

EXECUTIVE SUMMARY

MOTIVATION

The Albertine Graben is where all Uganda's recently discovered petroleum falls and is the most important eco region in Africa as it hosts the continent's most endemic vertebrate species. It also houses two mostly visited parks in Uganda, that is, Murchison falls and Queen Elizabeth Protected Areas.

With the discovery of viable Oil and Gas reserves in the Albertine Graben, drilling waste is currently generated by the exploration activities, wherefore the proper management of waste from the petroleum activities is of vital importance. Poor waste disposal may lead to degradation of land and water resources, change in the ecosystem, leading to fish stress/kills. To date, drilling waste generated in the Albertine Graben, is not being treated but is stored in designated Waste Consolidation Areas (WCAs).

The purpose of the audit was to assess the efforts of NEMA in securing effective and environmentally sound mechanisms geared towards handling drilling waste in the Albertine Region.

KEY AUDIT FINDINGS

Adequacy of Waste Management Regulations and Guidelines

NEMA is three (3) years late in coming up with revised legislation that would encompass the oil and gas issues considering that a review that had started in 2008/09 and was supposed to end by 2010/11 had not delivered any tangible outputs by the time of audit (March 2014) regulations issued incorporating aspects of drilling waste management had not been by issued by NEMA.

The current operational waste management guidelines for oil and gas operations issued by NEMA do not spell out how drilling waste currently generated in the Albertine Graben should be transported, stored, treated and disposed.

Besides; the relevant stakeholders were not consulted while formulating the Operational Guidelines on Waste Management for oil and gas in the Albertine Graben issued in 2012, and as a result, the guidelines had several gaps that hampered their adoption and/implementation.

Monitoring and Compliance Enforcement of waste management in the Albertine Graben

Oil exploration and production companies did not prepare and submit self-monitoring reports against set parameters as per requirement. A review of their self-monitoring reports for the FYs 2010/11, 2011/12, 2012/13 revealed that out of the expected twelve (12) self-monitoring reports, Tullow (TUOP) had submitted 7 reports (58%) while Total (TEP) and CNOOC were each expected to have submitted six (6) self-monitoring reports but Total (TEP) submitted 3 (50%) and CNOOC none (0%) respectively.

Licensed waste transportation firms did not regularly submit bi-annual reports on the quality and quantity of waste to NEMA as required. Despite the repeated non-compliance of the companies, NEMA did not impose any sanctions or penalties on them.

District Environment Officers (DEOs) are not conducting inspections in the Graben despite the fact that they have been trained to do so by NEMA especially on aspects of monitoring and inspection of oil and gas activities. This has been attributed to the inadequate funding from their respective Local Governments. Inspections were only carried out when NEMA or the oil companies were involved and/or facilitated them.

Multi-sectoral inspections required in the Albertine Graben were not conducted as regularly as required. On average, the multi-stakeholder inspections conducted constituted 18.75% of the expected inspections.

NEMA had done well to conduct inspections over and above (133%) the required frequency in the Albertine Graben in the financial year 2012/13. However, it had not reported and shared the results of these inspections with the concerned companies.

Compliance and Independent verification/ Methodology for inspections

NEMA was not carrying out independent verification of tests of solid and liquid waste samples generated from the drilling activities to corroborate the results they received from the self-monitoring tests carried out by the oil companies.

As a result, it might be very difficult for NEMA to provide assurance that the current environment management practices have not adversely affected the surrounding

environment as sample collection and laboratory testing are vital tools in reporting on and/or monitoring compliance with proper waste management practices

ENVIRONMENTAL AND ECONOMIC EFFECTS OF WASTE MANAGEMENT PRACTICES IN THE ALBERTINE GRABEN

Treatment and Disposal of waste

Drilling waste stockpiles in the Albertine Graben for the period kept by TUOP (Tullow) and TEP (Total) for solid and liquid waste stood at 39,625 tons and 8227 cubic meters respectively exclusive of CNOOC which did not provide information on the quantity of drilling waste it generated.

Companies currently licensed by NEMA to treat the waste generated in the Graben cannot treat this waste as required because there are no adequate and relevant waste management regulations specific to Oil and Gas.

As a result, companies are likely to run out of space for waste consolidation and as the country heads into the production phase, more of this waste will be generated to cause the country significant environmental challenge should companies fail to find a suitable treatment method agreeable to both NEMA and themselves.

Environmental effects

The current practices are likely to expose the Albertine Graben to more potential environmental risks since a larger area of land in this sensitive eco-system is cleared, dug up and compressed as a methodology

to handling the waste in the short run, than if waste was treated and disposed of at once; this was evidenced at Bugungu Waste Consolidation Site where waste had been piled above ground level but had not been properly tucked away.

The current waste management practices create a double cost in terms of time, labor and money since the waste has to be re-transported to a final waste treatment and disposal site. This has already cost government significant sums of money, since waste management is part of the recoverable expenditures/ costs as per Uganda's Production Sharing Agreements (PSAs).

From 2010 to 2013 alone, the total expenditure on drilling waste management activities by Oil and production companies amounted to UGX 26.263 billion.

KEY RECOMMENDATIONS

Waste management regulations and guidelines

- NEMA should prioritize and expedite completion of the review of Uganda's legislation to incorporate oil and gas issues to promote better management of drilling waste.
- NEMA should consider adding review of the Operational Waste Management Guidelines on Oil and Gas Operations to the on-going legislative review.

- In future, NEMA should involve stakeholders in formulation of any policies, legislation or guidelines, and seek their input.

Monitoring and compliance enforcement

- NEMA should ensure that the Oil and Exploration companies carry out Self-Monitoring and report the findings to it as required and where necessary, use available sanctions in the Law to compel their compliance.

- NEMA should step up its coordination efforts of the multi-sectoral inspections in order to ensure that the knowledge from the various experts in specialised fields of ecosystem management is harnessed.

- NEMA should expedite its proposal of permanently having its Environment Monitoring staff stationed in the Albertine Graben in order to keep pace with activities of Oil and Gas.

- NEMA should consider ensuring timely communication of inspection findings to inspected entities as per the strategy requirement.

- Government should consider introducing conditional grants for the District Environment Offices to facilitate environmental monitoring. In addition, MoFPED should consider approving/ financing the recommendation by NEMA's Institutional Review Report to employ more environmental monitoring officers (Oil and Gas) and establish regional offices for better environmental monitoring, especially in the oil and gas sector.

Environmental and Economic Effects of waste management practices

- NEMA should routinely carry out laboratory tests to ensure that it keeps track of the effect oil exploration activities (if any) have on the environment.

- NEMA should consider prioritizing acquisition for standard equipment for its existing laboratory so as to enable the regular conducting of verification tests of waste samples obtained from the Albertine Graben.

- NEMA should expedite review of environmental legislation to incorporate management of waste from drilling activities.

- NEMA should as far as possible engage the Oil companies to address their concerns and enable treatment and disposal of waste by the

licensed companies.

- NEMA should liaise with MEMD and PEPD to ensure that it is involved in assessing waste management expenditure proposals/scenarios submitted by the oil E&P companies.

OVERALL AUDIT CONCLUSION

The audit on monitoring and regulation of drilling waste management in the Albertine Graben established that NEMA has made positive strides in ensuring effective and sustainable management of drilling waste in the Albertine Graben. However, existing weakness in the regulatory framework for waste management and capacity gaps in supervision and monitoring by NEMA need to be addressed to ensure proper management of drilling waste in the Garden. In addition, the ongoing baseline survey of the Albertine Garden and the strategic impact assessment under consideration by the sector should be finalized to enable implementation of the proposed mitigation measures.