rates from 32 percent in 2013 to 2.51 percent in 2021, compliance gaps persist[4]. For instance, in March 2025, the Chief Executive Officer (CEO) of NPA indicated that fuel smuggling and selling of adulterated fuels persisted, and the Authority would continue to take enforcement actions against offenders[5]. Similarly, the Chamber of Petroleum Consumers in Ghana (COPEC) has reported illegal practices, including mixing petrol and diesel with low-grade petroleum products at the retail outlets to increase sales and returns[6].

5. In response to these developments, the Auditor-General, pursuant to Article 187(2) of the 1992 Constitution and Section 13(e) and 16 of the Audit Service Act, 2000 (Act 584), commissioned an audit into the operations of the National Petroleum Authority. The audit aimed to assess how the NPA ensured the quality of petroleum products at retail outlets across the country.

[2] www.cbodghana.com/govt-lost-ghs4-7bn-in-taxes-to-illegal-petroleum-sector-activities-bawumia/ (Date: 17 March 2026, GMT 21:40)
[3] www.acep.africa/wp-content/uploads/2025/01/Downstream-Petroleum-Products-Taxation-A-Call-to-Action-ACEP-2025.pdf (Date: 16 March 2026, GMT 11:05)
[4] www.cbodghana.com/5285-2/ (Date: 17 March 2026, GMT 21:47)
[5] www.npa.gov.gh/npa-boss-vows-to-flash-out-illegal-fuel-traders/ (Date: 19 March 2026, GMT 12:54)
[6] www.graphic.com.gh/news/general-news/copec-allergies-fuel-adulteration-are-causes-of-explosion.html (Date: 17 March 2026, GMT 21:47)

### 1.2 Purpose of the audit

6. The purpose is to assess whether NPA's regulatory activities in petroleum product distribution, product marking, and monitoring have ensured the quality of petroleum products at the retail outlets.

### 1.3 Scope of the audit

7. The audit focused on the National Petroleum Authority's activities from January 2023 to April 2026 in relation to the distribution of petroleum products (transporting and tracking of petroleum products), product marking, and monitoring the activities of retail outlets to prevent adulteration of petroleum products.

8. The audit was conducted at the NPA's headquarters in Accra and at its offices across five regions of Ghana. These included offices in the Upper East, Savannah, Ashanti, Northern, and Western Regions. We also visited four depots and a total of 30 retail outlets in the regions.

### 1.4 Audit objectives

9. The objectives of this audit were as follows:

a) to determine the extent to which the National Petroleum Authority (NPA) ensured effective transportation and tracking of petroleum products,
b) to determine whether petroleum products were effectively marked to ensure the quality on the market, and
c) to assess whether NPA monitored the activities of retail outlets to prevent adulteration of petroleum products.

### 1.5 Audit questions and assessment criteria

10. Table 1 presents the audit questions, assessment criteria, and the sources from which the criteria were derived.

**Table 1: Audit questions, assessment criteria, and sources of the criteria**

| Audit Questions | Assessment Criteria | Source(s) |
|---|---|---|
| To what extent has NPA ensured effective transportation and tracking of petroleum products? | The NPA is required to:<br>• ensure that bulk road vehicle operators obtain a license for bulk transportation of petroleum products;<br>• Use the bulk road vehicle tracking system to track and monitor the distribution of petroleum products under the unified petroleum price fund scheme. | • Section 11(1), 15(1) and Section 28 (a) of the National Petroleum Authority Act, 2005, (Act 691)<br>• Regulation 4 (1) & (2), 5(2a), and 8(1) of the National Petroleum Authority (Bulk Road Vehicle Tracking And Volume Monitoring) Regulations, 2016 (L.I. 2251) |
| To what extent has NPA ensured that petroleum products are effectively marked to safeguard the quality of petroleum products on the market? | The NPA is required to establish a petroleum product marking scheme to detect and prevent the adulteration of petroleum products and to monitor and protect their quality. | • Regulation 1, 3(1) and 5(b) of the National Petroleum Authority (Petroleum Product Marking) Regulations, 2012 (L.I. 2187) |
| To what extent has NPA monitored the activities of retail outlets to prevent adulteration of petroleum products? | The NPA is required to monitor and ensure the supply of quality petroleum products at retail outlets. | • Section 2(2)(f) &(g) of the National Petroleum Authority Act, 2005, (Act 691)<br>• Public Procurement Act, 2003 (Act 663) as amended by (Act 914) |

## 1.6 Audit standards, methodology, and sampling

### 1.6.1 Audit standards

11. We carried out the audit in accordance with the International Standards of Supreme Audit Institutions (ISSAIs), relevant to Performance Auditing. These are *ISSAI 100, Fundamental Principles of Public Sector Auditing, ISSAI 300, Performance Audit Principles, and ISSAI 3000, Performance Audit Standards*. These standards require that the audit be planned and performed to obtain sufficient and appropriate evidence to provide a reasonable basis to support the findings and conclusions and answer the audit objectives.

### 1.6.2 Audit Methodology

12. The team reviewed documents, interviewed key persons involved in the distribution, marking, and monitoring the activities of retail outlets. In addition, we carried out inspections and observations to collect data/information on NPA's activities in ensuring quality petroleum products at the retail outlets.

**a. Document review**

13. We reviewed documents relevant to the area of audit. This included NPA's annual work programmes, annual reports, budgets, contract documents, evaluation reports, policies, regulations, manuals, internal audit reports, maintenance plans, correspondence, and reports on monitoring and inspections. The documents we reviewed and the reasons for reviewing them are attached as Appendix A.

**b. Interview**

14. We interviewed the Head of the Licensing Department, Quality Assurance Directorate, Finance Department, and Internal Audit. We also interviewed the Uniform Petroleum Pricing Fund (UPPF) Coordinator, Officers at the depots and retail outlets we visited, representatives of the product marking and tracking companies, Drivers

of bulk road vehicles, and Consumers of petroleum products. The interviews helped to clarify issues gathered from the documents we reviewed. All persons interviewed are detailed in Appendix B.

**c. Inspections**

15. We inspected four depots and 30 retail outlets (refer to Appendix C). At the Retail outlets, we tested the presence of water in the petroleum products using the dip stick and water paste. The results obtained were compared with readings from the Automatic Tank Gauging System (ATGS) at the respective outlets to assess the accuracy of the ATGS readings.

**d. Observation**

16. We observed the processes involved in loading, marking, and tracking of petroleum products at the depots and testing of markers in the petroleum products at the retail outlets.

### 1.6.3 Sampling

17. According to NPA's database at the time of the audit, there were 29 operational depots and 4,000 retail outlets across the 16 regions of the country. To ensure geographical representation, we adopted a stratified sampling approach by grouping the regions into three zones: Northern, Middle, and Southern Zones.

18. From the three zones, we randomly selected five regions. Three from the Northern Zone and one each from the middle and southern zones:

- Northern Zone: Upper East, Northern, and Savanna Regions,
- Middle Zone: Ashanti Region, and
- Southern Zone: Western Region.

19. From the three zones, we purposively selected a total of four depots. These were located in Bolgatanga and Buipe (Northern Zone), Kumasi (Middle Zone), and Takoradi (Southern Zone). Activities at the selected depots were examined to determine whether the National Petroleum Authority (NPA) ensured that petroleum products were marked after loading into Bulk Road Vehicles (BRVs) and that the BRV compartments were sealed to prevent tampering during distribution.

20. We randomly selected 30 retail outlets out of the 4,000 outlets. The distribution of the sampled outlets within the Zones is as follows:

- 18 outlets from the Northern Zone,
- 6 outlets from the Middle Zone and
- 6 outlets from the Southern Zone.

# CHAPTER TWO

# DESCRIPTION OF NPA'S OPERATION IN ENSURING QUALITY PETROLEUM PRODUCTS AT THE RETAIL OUTLETS

## 2.1 Historical background

21. Ghana's petroleum downstream industry originated in the 20th century, evolving from colonial-era foreign domination by multinational companies to a state-regulated industry focused on refining and distribution.

22. The NPA began as the National Petroleum Tender Board in 2003 with limited functions focused on reviewing petroleum product supply tenders. In 2005, the government, through Act 691, established the National Petroleum Authority (NPA) to regulate the downstream petroleum industry. The NPA focuses on licensing and monitoring the infrastructure and operational activities of petroleum service providers, ensuring the quality, integrity, and efficient pricing of petroleum products while promoting fair competition among industry players.

23. To achieve its mandate, the NPA established the Uniform Petroleum Pricing Fund (UPPF) in 2005 to subsidise transportation costs for petroleum products from refineries or depots to retail outlets and ensure uniform prices nationwide. The NPA also commenced a petroleum product marking operations in February 2013; the Enterprise Relational Database Management System (ERDMS) in October 2018, the Electronic Cargo Tracking System (ECTS) in January 2020, and the Automatic Tank Gauging System (ATGS) at retail outlets in April 2021. These measures were introduced to ensure petroleum product quality, monitor bulk road vehicles in real-time, and monitor fuel stocks. The ERDMS was integrated with the Ghana Revenue Authority's (GRA) Integrated Customs Management System (ICUMS) to

provide real-time monitoring at the depots and to ensure accurate calculation and collection of taxes. The Authority also implemented a Zonalisation Policy, which divided the country into zones (e.g., Accra, Kumasi, Buipe, Bolgatanga) in September 2023 to ensure consistent, secure, and efficient distribution of petroleum products nationwide.

### 2.2 Vision of NPA

24. The vision of the National Petroleum Authority (NPA) was to be a catalyst for economic transformation and growth.

### 2.3 Mission of NPA

25. The mission of the National Petroleum Authority (NPA) was to regulate, oversee, and monitor the petroleum downstream industry in Ghana for efficiency, growth, and stakeholder satisfaction.

### 2.4 Mandate

26. Section 2(1) of the National Petroleum Authority Act, 2005 (Act 691), mandates the Authority to regulate, oversee, and monitor activities in the petroleum downstream industry and, where applicable, carry this out in pursuance of the prescribed petroleum pricing formula.

### 2.5 Functions

27. The functions of NPA in ensuring quality petroleum products at retail outlets include:

- ensuring adherence to quality standards,
- regulating product pricing using the prescribed petroleum pricing formula,
- promoting fair competition among industry players, and
- protecting consumer interests.

## 2.6 Funding

28. The National Petroleum Authority generates funds for its operations through Internally Generated Funds (IGF). Table 2 shows the funds budgeted, received, and expended by the Quality Assurance Department, Licensing Department and the UPPF for the period 1 January 2023 to 28 February 2026. The total amounts the three departments received exceeded the amounts budgeted and expended.

29. Within the period, the Quality Assurance Department recorded a total budget of GH¢1.41 billion, total receipts of GH¢1.57billion, and total expenditure of GH¢1.07 billion, resulting in a cumulative positive variance of GH¢495.88 million. Receipts exceeded budgetary allocations in all the years, while expenditure remained lower than receipts, leading to consistent annual surpluses.

30. The Licensing Department recorded a total budget of GH¢21.63 million, total receipts of GH¢64.24 million, and total expenditure of GH¢26.52 million, resulting in a cumulative positive variance of GH¢37.71million. Receipts significantly exceeded budgeted amounts in all the years reviewed, while expenditure remained relatively low compared to receipts.

31. The UPPF recorded the highest financial activity among the three departments, with a total budget of GH¢10.92 billion, total receipts of GH¢13.22 billion, and total expenditure of GH¢11.17 billion, resulting in an overall positive variance of GH¢2.05 billion. Receipts consistently exceeded budgetary allocations throughout the period. Although expenditure levels were high, receipts remained higher, resulting in positive variances each year.

**Table 2: Budget, receipt and expenditure for the period 2023-2025**

| Quality Assurance Financial Records from 1 January 2023 to 28 February 2026 | | | | |
|---|---|---|---|---|
| **Year** | **Budget (B) GH¢** | **Receipts (R) GH¢** | **Expenditure (E) GH¢** | **Variance (R-E) GH¢** |
| **2023** | 420,192,633.00 | 350,142,832.45 | 274,036,249.09 | 76,106,583.36 |
| **2024** | 417,048,173.00 | 521,220,250.69 | 404,553,834.83 | 116,666,415.86 |
| **2025** | 503,203,547.00 | 590,777,795.88 | 368,795,561.63 | 221,982,234.25 |
| **2026** | 67,822,007.00 | 105,780,640.86 | 24,657,118.31 | 81,123,522.55 |
| **Total** | **1,408,266,360.00** | **1,567,921,519.88** | **1,072,042,763.86** | **495,878,756.02** |

***Source: National Petroleum Authority's Financial Records, 2023-2026.***

| Licensing Dept. Financial Records from 1 January 2023 to 28 February 2026 | | | | |
|---|---|---|---|---|
| **Year** | **Budget (B) GH¢** | **Receipts (R) GH¢** | **Expenditure (E) GH¢** | **Variance (R-E) GH¢** |
| **2023** | 5,853,260.00 | 16,061,556.29 | 14,224,994.11 | 1,836,562.18 |
| **2024** | 6,108,207.00 | 28,659,904.66 | 5,344,375.81 | 23,315,528.85 |
| **2025** | 7,037,749.00 | 16,289,199.96 | 6,188,146.01 | 10,101,053.95 |
| **2026** | 2,625,833.03 | 3,225,400.00 | 765,740.10 | 2,459,659.90 |
| **Total** | **21,625,049.03** | **64,236,060.91** | **26,523,256.03** | **37,712,804.88** |

***Source: National Petroleum Authority's Financial Records, 2023-2026.***

| UPPF Financial Records from 1 January 2023 to 28 February 2026 | | | | |
|---|---|---|---|---|
| **Year** | **Budget (B) GH¢** | **Receipts (R) GH¢** | **Expenditure (E) GH¢** | **Variance (R-E) GH¢** |
| **2023** | 2,301,050,354.00 | 3,055,691,105.62 | 2,354,152,749.69 | 701,538,355.93 |
| **2024** | 3,298,816,654.00 | 4,332,406,180.62 | 3,298,816,655.70 | 1,033,589,524.92 |
| **2025** | 4,554,812,340.00 | 4,827,708,720.43 | 4,672,789,140.00 | 154,919,580.43 |
| **2026** | 763,016,989.00 | 1,003,171,876.99 | 846,177,460.40 | 156,994,416.59 |
| **Total** | **10,917,696,337.00** | **13,218,977,883.66** | **11,171,936,005.79** | **2,047,041,877.87** |

***Source: National Petroleum Authority's Financial Records, 2023-2026***.

## 2.7 Organisational Structure

32. The organisational structure of NPA in relation to its operations in ensuring quality petroleum products at the retail outlets is presented as Appendix 'D'.

## 2.8 Key Players and their Responsibilities

33. The key players involved in ensuring quality petroleum products at the retail outlets are presented in Appendix E:

## 2.9 Stakeholders and their responsibilities

34. The stakeholders and their responsibilities are presented as Table 3.

**Table 3: Stakeholders and their responsibilities**

| Stakeholders | Responsibilities |
|---|---|
| Ministry of Energy | • Formulates, implements, monitors, and evaluates policies that guide the regulatory actions of the NPA in the petroleum downstream sector.<br>• Supervises and coordinates the activities of the National Petroleum Authority (NPA) to ensure efficient, fair, and safe downstream operations.<br>• Evaluates the performance of the NPA in regulating the downstream industry to ensure consumer value for money and the sector's profitability. |
| Ministry of Finance | • Budgetary allocation and control.<br>• Collaborates with the NPA to ensure that pricing mechanisms are in line with national fiscal goals.<br>• Manages and reports on petroleum revenues. |
| Ghana Revenue Authority | • Ensures that all taxes due on petroleum products are accurately assessed and collected. |
| Ghana Standards Authority | • Develops and enforces standards to ensure petroleum products meet the required quality standards. |
| Environmental Protection Agency | • Issues environmental permits and ensures adherence to environmental standards. |
| Ghana National Fire Service | • Ensures fire safety and prevention within the petroleum downstream sector. |
| Metropolitan, Municipal, and District Assemblies | • Oversee land use planning, permitting and compliance with local regulations for petroleum infrastructure. |

## 2.10 Process description of the operations of NPA

### Process involved in the distribution of petroleum products

### Placing order for petroleum products

35. Oil Marketing Companies (OMCs) order petroleum products through the Enterprise Relational Database Management System (ERDMS) which is used for the direct placement and scheduling deliveries. Bulk Distribution Companies (BDCs) review and approve the order within the system, while the depot managers validate the order on the system. A designated Customs Officer issues a release and validates the order on the system.

### Documentation and pre-loading checks

36. Once the order is validated, the UPPF representative inspects the BRVs to check the NPA license, tracking devices, road worthiness and safety protocols. The UPPF representative also checks the order numbers, product type, intended destination and valid calibration certificate to ensure the drivers have the necessary documentation to load.

### Transporting and tracking of petroleum products

37. The NPA, Rock Africa and the OMCs track the movement of the BRVs in real-time through Electronic Cargo Tracking System (ECTS) to prevent diversion, adulteration and dilution of petroleum products. The system uses GPS, volume sensors, and web-based software to track transportation from 16 major depots to retail outlets nationwide.

### Process involved in the marking of petroleum products

38. After the pre-loading checks, the UPPF officer grants clearance to the BRV drivers to load the petroleum products at the gantry. The BRVs are then driven to the marking section of the depot, where markers are introduced into the products by Nationwide Technologies Limited (NTL).

**Marking of petroleum products**

39. Nationwide Technologies Limited (NTL) retrieve data on the orders from the OMCs through the ERDMS, the quantity of petroleum product in each compartment of the BRV, the type of product, the names of the transporter, OMC, retail outlet, and BDC, as well as the truck registration number, loading order number, depot tag number, and the name of the BRV driver. The NTL inspects the loaded BRV to ensure that it corresponds with the information retrieved from the ERDMS. A ratio of marker concentration is introduced into the products based on the quantity of products in each compartment and a marking certificate issued to the BRV driver.

**Sealing of the compartments on the BRVs**

40. Rock Africa seals the hatches and discharge valves on the BRVs with electronic seals to ensure product integrity during transport.

**Process involved in monitoring the activities of retail outlets**

41. At the regional level, the Quality Assurance Directorate (Quality Control) monitors depot operations to ensure continued compliance with established quality and regulatory requirements. In addition, the Quality Assurance Directorate (PPMS) conducts monthly and bi-monthly monitoring visits to retail outlets. During these visits, the PPMS tests the concentration of markers and the presence of water in petroleum products to determine whether the products have been diluted or adulterated. Samples of products that fail the marker tests are forwarded to the NPA's regional laboratory for confirmatory testing. Following an initial failed test, PPMS officials in the regions lock the dispensers at the affected retail outlets to prevent further sales. The failed samples are subsequently submitted to the NPA Head Office for further laboratory analysis. Where the products fail the subsequent

tests, the NPA imposes sanctions on the OMCs whose retail outlets failed the marker tests.

42. The National Petroleum Authority (NPA) has also installed Automatic Tank Gauging Systems (ATGS) at retail outlets to monitor petroleum product quality, stock levels, and curb illicit activities such as fuel smuggling. Rock Africa monitors the ATGS remotely from its command centre at the NPA Head Office.

# CHAPTER THREE

## FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 3.0 Introduction

43. This chapter presents the findings, conclusions, and recommendations arising from the audit of the National Petroleum Authority's operations in ensuring the quality of petroleum products at retail outlets based on review of documents, interviews, inspections and observations during our field work. The findings are presented under the following sub-headings:

a) Transportation and tracking of petroleum products,
b) Marking of petroleum products and
c) Monitoring the activities of retail outlets.

### 3.1 Transportation and tracking of petroleum products

44. According to Section 11(1) of the NPA Act, 2005 (Act 691), a person shall not engage in business or commercial activity in the downstream industry unless that person has been granted a license for that purpose by the Board. Based on this, Section 15 of the NPA Act, 2005 (Act 691) requires the National Petroleum Authority (NPA) to issue a license to Bulk Road Vehicle (BRV) operators for the transportation of petroleum products. In addition, NPA directives require BRV operators to renew the licenses of their trucks by 31 March each year. This is to enable NPA to regulate the activities of BRV owners to reduce fuel spillages, leakages, accidents, fires, and explosions during petroleum product distribution.

45. We noted from the 2025 Uniform Petroleum Pricing Fund (UPPF) Annual Report and an interview with the Acting Director of the Licensing Department that 5,373 Bulk Road Vehicles (BRVs) were licensed to distribute petroleum products, out of which 4,904 were

licensed to distribute petrol and diesel. However, as of 9 April 2026, only 2,514 of the 4,904 BRVs (representing 51.3 percent) held valid licenses to distribute petrol and diesel across the country. We further noted that the licenses of the BRVs expired on 31 December of the respective licensing years. The NPA gave operators a grace period up to 31 March of the ensuing year to renew them. Nevertheless, some operators had not renewed their licenses within the stipulated grace period.

46. For instance, we inspected a total of 25 BRVs at various depots loading petroleum products and at filling stations distributing them, and noted that nine had expired licenses. Our review of the database on licensed BRVs on 9 April 2026 indicated that the licenses of the nine BRVs had not been renewed. Table 4 provides details.

**Table 4: BRVs operating with expired licenses as of 9 April 2026**

| No. | BRV Registration Number | Licensed expiry date | Date of inspection | COMMENT | Location of inspection |
|---|---|---|---|---|---|
| 1 | GT 7045-25 | 31 December 2025 | 9 March 2026 | License expired | Naagamni Filling Station, Navrongo |
| 2 | NR 5384-23 | 31 December 2025 | 10 March 2026 | License expired | Akara Energy Filling Station, Tamale |
| 3 | GT 6776-14 | 31 December 2025 | 11 March 2026 | License expired | Petrosol Filling Station, Buipe |
| 4 | GT 8073 – 22 | 31 December 2025 | 12 March 2026 | License expired | Santasi Goil Service Station, Kumasi |
| 5 | GT 9030-24 | 31 December 2025 | 11 March 2026 | License expired | Buipe Depot |
| 6 | GN 9030-24 | 31 December 2025 | 11 March 2026 | License expired | Buipe Depot and Total Energies Service Station, Buipe |
| 7 | GT 5055-24 | 31 December 2025 | 11 March 2026 | License expired | Buipe Depot |
| 8 | GT 9943-23 | 31 December 2025 | 11 March 2026 | License expired | SO Filling Station, Buipe |
| 9 | WR 100-16 | 31 December 2025 | 11 March 2026 | License expired | Petrosol Filling Station, Buipe |

***Source: Audit team's inspection, March 2026.***

47. We expected the NPA to have deactivated the unlicensed BRVs from the ERDMS to prevent them from loading and distributing petroleum products, but the NPA allowed BRVs with expired licenses to operate. The Acting Director of Licensing indicated during our exit meeting on 10 April 2026 that these BRVs had not been deactivated; instead, they had been granted a further extension to renew their licenses. According to the Acting Director, deactivating the BRVs would adversely affect the distribution of petroleum products nationwide.

48. Consequently, unauthorised BRVs participated in fuel distribution, and there was no assurance that the affected BRVs were in good condition to safeguard the quality of fuel as well as public and environmental safety.

49. The NPA is also required to install tracking devices on BRVs to monitor the distribution of petroleum products as stipulated in Regulations 4(1), 5(2a), and 8(1) of the National Petroleum Authority (Bulk Road Vehicle Tracking and Volume Monitoring) Regulations, 2016 (L.I. 2251). This was to ensure that the integrity of petroleum products was protected during transit from depots to retail outlets.

50. We noted from the Contract for the Design, Supply, Installation, Operations, and Maintenance of the National Fuel Monitoring System (2020) that NPA engaged Rock Africa in 2020 to install Electronic Cargo Tracking Systems (ECTS) on the BRVs and track the BRVs in transit from its Command Centre. We observed during our inspections at the retail outlets and depots that all 25 bulk road vehicles (BRVs) inspected were fitted with functioning tracking systems, with an electronic seal at each compartment. We also noted that Rock Africa electronically sealed the hatches and discharge valves of the BRVs with sensors after loading petroleum products at the depots to prevent adulteration of petroleum products during transit from depots to retail outlets. However, we noted

that there were challenges with the tracking system. For instance, our review of the UPPF Annual Reports from 2023 to 2025 indicated that NPA did not track 48,678 out of 1,092,440 trips. Table 5 provides details.

**Table 5: Analysis on tracking of BRVs**

| Year | Number of BRVs | Number of BRVs with tracking system | Deliveries/ Trips (A) | Trips that were tracked (B) | Trips that were not tracked (C=A-B) |
|---|---|---|---|---|---|
| **2023** | 5,033 | 5,033 | 325,410 | 290,161 | 35,249 |
| **2024** | 5,460 | 5,460 | 367,343 | 359,244 | 8,099 |
| **2025** | 6,142 | 6,142 | 399,678 | 394,348 | 5,330 |
| **Total** | | | **1,092,440** | **1,043,753** | **48,678** |

***Source: UPPF Annual Reports, 2023 to 2025.***

51. According to the UPPF Coordinator, the 48,678 deliveries that were not tracked pertained to distributors of Aviation Turbine Kerosene (ATK) and Naphtha, both of which were excluded from the tracking system because they did not attract UPPF margins. However, Section 8(1) of L.I. 2251 requires NPA to track and monitor the distribution of diesel, petrol, kerosene, premix fuel, liquefied petroleum gas, marine gasoil, or any other petroleum product that the Authority may determine under the UPPF Scheme. Also, there was no directive instructing that ATK and Naphtha products should not be tracked. Tracking the delivery of ATK to ensure the supply of quality fuel to the Aviation Industry was important for securing the safety of the air transportation system. Tracking ATK would also prevent diversion of the product for other purposes, such as cleaning or degreasing industrial machines.

52. The coordinator further stated that the system only tracked petroleum products that attracted UPPF margins. However, from our review of the database on untracked BRVs, we noted that in 2023, the NPA did not track 544 deliveries of petroleum products that attracted UPPF margins. The UPPF Coordinator attributed this to NPA's migration from the Volumetric Tracking System (VTS) to the Electronic Cargo Tracking System (ECTS).

53. We further noted from NPA's data on violations that, out of the 1,092,440 trips undertaken from 2023 to 2025, the NPA detected 582 instances of diversion of 9,781,600 litres of petrol and diesel in 2024 and 2025. This indicates that weaknesses in tracking BRVs exposed the transportation and distribution of petroleum products to the risk of diversion. According to Section 20 (6) of the National Petroleum Authority (Bulk Road Vehicle Tracking and Volume Monitoring) Regulations, 2016 (L.I. 2251), a person who diverts petroleum products commits an offence and is liable on summary conviction to a fine of not less than two thousand five hundred penalty units and not more than five thousand penalty units, or to a term of imprisonment of not less than two years and not more than five years, or to both. The NPA informed us that it rejected the freight claims of OMCs that diverted petroleum products as a penalty for the diversion.

**Conclusion**

54. The Licensing Department of NPA did not ensure that only BRVs with valid licenses loaded and distributed petroleum products to retail outlets. Also, the NPA did not track the distribution of Aviation Turbine Kerosene (ATK). Therefore, there was no assurance that NPA effectively regulated the activities of all BRV owners to ensure quality and safety in petroleum product distribution.

**Recommendation**

55. We recommended that the:

a) Director of Licensing must deactivate BRVs whose licenses expire after the 31 March deadline from the ERDMS,
b) The UPPF representatives at the depots must inspect the licenses on the BRVs to ensure only valid BRVs are permitted to load petroleum products, and
c) The UPPF must track all petroleum products (including ATK and Naphtha products) as required by L.I. 2251.

***Management response***

*56. Management of NPA acknowledged the audit findings and has taken steps to implement the recommendations. As of 31 May 2026, approximately ninety-three percent (93%) of the BRVs licensed in 2025 had successfully completed the 2026 licensing process, and the remaining seven percent (7%) of BRVs that failed to regularise their licenses were subsequently suspended in the ERDMS and were not permitted to participate in the loading, transportation, or distribution of petroleum products.*

*57. Regarding tracking of petroleum products, Management will take the necessary steps to ensure that ATK deliveries are brought under the Electronic Cargo Tracking System (ECTS) framework before the end of 2026 through the installation of IVM devices on ATK/BRVs. Responses specific to this finding are presented in Appendix 'H'.*

### 3.2 Marking of petroleum products

58. Regulation 1 of the NPA Petroleum Product Marking Regulations, 2012 (L.I. 2187) provides for a petroleum product marking scheme to preserve and protect the quality and purity of petroleum products, detect and prevent the adulteration of petroleum products, and monitor the quality and purity of petroleum products. Pursuant to this requirement and Regulation 3(1), NPA engaged a product marking service provider to mark petroleum products after they are loaded onto BRVs at the depots and before they are transported to retail outlets. This was intended to preserve and protect the quality of petroleum products and ensure that consumers receive value for money at the pumps.

59. We noted from the Contract for the Provision of Fuel Marking Services (2019) that NPA engaged the services of Nationwide Technologies Limited (NTL) in 2019 to mark petroleum products before distributing them to retail outlets. Given that petroleum products are marked after loading into BRVs for delivery, the volume of marked products was expected to correspond with the quantity distributed. However, our review of the marking and distribution data revealed inconsistencies. Data from the Annual Reports of the Quality Assurance Directorate and the UPPF Secretariat showed that, between 2023 and 2025, a total of 15.42 billion litres of petroleum products (petrol and diesel) were marked, while only 15.05 billion litres were distributed. This indicates that the volume of petroleum products marked exceeded the volume distributed by approximately 362.56 million litres, representing a variance of 2.35 percent. Details are presented in Table 6.

**Table 6: Analysis on petroleum product (petrol and diesel) marked and distributed from 2023 to 2025**

| Year | Volume of petroleum products marked (litres) (A) | Volume of petroleum products distributed to retail outlets and bulk consumer sites (litres) (B) | Variance between marked and distributed petroleum products (C=A-B) | % variance |
|---|---|---|---|---|
| **2023** | 4,340,237,300 | 4,257,138,300 | 83,099,000 | 1.91 |
| **2024** | 5,157,056,800 | 4,942,522,600 | 214,534,200 | 4.16 |
| **2025** | 5,919,503,700 | 5,854,579,800 | 64,923,900 | 1.10 |
| **Total** | **15,416,797,800** | **15,054,240,700** | **362,557,100** | 2.35 |

***Source: 2023 to 2025 UPPF Secretariat and Quality Assurance Directorate Annual Reports.***

60. Management of NPA explained that the variance arose from the comparison of two distinct operational datasets serving different purposes within the downstream petroleum value chain. Marking volumes were based on loading transactions captured in the Enterprise Relational Database Management System (ERDMS), while distribution volumes were based on dispatch and delivery records.

61. According to Management, the variance occurred due to differences in reporting classifications between the UPPF and PPMS. The PPMS reported all petroleum products marked at the depots, namely diesel additivated, diesel retail outlets, diesel cell sites, AGO Power Plant, AGO Rigs, and AGO Subsidised, while UPPF reported only the distribution of petroleum products that attracted the UPPF margin, namely diesel additivated and diesel retail outlets. However, the NPA did not provide data on the volumes of diesel cell sites, AGO Power Plant, AGO Rigs, and AGO Subsidised that were distributed.

62. From Management's explanation, the difference in the quantity of petroleum products marked and distributed was due to the types of diesel products reported. However, we noted discrepancies in the volumes of petrol marked and distributed. Refer to Table 7 for details.

**Table 7: Analysis on volume of petrol marked and distributed from 2023 to 2025**

| Year | Volume of petrol marked (litres) A | Volume of petrol distributed (litres) B | Variance (litres) C | Rate per kilo litre (USD) D | UPPF Margin (GH¢) E | Amount |
|---|---|---|---|---|---|---|
| **Cost analysis on volumes marked but not distributed** | | | | | | **C/1000x D)** |
| **2023** | 2,252,267,300 | 2,251,676,800 | 590,500 | 4.21 | | US$2,486.01 |
| **2024** | 2,606,916,100 | 2,606,868,100 | 48,000 | 4.21 | | US$202.08 |
| | | | | | **Total** | **US$2,688.09** |
| **Cost analysis on UPPF margins** | | | | | | **( C/1000x E)** |
| **2025** | 3,011,209,500 | 3,098,596,900 | (87,387,400) | - | 0.90 | GH¢78,648,660.00 |
| ***Total*** | ***7,870,392,900*** | ***7,957,141,800*** | ***(86,748,900)*** | **-** | | **GH¢78,648,660.00** |

***Source:** UPPF Secretariat and Quality Assurance Directorate Annual Reports, 2023-2025 and Contract for the Provision of Fuel Marking Services between NPA and Nationwide Technologies Ltd, June 2024.*

63. From our analysis, the NPA paid NTL a total amount of US$2,688.09 ($2,486.01 and $202.08) for a total volume of 638,500 litres (590,500 and 48,000) of petrol that was marked but not distributed in 2023 and 2024. Additionally, the NPA did not mark approximately 87 million litres of petrol which was distributed, thereby exposing consumers to the risk of purchasing substandard fuel at retail outlets. Also, there was a loss of about GH¢78.6million to the UPPF in 2025 and a possible evasion of taxes on the unmarked volumes, resulting in revenue loss to the State.

64. We noted that both the Quality Assurance Directorate and the UPPF Secretariat had in place control measures to ensure that products were marked before being distributed. The Quality Assurance Directorate maintained a reconciliation process that involved:

- Weekly and monthly reconciliation of marked volumes using ERDMS data,
- Verification of contractor submissions against ERDMS records,
- Review of marking certificates before approval,
- Multi-level marking data validation by Field Officer, Supervisor, and Head of PPMS before approval, and
- Legal Directorate review prior to payment processing.

65. Also, the UPPF Secretariat vetted orders from the OMCs to determine whether they corresponded with the orders in the ERDMS before products were loaded. However, the UPPF Secretariat and the Quality Assurance Directorate did not check whether the quantity loaded into the BRVs and marked corresponded with the quantity distributed. In addition, the Secretariat and the Directorate did not reconcile the data on the petroleum products marked and distributed.

**Conclusion**

66. The NPA did not adequately carry out the marking and distribution of petroleum products. There were discrepancies between the volumes of petroleum products marked and those distributed. About 87 million litres of unmarked petrol were distributed between January 2023 and May 2026. Therefore, there was no assurance that the product was of the desired quality at the pumps and that the appropriate tax on the sale of the unmarked product was collected by the State. Also, there was a loss of about GH¢79 million to the UPPF.

**Recommendations**

67. We recommended that:

a) The Quality Assurance Directorate and the UPPF Secretariat must collaborate to ensure uniformity in the volumes of petroleum products marked and distributed, and

b) The NPA must refund US$2,688.09 for the 638,500 litres of petrol that was marked but not distributed, into the Auditor-General's Recovery Account No. 1018331470015 at the Bank of Ghana by 31 December 2026 and submit copies of the receipt to the audit team for verification.

***Management response***

*68. The apparent variances identified during the audit arose primarily from differences in reporting classifications between PPMS and UPPF datasets, and the approved suspension of marking of differentiated PMS (RON 95) effective 4 July 2025. Management nonetheless acknowledged the need to improve reconciliation and reporting controls and committed to continue strengthening coordination between the PPMS and UPPF reporting processes. This would help ensure that future reports accurately reflect policy decisions, operational changes, and data adjustments, thereby reducing the risk of misinterpretation. Responses relating to this finding are provided in Appendix 'H'.*

### 3.3 Monitoring of the retail outlets

69. Section 2(2)(f) of the National Petroleum Authority Act, 2005 (Act 691), mandates the NPA to monitor standards of performance and quality of the provision of petroleum services offered to consumers. This was to ensure the supply of quality petroleum products at retail outlets. Accordingly, we expected the Authority to monitor retail outlets' compliance with quality standards to guarantee that consumers received the required quality products at the pumps.

70. We noted from interviews and reviews of documents that NPA monitored retail outlets both through physical inspections and the Automatic Tank Gauging System (ATGS). We further noted from reviews of monitoring plans, budgets, field reports, and laboratory results that the Petroleum Product Monitoring and Surveillance (PPMS) Department planned, budgeted for, and conducted monitoring activities. These activities included testing for marker concentrations and the presence of water in petroleum products stored in underground storage tanks (USTs) to verify product quality at the retail outlets.

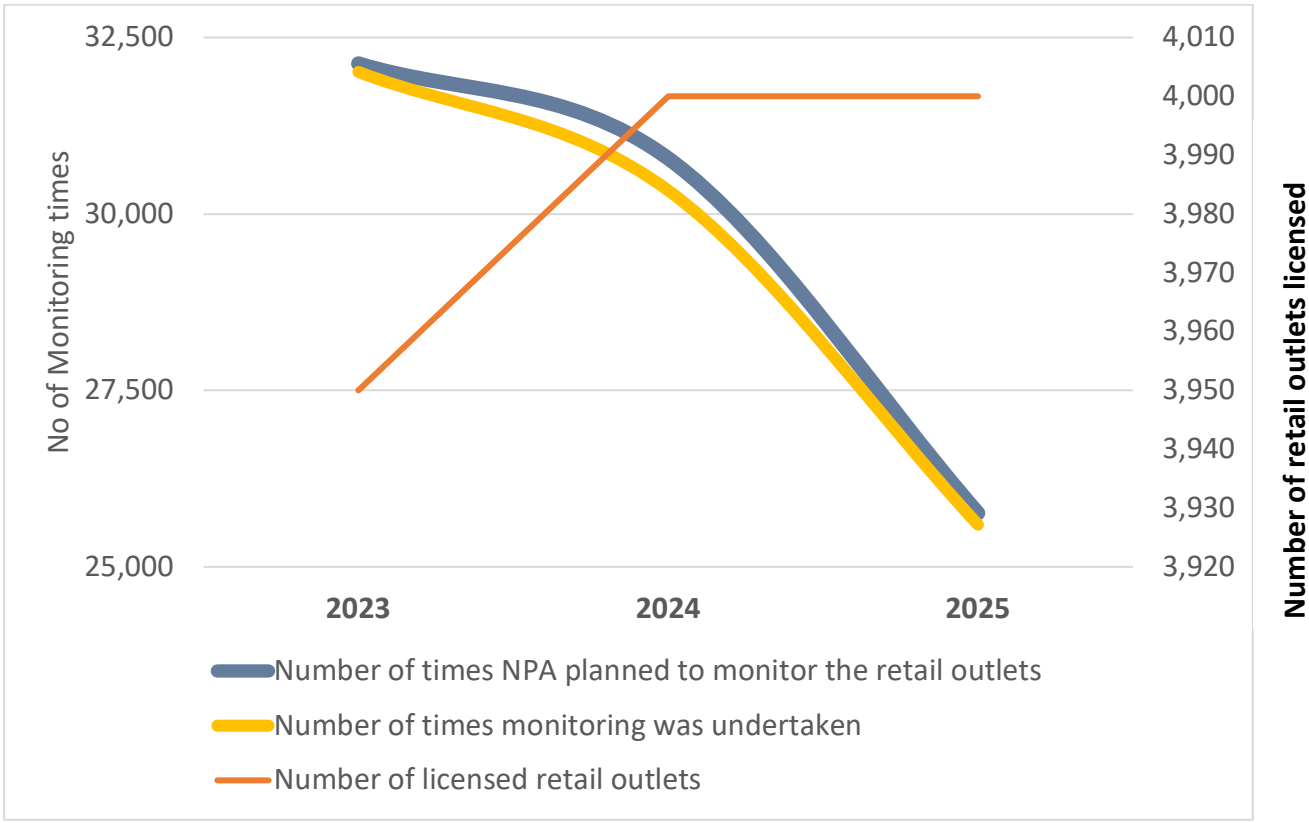
71. During the period under review, the Department planned to monitor the activities of 4,000 retail outlets a combined total of 88,678 times at a total cost of approximately GH¢1.34 billion. We noted that the Department carried out monitoring on the 4,000 retail outlets, 87,944 times at a cost of GH¢1.04 billion. Refer to Table 8 for details and Figure 2 for the trend in the monitoring activities over the audit period.

**Table 8: PPMS field monitoring summary data from 2023 to 2025**

| Year | Number of licensed retail outlets | Number of times NPA planned to monitor the retail outlets | Number of times monitoring was undertaken | Number of passes recorded in relation to marker test at the retail outlets | % of passes recorded at the retail outlets |
|---|---|---|---|---|---|
| **2023** | 3,950 | 32,130 | 32,012 | 28,021 | 98.34 |
| **2024** | 4,000 | 30,787 | 30,334 | 25,775 | 96.00 |
| **2025** | 4,000 | 25,761 | 25,598 | 22,319 | 97.81 |
| **Total** | | **88,678** | **87,944** | **76,115** | |

***Source: NPA Quality Assurance Directorate 2023 – 2025 Annual Reports***

**Figure 2: Trend showing licensing and monitoring activities from 2023 to 2025**



72. From the trend in Figure 2, the NPA's monitoring activities decreased over the period, while the number of retail outlets it licensed increased. From 2023 to 2025, the NPA's planned monitoring activities decreased by 19.82 percent while the number of retail outlets it licensed increased by 1.27 percent. The Director of the Quality Assurance Directorate attributed the decline in the number of times monitoring was undertaken to operational constraints (limited field personnel, competing priorities), capacity-building (technical training), and field challenges (security challenges). According to the Director, these challenges were mitigated through a risk-based approach, prioritising high-risk retail outlets, high-failure areas, and diversion-prone hotspots. The Director further indicated that management strengthened engagement with the Security and Intelligence Directorate, submitted structured monitoring plans to HR for staffing alignment, intensified laboratory testing, depot surveillance, and improved monitoring oversight through data-driven compliance reviews.

73. Regarding the use of ATGS in monitoring, we noted from the contract agreement dated 18 December 2020 that NPA contracted Rock Automation Solutions Limited (RASL) to install ATGS in 4,000 retail outlets from 2021 to 2023. The installation of the ATGS was intended to monitor the volume of fuel received, check the temperature of fuel, and the availability of water in the tanks, and the sales of petroleum products to facilitate the collection of tax revenue, among others. Table 9 provides details on the number of ATGS installed, operated, and maintained, as well as their respective costs.

**Table 9: Installation, operational, and maintenance costs of the ATGS**

| Year | Number of ATGS to be installed | Cost of Installation (USD) | Number of ATGS to be maintained | Cost of operation and maintenance (USD) |
|---|---|---|---|---|
| **2021** | 1,000 | 14,807,000 | 1,000 | 2,614,000 |
| **2022** | 1,500 | 16,588,500 | 2,500 | 4,360,000 |
| **2023** | 1,500 | 16,588,500 | 4,000 | 6,106,000 |
| **2024** | - | - | 4,000 | 6,106,000 |
| **2025** | - | - | 4,000 | 6,106,000 |
| **2026** | - | - | 4,000 | 6,106,000 |
| **2027** | - | - | 4,000 | 6,106,000 |
| **2028** | - | - | 4,000 | 3,492,000 |
| **2029** | - | - | 4,000 | 1,746,000 |
| **Sub-total** | | **47,984,000** | | **42,742,000** |
| **Overall total** | | | | **90,726,000** |

***Source: NPA Contract Document, 2020***

74. From the contract, RASL was to install 4,000 ATGS at the end of 2023. However, as at the time of our audit in March 2026, RASL had installed a total of 3,443 with an outstanding installation of 557. (Refer to Appendix F for details). According to the CEO of Rock Africa, the outstanding 557 ATGS were not installed because the infrastructure of the retail outlets did not support the installation of ATGS. The retail outlets lacked a concrete forecourt, tank farms, dispenser pumps, and a sustainable source of power.

75. Out of the 3,443 retail outlets with installed ATGS, 1,813 were fully automated while 1,630 were partially automated. However, our field visits revealed challenges with the utilisation of the ATGS. According to the CEO of Rock Africa, the retail outlets with partial automation lacked a concrete forecourt and needed to upgrade their infrastructure, while others needed to provide standby generators, repair faulty pumps, and upgrade their dispensers to enable full

automation of the ATGS. Also, approximately 200 retail outlets with ATGS installed were inactive as at the end of 2024.

76. According to the contract, RASL was required to undertake routine and regular maintenance support of the ATGS in accordance with the maintenance plan. The NPA was required to audit the operations of the ATGS and issue all appropriate guidelines to enable the Service Provider to implement the services. We noted from the 2025 maintenance schedule and report that RASL planned and carried out maintenance at the retail outlets. The schedule indicated the dates for the maintenance and the retail outlets. However, the schedule did not indicate the type of maintenance carried out at the respective retail outlets. We noted from the maintenance report that, generally, RASL carried out civil works, including infrastructure, cabinet, tank farm, forecourt, and IT maintenance. NPA has yet to provide the 2023 and 2024 maintenance schedule and report for our analysis.

77. Regarding payments made to RASL, the NPA disbursed lump-sum amounts covering installation, operations, and maintenance of the ATGS. This aggregated payment structure made it difficult to validate amounts attributable to specific activities performed. The NPA paid RASL a total of GH¢648.62 million for installing, operating, and maintaining the ATGS from 1 January 2023 to 4 May 2026. However, NPA has yet to provide evidence that it verified and paid for the actual maintenance work RASL carried out. Refer to Table 10 for details. (The number of ATGS indicated in Table 10 for 2023 represents a cumulative total of ATGS installed from 2021 to 2023).

**Table 10: Payments made for the installation, operation, and maintenance of the ATGS**

| Year | Number of ATGS installed | Number of ATGS operated and maintained | Amount paid for installation, operation and maintenance (GH¢) |
|---|---|---|---|
| **2023** | 3,029 | 3,029 | 255,330,137.50 |
| **2024** | 276 | 3,305 | 199,603,319.88 |
| **2025** | 128 | 3,433 | 87,720,536.22 |
| **2026** | 10 | 3,443 | 105,966,937.44 |
| **Total** | **3,443** | **3,443** | **648,620,931.04** |

***Source: PVs on installation, operation and maintenance of the ATGS***

78. We noted during our visit to 30 selected retail outlets that 23 (64%) had ATGS installed, while 13 (36%) did not have ATGs. Out of the 23 installed ATGS, 11 (48%) were not functional. NPA officials in the regions explained that the non-functional ATGs were due to system breakdowns, improper configuration, or lack of integration between the Underground Storage Tanks (USTs) and dispenser pumps. Appendix G provides details on the state of the ATGS installed at the retail outlets we visited.

79. The CEO of RASL explained that the broken-down ATGS was not repaired because NPA had not given RASL the directive to retrieve faulty parts and repair or replace them. We noted from our interview with the UPPF Coordinator that NPA had not repaired or replaced broken-down parts on the ATGS since its inception. According to the Coordinator, the NPA on 17 March 2026 instructed Rock Africa to assess all the faulty ATGS and provide estimates for their repairs.

80. We noted from the review of documents that the absence and non-functionality of ATGS made it possible for the retail outlets to stock and sell inferior products prior to NPA's scheduled monitoring. For instance, we noted from Fuel Quality Complaint and Investigation Forms and Memos that the PPMS team visited the Zuarungu GOIL Service Station

in Bolgatanga on 18 August 2023, where the products passed the marker test. However, from records on customer complaints, on 24 August 2023, a consumer reported that there was water in the petrol purchased from the same station, which the Station Manager confirmed. The NPA followed up with an inspection on 25 August 2023 and confirmed the presence of approximately 180 litres of water in the underground storage tank (UST).

81. Additionally, on 9 January 2025, a consumer complained about the presence of water in the diesel purchased on 10 October 2024 from Nasona Oil Outlet at Kanvili, which was confirmed by the retail outlet manager. The Northern Regional Office of NPA received the complaint on 9 January 2025 and, upon investigations, noted that the retail outlet received and sold a total of 36,000 litres of diesel to the public between 10 October 2024 and 9 January 2025. The NPA did not carry out a marker concentration test as the product in question had been sold.

82. Similarly, on 29 April 2025, a driver purchased petrol from Mobik Service Station at Fijai in the Western Region. The following day, 30 April 2025, he purchased additional fuel from Mobik Nkroful Junction in the Western Region, after which he experienced severe engine performance issues, including jerking, knocking sounds, and excessive smoke. The vehicle was taken to a mechanic, and the fuel was drained into a 25-litre container and returned to the station. Subsequent marker tests conducted by NPA indicated that products from both outlets were substandard. This indicated that the National Petroleum Authority's monthly and bi-monthly monitoring did not promptly detect fuel quality issues.

**Conclusion**

83. The NPA monitored the operations of retail outlets. However, it did not implement measures to ensure the installation and proper functioning of all ATGS to complement physical monitoring. As a result, consumers were exposed to the risk of purchasing substandard petroleum products at the affected outlets. Additionally, the Authority did not verify the actual maintenance activities undertaken prior to making payments to the service provider (RASL).

**Recommendation**

84. We recommended that:

a) NPA should:
   i. complement routine bi-monthly or monthly inspections with unannounced visits to the retail outlets to reduce the likelihood of outlets selling substandard products to consumers,
   ii. expedite the installation of ATGS in all the remaining retail outlets by the end of 2026 and
   iii. assess ATGS installed, identify and repair non-functioning ones by the end of September 2026.

b) The Finance Director should request detailed maintenance reports and carry out independent validation of maintenance performed, to ensure payments correspond with actual maintenance work carried out.

***Management response***

*85. Management acknowledged the findings and committed to implementing the recommendations. Responses specific to this finding are presented in Appendix 'H'.*

**Overall Conclusion**

86. The NPA implemented regulatory activities to ensure the quality of petroleum products at the retail outlets. However, there were challenges in performing distribution, product marking, and monitoring activities.

87. The NPA did not ensure that only BRVs with valid licenses loaded and distributed petroleum products to retail outlets. It did not track the distribution of Aviation Turbine Kerosene (ATK). Also, the marking and distribution of petroleum products was not adequate, as there were discrepancies between the volumes of petroleum products marked and those distributed. Unmarked petroleum products were distributed. Furthermore, the NPA did not adequately implement measures to ensure the installation and proper functioning of ATGs to properly monitor the activities of all outlets. The Authority did not verify the actual maintenance activities undertaken on installed ATGs prior to making payments to the service provider.

88. From these challenges, there is no assurance that all petroleum products at the pumps were of the desired quality and that all the appropriate taxes on the sale of all products are collected by the State.

# APPENDICES

**APPENDIX 'A'**

## Documents reviewed and reasons for the review

| No. | Name of document | Reasons for the review |
|---|---|---|
| 1 | NPA Act, 2005 (Act 691) | • To know the mandate of the NPA<br>• To understand the functions of the directorates and departments responsible for ensuring the provision of quality petroleum products at the retail outlets. |
| 2 | NPA Petroleum Product Marking Regulations, 2012 (L.I. 2187) | To have un understanding of:<br>• petroleum products that are to be marked and where the markings should take place before distributing them to retail outlets;<br>• the responsibilities of key players and stakeholders in ensuring quality petroleum products at retail outlets;<br>• the offences and sanctions applicable to defaulters; and<br>• the meaning of the terms used under the petroleum marking scheme. |
| 3 | NPA Bulk Road Vehicle Tracking and Volume Monitoring Regulations, 2016 (L.I. 2251) | To know:<br>• NPA and stakeholders' responsibilities under the BRV tracking scheme;<br>• the petroleum products that are tracked under the scheme;<br>• the offences under the scheme and their corresponding sanctions;<br>• the accompanying documentation of petroleum products in transit; and<br>• the meaning of the terms used under the UPPF scheme. |
| 4 | 2023-2025 Annual Report of UPPF Secretariat | To know:<br>• volumes of petroleum products distribution for the period under review;<br>• deliveries or distributions that were tracked;<br>• distribution of petroleum products per distance;<br>• inflows and outflows of the petroleum distribution margin fund;<br>• stakeholders' engagement carried out; and<br>• challenges of the directorate. |
| 5 | 2023-2025 Annual Report of QA Directorate | To know:<br>• the number of retail outlets that were inspected and monitored within the period and the outcomes;<br>• the frequency and outcomes of the Department's inspection and monitoring activities;<br>• the volumes of petroleum products marked, and payments made for marking;<br>• petroleum products tested and their corresponding results;<br>• sanctions applied to defaulters;<br>• stakeholders' engagement carried out; and<br>• challenges of the directorate. |

| | | |
|---|---|---|
| 6 | 2023-2025 Annual Report of Licensing Department | To know:<br>• the licensed OMCs and BRVs that distributed petroleum products within the period under review; and<br>• sanctions applied to OMCs that defaulted. |
| 7 | Contract documents on the procurement of service providers | To understand the contract terms and conditions between NPA and the Service Providers in terms of:<br>• contract agreement date;<br>• effective date of the contract;<br>• responsibilities of the NPA and the service providers;<br>• contract sum or amount;<br>• milestones in the implementation of the contracts;<br>• payment modalities. |
| 8 | Monitoring and inspection reports | To know the activities carried out, their outcomes and actions that were taken during inspection and monitoring. |
| 9 | Investigation reports | To know the offences that occurred and their outcomes after investigations. |
| 10 | Correspondence file | To know the stakeholders that NPA engaged and the issues they discussed. |
| 11 | 2023-2025 Budget and Expenditure of the UPPF Secretariat, QA Directorate and Licensing Department | To determine whether the directorates budgets were realistic and operated within their budget. |
| 12 | 2023-2025 PPMS Administrative Database | To know the OMCs that defaulted, the nature of the default and sanctions applied. |
| 13 | Work Programme of QA Directorate (PPMS & Quality Control) and UPPF Secretariat | To know their planned activities over the period under review. |

**APPENDIX 'B'**

## Persons interviewed

| No. | Persons Interviewed |
|---|---|
| 1 | Head of Quality Assurance Directorate |
| 2 | Head of Quality Control |
| 3 | UPPF Coordinator |
| 4 | Acting Head of the Finance Department |
| 5 | Acting Head of Licensing Department |
| 6 | Head of Procurement |
| 7 | Head of Legal |
| 8 | CEO of Rock Africa |
| 9 | Head of Operations, UPPF |
| 10 | Heads of Upper East, Northern, Ashanti, and Western Regional Offices of NPA |
| 11 | Quality Control Teams at the Upper East, Northern, Ashanti, and Western Regional Offices |
| 12 | UPPF Officials at the Savanna, Ashanti and Western Regions |
| 13 | Representatives of Rock Africa in the Upper East, Savanna, Ashanti and Western Regions |
| 14 | Managers/ Supervisors of retail outlets |
| 15 | Bulk Road Vehicle (BRV) Drivers |
| 16 | Consumers |

**APPENDIX 'C'**

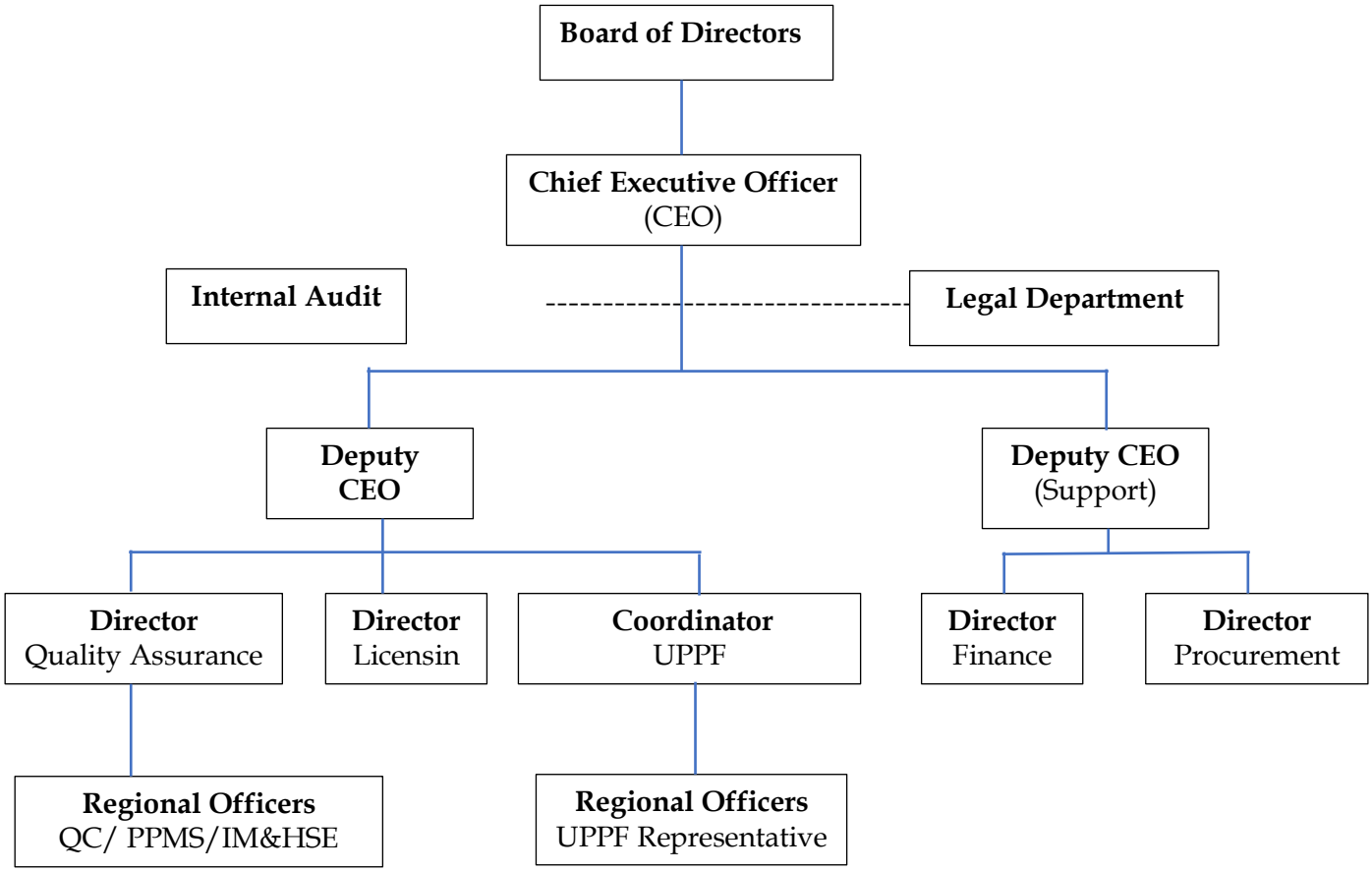
**Retail and Depots outlets visited during the audit**

| No. | Name of retail outlet | Location | Region |
|---|---|---|---|
| 1 | Frimps Oil Ltd | Bolgatanga | Upper East |
| 2 | Goil Plc Ltd | Navrongo | Upper East |
| 3 | Naagamni Oil Ltd | Navrongo | Upper East |
| 4 | Moari Oil Ltd | Paga | Upper East |
| 5 | Total Energies Ltd | Paga | Upper East |
| 6 | Aminso Energy Ltd | Paga | Upper East |
| 7 | Shell (Vivo) Filling Station | Tamale | Northern |
| 8 | Amdaway Filling Station | Tamale | Northern |
| 9 | Gab Energy Oil | Tamale | Northern |
| 10 | Akara Energies Ltd | Tamale | Northern |
| 11 | Desert Oil Kpanvo SS | Tamale | Northern |
| 12 | Total Energies Ltd | Tamale | Northern |
| 13 | SO Energy Ltd | Buipe | Savanna |
| 14 | Zen Energy Ltd | Buipe | Savanna |
| 15 | Petrosol Oil Ltd | Buipe | Savanna |
| 16 | Goil Plc | Buipe | Savanna |
| 17 | Total Energies Ltd | Buipe | Savanna |
| 18 | FueLit | Buipe | Savanna |
| 19 | Goil Plc | Santasi, Kumasi | Ashanti |
| 20 | Unity Oil | Santasi, Kumasi | Ashanti |
| 21 | Goil Plc | Kronum Afrancho Washing Bay, Kumasi | Ashanti |
| 22 | Goil Plc | Kronum Afrancho, Kumasi | Ashanti |
| 23 | Power Oil Ltd | Abenkyim, Bekwai | Ashanti |
| 24 | Liberty Petroleum Ltd | New Ayaase | Ashanti |
| 25 | Goil Plc | Prestea | Western |
| 26 | Telenergy | Prestea | Western |
| 27 | Petrosol Oil Ltd | Prestea | Western |
| 28 | Goil Plc | Prestea | Western |
| 29 | Reliance Retail Outlet | Agona Nkwanta | Western |
| 30 | Star Oil | Shama | Western |

| No. | Name of Depot | Location |
|---|---|---|
| 1. | BEST | Bolgatanga and |
| 2. | BEST | Buipe |
| 3. | BEST | Kumasi |
| 4. | GHANSTOCK | Takoradi |

**APPENDIX 'D'**

## Organisational structure of NPA



**APPENDIX 'E'**

## Key Players and Responsibilities

| Key Players | Responsibilities |
|---|---|
| Chief Executive Officer | • Responsible for the day-to-day administration of the Authority.<br>• Ensures all directorates/departments in the Authority function effectively. |
| Licensing Department | • Issues licenses and permits to petroleum service providers.<br>• Collaborates with the inspections and monitoring department to inspect refineries, petroleum storage depots, petroleum product retail outlets, and LPG filling plants to ensure conformity with best practices and protocols in the petroleum downstream industry. |
| Inspections, Monitoring and Health, Safety and Environment (IM&HSE) Directorate | • Inspects and monitors infrastructure and operational activities of petroleum service providers.<br>• Monitors standards of performance and quality of the provision of petroleum services.<br>• Investigates on a regular basis the operation of petroleum service providers to ensure conformity with best practice and protocols in the petroleum downstream industry. |
| Quality Assurance Directorate | • Ensures the quality and integrity of petroleum products on the market.<br>• Monitors petroleum products quality at import ports, refineries, depots and retail outlets.<br>• Undertakes marking of petroleum products.<br>• Assesses the quality of petroleum products supplied in Ghana in conformity to national standards/specifications.<br>• Investigates on regular basis the quality systems of petroleum service providers to ensure conformity with best practices and protocols.<br>• Initiates and conducts investigations into standard of quality of petroleum products offered to consumers.<br>• Liaises with the Ghana Standards Authority and relevant stakeholders to review and update all petroleum product standards and procedures. |
| Economic Regulation and Planning Directorate | • Oversees the supply of petroleum products into and out of the country.<br>• Ensures efficient pricing of petroleum products in accordance with the prescribed petroleum pricing formula.<br>• Promotes transparency fair competition in the pricing and marketing of petroleum products.<br>• Monitors production of petroleum products by refineries, and stocks of petroleum products across the country's storage depots. |

| | |
|---|---|
| | • Ensures value for money for petroleum service providers and consumers. |
| Uniform Petroleum Pricing Fund Coordinator | • Ensures petroleum products reach the consumer efficiently, regardless of location in the country.<br>• Ensures petroleum product is transported in a manner that is simple, effective and inexpensive.<br>• inspects Bulk Road Vehicles to ensure they are roadworthy and equipped with functional tracking devices to monitor the movement of petroleum products from depots to retail outlets. |
| Bulk Import, Distribution, and Export Companies | • Import crude oil and finished refined petroleum products to meet national demand.<br>• Serve as the primary link between international suppliers and local Oil Marketing Companies (OMCs), selling products in bulk to OMCs and major industrial consumers.<br>• Export petroleum products to neighbouring countries under customs seal.<br>• Ensure the safe transportation of fuel from storage depots to retail outlets and industrial end-users.<br>• Maintain standards to prevent contamination, ensuring product integrity throughout the supply chain. |
| Refineries | • refine crude oil and transform it into petroleum products that are ready for consumption.<br>• adhere to environmental standards and contribute to economic stability. |
| Depots | • ensure safe receipt and storage of petroleum products.<br>• monitor stock levels to prevent shortages across the country.<br>• Conducting laboratory analysis on products before and during discharge into storage tanks to ensure compliance with Ghana Standards Authority (GSA) national standards.<br>• Ensure the security of the depot infrastructure to prevent theft, unauthorised access, or sabotage.<br>• Maintain accurate data on stock, product quality, and throughput, and report to the NPA and other stakeholders.<br>• Adhere to strict safety protocols (e.g., fire prevention, equipment maintenance) and environmental protection measures to prevent leaks and accidents. |
| Bulk Energy Storage and Transportation Company | • Ensures the strategic storage and transportation of petroleum products to maintain energy security. |
| Retail outlets | • obtain a license to operate and comply with industry regulations.<br>• ensure consistent availability of petroleum products.<br>• maintain high product quality standards. |

| | |
|---|---|
| | • ensure accurate measurement (calibration) of dispensing pumps.<br>• adhering to price regulations set in cedis and pesewas.<br>• uphold strict safety protocols.<br>• adhere to health, safety, and environmental regulations.<br>• Provide data on inventory and sales to the NPA as required for market monitoring. |
| Oil Marketing Companies | • Procure refined petroleum products from Bulk Distribution Companies (BDCs) and ensure a consistent supply across the country.<br>• Manage and operate a minimum number of retail outlets as a licensed OMC.<br>• Adhere to standards set by the Ghana Standards Authority to ensure the quality of fuel dispensed to consumers.<br>• ensuring safe fuel transportation and adhere to national safety/environmental standards. |
| Bulk Road Vehicle Companies | • Ensure vehicles are licensed by the National Petroleum Authority (NPA).<br>• Install and maintain authorised GPS tracking devices to monitor product distribution in real-time.<br>• Ensure proper vehicle maintenance to avoid hazards.<br>• Regularly calibrate tankers to ensure accurate measurement of volume.<br>• Prevent adulteration and ensure petroleum products are delivered directly to authorised locations without illegal diversion. |
| Petroleum Product Marking Companies | • Mark petroleum products at all operational depots before distribution to ensure quality and prevent smuggling.<br>• Supply marking detectors (e.g., LSX3000) to the NPA to facilitate testing at retail outlets and bulk consumer locations.<br>• Issue a Petroleum Product Marking Certificate to the driver of a bulk road vehicle upon completion of marking.<br>• Ensure data from markers is securely encrypted and transmitted in real-time for monitoring purposes |
| Bulk Road Vehicle Tracking Companies | • Install, inspect, and upgrade approved, secure tracking devices on licensed bulk road vehicles.<br>• Provide real-time, accurate, and secure information on vehicle location and movement to the National Petroleum Authority (NPA) and Fund Management Committee.<br>• Calibrate bulk road vehicles and ensure all tracking devices meet regulatory standards set by the NPA.<br>• Assist the NPA in preventing illicit activities, such as product diversion or smuggling, by ensuring the |

| | |
|---|---|
| | tracking system detects irregularities in transport routes.<br>• Issue valid installation certificates for compliant vehicles and provide data for the validation of freight costs.<br>• Work closely with the NPA and other regulatory agencies to ensure the efficiency of the national monitoring scheme. |
| Consumers | • Purchase petroleum products from only approved and licensed service providers.<br>• Verify that the pumps display the correct price per litre in Ghana cedis and pesewas and ensure they receive the correct quantity and quality of product.<br>• Report any cases of under-delivery, poor quality, or high-priced petroleum products to the National Petroleum Authority (NPA).<br>• Follow safety standards regarding the storage and handling of petroleum products to prevent accidents. |

**APPENDIX 'F'**

**Status of ATGS at the retail outlets nationwide**

| Year | Number of licensed retail outlets | Number of fully automated retail outlets | % of fully automated retail outlets | Number of retail outlets partially automated | Number of retail outlets with only civil works completed | Number of retail outlets with no work done |
|---|---|---|---|---|---|---|
| **2023** | 3,959 | 1,305 | 33 | 1,724 | 231 | 699 |
| **2024** | 4,000 | 1,676 | 42 | 1,629 | 186 | 509 |
| **2025** | 4,000 | 1,797 | 45 | 1,637 | 206 | 361 |
| **2026 March)** | 4,000 | 1,813 | 45 | 1,630 | 41 | 557 |

***Source: NPA UPPF Secretariat, 2023 – 2025 Annual Reports.***

**APPENDIX 'G'**

## Information on ATGS at the retail outlets visited during the audit

| Retail Outlet | Location | ATGS Installed | ATGS functioning | Remarks |
|---|---|---|---|---|
| Frimps Oil | Bolgatanga | Yes | Yes | |
| Aminso Energy Ltd | Paga | No | NA | |
| Moari Oil | Paga | No | NA | |
| Total Energies | Paga | No | NA | |
| Naagamni | Navrongo | Yes | Yes | |
| Goil | Navrongo | Yes | Yes | |
| Shell | Tamale | Yes | Yes | |
| Amdaway | Tamale | Yes | Yes | |
| Gab Energy Oil | Tamale | Yes | Yes | |
| Ankara Energy | Tamale | Yes | No | ICU in the ATGS burnt. |
| Desert Oil | Tamale | Yes | Yes | |
| Total Energies | Tamale | Yes | Yes | |
| SO Energy | Buipe | Yes | Yes | Could not read the water and fuel quantity levels in the tank. |
| Zen Energy | Buipe | Yes | Yes | Could not read the water and fuel quantity levels in the tank. |
| Petrosol | Buipe | Yes | No | Has not been functioning since January 2024. Broke down due to power outage. |
| Goil | Buipe | Yes | No | Power fluctuations got the system damaged. Not working since 2025. |
| Total Energies | Buipe | Yes | Yes | ATGS is connected to 2 out of 6 fuel pumps which are diesel. The petrol and other diesel pumps, according to the Manager, were not compatible with the ATGS. |
| Fuelit | Buipe | No | NA | |
| Goil | Santasi Round About, Kumasi | Yes | No | ATGS broke down due to power outages. It has not been working since October 2025. |
| Unity Oil | Santasi Round About, Kumasi | Yes | Yes | Could not read the water and fuel quantity levels in the tank. Also, ATGS could not read quantities dispensed to customers. |
| Goil 1 | Kronom Afrancho, Kumasi | Yes | No | |

| | | | | |
|---|---|---|---|---|
| Goil 2 | Kronom Afrancho, Kumasi | Yes | No | Not functioning since the latter part of 2025 due to power outage which caused the ATGS to breakdown. |
| Power Oil | Bekwai Abenkyim | Yes | Yes | |
| Liberty Petroleum | New Ayaase | No | NA | The pipes for the connection had been laid but the ATGS has not been installed. |
| Goil | Prestea | Yes | Yes | ATGS was linked to the petrol tank and not the diesel tank as it was not compatible. |
| Telenergy | Prestea | Yes | Yes | |
| Petrosol | Prestea | | | Couldn't check because the manager was not around to open the office. |
| Goil | Prestea | No | NA | Operations started on the 17 November 2025. |
| Reliance | Agona Nkwanta | Yes | No | It was disconnected because the pumps could not pump fuel after they were installed. |
| Star Oil | Shama | Yes | Yes | |

**APPENDIX 'H'**

## Management Response from NPA

NPA
NATIONAL PETROLEUM AUTHORITY

**Ref: NPA/IAD/PER.RPT/04/26**

**12th June 2026**

The Auditor General
Ghana Audit Service
Accra

**Dear Sir,**

**RE – REQUEST FOR RESPONSE, MANAGEMENT LETTER ON PERFORMANCE AUDIT OF THE AUDITOR GENERAL ON THE OPERATIONS OF NATIONAL PETROLEUM AUTHORITY**

I refer to your letter dated 15th May 2026 on the subject above.

In relation to your management letter, kindly find attached to this letter our responses to the observations made by the Ghana Audit Service team on the performance audit undertaken.

Thank you for your continuous support and cooperation.

Yours faithfully,

.....

**Godwin Kudzo Tameklo, Esq.**

**Chief Executive**

No. 6 George Bush Highway,
Dzorwulu, Accra
C.P.M.B. Cantonments, Accra

0302 550 333 / 030 276 6195
0800 12300 (Vodafone Toll Free)
info@npa.gov.gh
www.npa.gov.gh

## RESPONSES TO PERFORMANCE AUDIT MANAGEMENT LETTER

We note that the observations made were categorised under these three broad headings

1. TRANSPORTATION AND TRACKING OF PETROLEUM PRODUCTS
2. MARKING OF PETROLEUM PRODUCTS
3. MONITORING THE ACTIVITIES OF RETAIL OUTLETS

Our responses are directed at addressing the three broad headings in the management letter, with additional information on the observations made.

### 1. TRANSPORTATION AND TRACKING OF PETROLEUM PRODUCTS

**LICENSING**

a. The distribution of petroleum products nationwide is primarily undertaken using Bulk Road Vehicles (BRVs), which serve as the principal means of transporting petroleum products from refineries and storage depots to retail outlets and bulk consumers across the country.

b. Considering the downstream petroleum industry's heavy reliance on Bulk Road Vehicles (BRVs) for the transportation of finished petroleum products to consumers, the deactivation of BRVs from the Enterprise Relational Database Management System (ERDMS) is the Authority's ultimate enforcement measure for addressing non-compliance by transporters.

c. Prior to the deactivation of unlicensed BRVs, the Authority assesses the number of licensed trucks in operation and engages relevant stakeholders to evaluate and mitigate any potential disruptions to the supply and availability of petroleum products that may arise from the enforcement exercise.

d. As at 9th April 2026, only approximately fifty-one percent (51%) of the Bulk Road Vehicles (BRVs) licensed as at 31st December 2025 had completed the 2026 licence renewal process, leaving approximately forty-nine percent (49%) of the fleet yet to regularize their licences for the 2026 licensing year.

e. The forty-nine percent (49%) of BRVs that had not yet regularized their licences represented a significant portion of the national fleet. Consequently, the immediate deactivation of all such BRVs from the Enterprise Relational Database Management System (ERDMS) would have substantially reduced the country's petroleum distribution capacity, with the potential to disrupt fuel supplies, cause product shortages, and adversely affect economic activities nationwide.

f. To address the issue, the Authority engaged relevant industry stakeholders, including the Tanker Owners Union (TOU), and communicated the implications of the low compliance rate. Following these engagements, the Authority granted a final extension of the registration deadline to 31st May 2026 to enable Transporters to regularize their operations and to allow the TOU to intensify efforts to notify and encourage its members to comply with the licensing requirements.

g. Additionally, the Authority directed depot managers and NPA officers stationed at the various storage depots to strengthen verification procedures and ensure that only BRVs with the approved licences for 2026 were permitted to load petroleum products. During the extension period, the Authority continued to monitor compliance levels and maintained oversight through depot inspections and licence verification processes.

h. The extension granted was a temporary measure aimed at safeguarding national fuel supply while improving compliance levels within the industry. The Authority remains committed to enforcing its licensing requirements and ensuring that BRVs that fail to regularize their licences within the stipulated period are deactivated from the ERDMS and prevented from participating in the loading, transportation, and distribution of petroleum products.

i. As at 31st May 2026, all Bulk Road Vehicles that had failed to complete the 2026 licensing process were suspended on the ERDMS. By this deadline, approximately ninety-three percent (93%) of the BRVs licensed in 2025 had successfully completed the 2026 licensing process, representing a significant improvement from the fifty-one percent (51%) compliance level recorded as at 9th April 2026.

j. The remaining seven percent (7%) of BRVs that failed to regularize their licences were subsequently suspended on the ERDMS and were not permitted to participate in the loading, transportation, or distribution of petroleum products.

**TRACKING**

k. Management acknowledges the recommendation and will take the necessary steps to ensure that ATK deliveries are brought under the Electronic Cargo Tracking System (ECTS) framework before the end of the year through the installation of IVM devices on ATK BRVs.

l. However, UPPF wishes to clarify for the record that Naphtha products are already tracked under the ECTS and are therefore not excluded from the current tracking regime. Accordingly, the finding regarding the non-

tracking of Naphtha products may require review to reflect the existing operational arrangements.

**2. MARKING OF PETROLEUM PRODUCTS**

a. Difference Between PPMS and UPPF Data Sets

Management wishes to clarify that the Petroleum Product Marking Scheme (PPMS) and Unified Petroleum Pricing Fund (UPPF) datasets are generated for different operational and regulatory purposes and therefore cannot be expected to produce identical volume records under all circumstances.

The PPMS dataset captures volumes of petroleum products marked under the Petroleum Product Marking Scheme at the point of loading. These records are generated directly from the Enterprise Relational Database Management System (ERDMS) and represent only products subjected to marking activities.

The UPPF Secretariat dataset, on the other hand, captures petroleum product volumes that attract UPPF margins for pricing and equalisation purposes. Accordingly, while both datasets relate to petroleum product movements, they serve different regulatory objectives and are not intended to be direct substitutes for one another.

b. Suspension of Marking of Differentiated PMS (RON 95)

The audit report identified a variance between PPMS and UPPF gasoline volumes and concluded that approximately 87.4 million litres of petrol were distributed without being marked. Management respectfully submits that this conclusion does not take into account a regulatory decision implemented by the Quality Assurance Directorate in July 2025.

By directive dated 3rd July 2025, the Director of Quality Assurance approved the suspension of marking of Differentiated Petroleum Products (RON 95) with effect from 4th July 2025 and instructed that the necessary configuration changes be implemented on the ERDMS platform. (Copy of Directive attached for ease of reference)

Following the implementation of this directive, RON 95 volumes continued to be distributed and recorded under UPPF records, but were no longer subjected to petroleum product marking activities under the PPMS.

Subsequent reconciliation exercises conducted by Management has established that the variances between PPMS and UPPF gasoline volumes were from July 2025, corresponding precisely with the implementation date of the suspension of RON 95 marking.

c. Correction of January 2025 PPMS Gasoline Volume

Management further identified a reporting error in the PPMS Annual Report for 2025. The report inadvertently recorded the January 2025 gasoline volume as 251,234,200 litres instead of the correct volume of 271,769,100 litres, resulting in an understatement of 20,534,900 litres.

A reconciliation conducted using ERDMS source records confirmed that the correct January 2025 gasoline volume was 271,769,100 litres, which corresponds exactly with the UPPF volume for the same period.

This reporting error contributed significantly to the apparent discrepancy observed during the audit review and has since been corrected in Management's reconciliation records.

d. Reconciliation of PPMS and UPPF Gasoline Volumes

Following the correction of the January 2025 reporting error and reconciliation of the impact of the suspension of RON 95 marking, the gasoline volume variance between the PPMS and UPPF datasets was determined as follows:

*Table 1: Reconciliation of PPMS and UPPF Gasoline Volumes Showing the Impact of the Suspension of RON 95 Marking (July–December 2025).*

| MONTH | PPMS SUPER | UPPF SUPER | Difference |
|---|---|---|---|
| Jan-25 | 271,769,100.00 | 271,769,100.00 | - |
| Feb-25 | 228,823,700.00 | 228,823,700.00 | - |
| Mar-25 | 232,497,100.00 | 232,497,100.00 | - |
| Apr-25 | 259,859,600.00 | 259,859,600.00 | - |
| May-25 | 250,615,400.00 | 250,615,400.00 | - |
| Jun-25 | 258,655,300.00 | 258,655,300.00 | - |
| Jul-25 | 255,865,000.00 | 265,979,000.00 | 10,114,000.00 |
| Aug-25 | 217,198,900.00 | 227,064,400.00 | 9,865,500.00 |
| Sept-25 | 245,857,900.00 | 257,708,400.00 | 11,850,500.00 |
| Oct-25 | 264,662,400.00 | 275,740,900.00 | 11,078,500.00 |
| Nov-25 | 250,490,000.00 | 261,777,500.00 | 11,287,500.00 |

| | | | |
|---|---|---|---|
| Dec-25 | 295,450,000.00 | 308,106,500.00 | 12,656,500.00 |
| **TOTAL PER PRODUCT (LITRES)** | **3,031,744,400** | **3,098,596,900** | **66,852,500** |

The reconciliation clearly demonstrates that the variance emerged only from July 2025 onwards, coinciding with the suspension of RON 95 marking activities.

e. No Evidence of Unmarked Fuel Entering the Market Contrary to Policy

Management respectfully submits that the available operational evidence does not support the conclusion that approximately 87 million litres of gasoline entered the market without being marked contrary to policy requirements.

The identified variance as indicated is attributable primarily to the approved suspension of marking of Differentiated PMS (RON 95) effective 4th July 2025; and a reporting error in the January 2025 PPMS Annual Report which understated gasoline volumes by 20,534,900 litres. Accordingly, the variance does not represent regular gasoline volumes that should have been marked under the Scheme, but rather volumes associated with a product category intentionally excluded from marking, following a management decision.

The audit report further estimated a loss of approximately GH¢78.6 million to the Unified Petroleum Pricing Fund (UPPF) based on the identified variance. Management respectfully submits that the basis for this computation has been clarified, hence, there is no loss occasioned to the UPPF and therefore the amount quoted should be struck out from the records. The volume variance relates to Differentiated PMS (RON 95) volumes which remained fully captured within UPPF records, but were excluded from PPMS marking activities following an approved regulatory decision. Consequently, the identified variance cannot automatically be interpreted as a financial loss to the UPPF without further assessment of the underlying assumptions used in the calculation.

f. **Conclusion**

The Authority respectfully submits that the apparent variances identified during the audit arose primarily from:

i. Differences in reporting classifications between PPMS and UPPF datasets; and
ii. The approved suspension of marking of Differentiated PMS (RON 95) effective 4 July 2025.

Management nonetheless acknowledges the need for enhanced reconciliation and reporting controls and will continue to strengthen coordination between PPMS and UPPF reporting processes to ensure that future reports adequately reflect policy decisions, operational changes, and data adjustments, thereby minimizing the risk of misinterpretation.

### 3. MONITORING THE ACTIVITIES OF RETAIL OUTLETS

a. Management acknowledges the recommendation and notes that the remaining retail outlets yet to be automated are primarily constrained by site-specific infrastructural deficiencies that currently do not support the installation and operation of the ATGS. Most of the remediation of these deficiencies falls under the responsibility of the respective station owners and must be completed prior to the commencement of automation works.

b. However, the Authority is actively engaging affected retail outlet operators through the Chamber of Oil Marketing Companies (COMAC) to ensure the timely resolution of these deficiencies and facilitate the completion of the installation program. Management is therefore committed to working collaboratively with stakeholders to achieve full ATGs deployment and considers the proposed end-of-2026 timeline reasonable, subject to the timely remediation of the identified infrastructure constraints by the affected operators.

c. Assessment of ATGs installed and identification & repairs of non-functioning ones is already underway. However, it forms part of a broader, holistic process that must follow regulatory reforms, contract reviews, and the necessary amendments. For this reason, the proposed September 2026 timeline is not feasible. Management states that this activity can be undertaken by the end of June 2027.

d. Management notes the audit observation and wishes to clarify that maintenance activities undertaken by the service provider are guided by an approved maintenance schedule developed and maintained by the UPPF Directorate in accordance with the terms of the existing contract. The Directorate monitors the execution of scheduled maintenance activities and confirms the completion of the required works before supporting documents are forwarded for payment processing. Payments are therefore based on maintenance schedules and reports submitted by the responsible user department, which serves as the contract manager.

e. Notwithstanding the above, Management acknowledges the need to strengthen the documentation of the verification process to provide a clearer audit trail. Accordingly, the Finance Directorate will continue to require maintenance reports duly certified by the UPPF Directorate, together with evidence of completed maintenance activities, before processing payments. This will enhance accountability, improve documentation of contract performance, and provide assurance that payments correspond to maintenance services actually rendered under the contract.

Outlook

**Fwd: ERDMS Update: Suspension of Marking for Differentiated PMS**

From Ernest Ayeh-Datey <eadatey@npa.gov.gh>
Date Thu 11 Jun 2026 12:55 PM
To Andy Opoku-Agyemang <aoagyemang@npa.gov.gh>

Sent from my iPhone

Begin forwarded message:

**From:** Dzidzor Klake <dklake@npa.gov.gh>
**Date:** 11 June 2026 at 12:29:55 PM GMT
**To:** Setso Agbenoto <sagbenoto@npa.gov.gh>
**Cc:** Andy Opoku-Agyemang <aoagyemang@npa.gov.gh>, Ernest Ayeh-Datey <eadatey@npa.gov.gh>
**Subject: Fw: ERDMS Update: Suspension of Marking for Differentiated PMS**

Hello Directors,

Following a reconciliation with UPPF, we noted that the variations between UPPF Data and PPMS data for gasoline started in July and can be attributed to the fact that PPMS stopped Marking RON 95 in July 2025.

Below is the communique between Director QA and UC.

I hope this helps.

Thank You.

Dzidzor Maklwa Klake
Head, PPMS
Quality Assurance Directorate
National Petroleum Authority
No. 6 George Walker Bush Highway
Dzorwulu, Accra
Tel: +233 302 550 323 Ext. 2330
Website: www.npa.gov.gh

---

**From:** Setso Agbenoto <sagbenoto@npa.gov.gh>
**Sent:** Thursday, 3 July 2025 2:53 pm
**To:** Ernest Ayeh-Datey <eadatey@npa.gov.gh>
**Cc:** Hawa Tejannie Ajei <hajei@npa.gov.gh>; Abass Tasunti <atasunti@npa.gov.gh>; Dzidzor Klake <dklake@npa.gov.gh>; Ubeidalah Kutia Saeed <uksaeed@npa.gov.gh>; Evans Asamany Addo <eaddo@npa.gov.gh>; Michael Savage <michael.savage@ngroupgh.com>; Gloria Nyanteh <gnyenteh@npa.gov.gh>
**Subject:** ERDMS Update: Suspension of Marking for Differentiated PMS

Dear Ernest,

The Quality Assurance Directorate has decided to suspend the marking of Differentiated Petroleum Products (RON 95) with immediate effect.

Kindly implement this change on the ERDMS portal effective **Friday, July 4, 2025**, to ensure system-wide consistency.

Please confirm once the update has been completed.

Thank you for your cooperation.

**Setsoafia .K. Agbenoto**
Director, Quality Assurance
National Petroleum Authority
No. 6 George Walker Bush Highway
(Adjacent Petroleum Commission)
Dzorwulu, Accra

Tel: +233 (0)24 2830423
+233 (0)30 2766193/6 Ext. 2307

Email: sagbenoto@npa.gov.gh
Website: www.npa.gov.gh

NPA
NATIONAL PETROLEUM AUTHORITY

NPA/LIC/TOU/01/12

27th April 2026

To: See Distribution List

**Extension of Deadline for the Renewal of NPA Bulk Road Vehicle (BRV) Sticker for 2026**

The National Petroleum Authority (NPA) wishes to inform all Transporters that the deadline for the registration and licensing of Bulk Road Vehicles (BRVs) engaged in the haulage of petroleum products has been extended to **Friday, 29th May 2026**.

This final extension is granted to enable all Transporters who have not yet acquired the approved BRV stickers and licences for the 2026 operational year to do so without further delay.

The registration and licensing of Bulk Road Vehicles is an annual exercise undertaken by the Authority to ensure that road tankers engaged in the transportation of petroleum products are in sound condition and do not pose a threat to public health, safety, and the environment.

Effective **1st June 2026**, any Transporter whose BRV has not obtained a valid licence and sticker for 2026 shall not be permitted to load petroleum products at any refinery or storage depot nationwide. Furthermore, all unlicensed BRVs shall be deactivated on the Enterprise Relational Database Management System (ERDMS) by the said date.

All stakeholders are hereby advised to take note and comply accordingly.

**Godwin Kudzo Tameklo Esq.**
**Chief Executive**

**Distribution List**

1. The Executive Secretary, Tanker Owners Union (TOU), Tema.
2. The Chief Executive Officer, Chamber of Oil Marketing Companies, Accra.
3. The Managing Directors, OMCs and LPGMCs.
4. The Managing Directors, All Refineries.
5. The Managing Directors, All Storage Depot Operators.

No. 6 George Bush Highway,
Dzorwulu, Accra
C.P.M.B. Cantonments, Accra

0302 550 333 / 030 276 6195
0800 12300 (Vodafone Toll Free)
info@npa.gov.gh
www.npa.gov.gh

# MISSION STATEMENT

The Ghana Audit Service exists

**To Promote**

Good governance in the areas of transparency, accountability and probity in Ghana's Public financial management system

**By auditing**

to recognised international standards

**And**

reporting audit results to Parliament