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# The Midstream and Downstream Petroleum Environmental Regulations: What Operators Should Know



## Introduction

The petroleum industry faces mounting environmental protection challenges in an era of heightened environmental activism and demands for a shift to renewable energy sources with less environmental footprint. While Nigeria may not be able to make an immediate transition to renewables, it is committed to ensuring that operators in the petroleum industry adopt sustainable practices. Recognizing the urgency to mitigate the environmental impact, particularly within the midstream and downstream sectors, the Nigerian Midstream and Downstream Petroleum Regulatory Authority (the “**NMDPRA**” or the “**Authority**”) has taken a momentous step in issuing Midstream and Downstream Petroleum Environmental Regulations, 2023 (the “**Regulations**”). The Regulations were designed to (a) address perennial environmental and safety concerns associated with the midstream and downstream sector, and (b) serve as a roadmap for promoting environmental responsibility.

By the Regulations, the NMDPRA seeks to regulate and monitor health and environmental measures, establish environmental standards, outline the duties of Licensees in midstream and downstream petroleum sector as well as impose sanctions and penalties for noncompliance.<sup>1</sup> In this article, we shall be examining the key provisions of the Regulations with a view to shed light on the new environmental obligations of operators in the midstream and downstream sector.

## Environmental Management System (EMS)

The NMDPRA in its bid to ensure that midstream and downstream petroleum operations are carried out in environmentally respectful processes and conditions have issued the Regulations. The Regulations mandates all Licensees<sup>2</sup> operating in the midstream and downstream petroleum sector to establish an Environmental Management System (the “**EMS**”).<sup>3</sup> The EMS comprises processes and practices that guide operators in conducting their operations in an environmentally conscious and responsible manner. The Regulations also require Licensees to conduct regular Environmental Management Reviews (“**EMRs**”).<sup>4</sup>

The rationale behind conducting EMRs is to ensure that the EMS is constantly adequate and relevant considering ever-changing environmental issues, regulations, and prevailing circumstances. Thus, recognizing the dynamic nature of environmental challenges and government policies, Licensees must develop, adopt, and maintain their EMS as new environmental concerns arise, or governmental environmental policies evolve. It is instructive to note however, that the Regulations do not specify a time frame for conducting EMRs, hence leaving room for flexibility based on the unique requirements of each operation.

Additionally, the Regulations require Licensees to conduct periodic environmental audits.<sup>5</sup> These audits serve two critical purposes: (a) facilitating management control of environmental practices, and (b) assessing compliance with both the EMS and regulatory requirements. Further, the Regulations imposes on Licensees, reporting obligations concerning the performance of their environmental obligations. The reports must be submitted in the format outlined in guidelines issued by the Authority.<sup>6</sup>

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<sup>1</sup> Para. 1 of the Regulations.

<sup>2</sup> “Licensees” is used in this article to refer to Licensees and Permit holders.

<sup>3</sup> Para. 3 of the Regulations.

<sup>4</sup> Para. 4 of the Regulations.

<sup>5</sup> Para. 5 of the Regulations.

<sup>6</sup> Para. 6 of the Regulations

## Environmental Studies and Assessment

All Licensees are required by the Regulations to conduct environmental studies to evaluate the impact of their operations on the environment. These studies are required prior to the implementation of a new project, while operating an existing facility, after incidents such as spills, and for special activities within the sector, as directed by the NMDPRA.<sup>7</sup> The Regulations clearly outline four (4) special studies that must be carried out by licensees or permit holders, following the guidelines issued by the NMDPRA.<sup>8</sup> These studies are the Project Concept Screening (the “PCS”), Preliminary Environmental Risk Assessment (the “PERA”), Environmental Evaluation Study (the “EES”), and Post Impact Assessment Study (the “PIA”).

The PCS study involves an in-depth evaluation of various project concepts from an environmental perspective,<sup>9</sup> and upon its conclusion, the licensee or permit holder must select the most environmentally friendly project to proceed with.<sup>10</sup> PERA, on the other hand, is undertaken by licensees or permit holders to identify and evaluate “*potential significant and adverse environmental effects*” of a selected project, which presumably will be the selected project from the PCS.<sup>11</sup> The EES is required to be conducted every five (5) years from the commencement of operations, whenever deemed necessary by the NMDPRA, and before the decommissioning and abandonment.<sup>12</sup> This study aims to assess the ongoing environmental impact of the project throughout its lifecycle. Finally, the PIA study is conducted when authorized by the NMDPRA following an incident like an oil spill.<sup>13</sup> The PIA study must be undertaken within five (5) weeks from the date of the incident cleanup.<sup>14</sup> Its purpose is to thoroughly evaluate the environmental impact of the incident and the effectiveness of the cleanup measures implemented.

The Regulations empowers the NMDPRA to direct the conduct of special studies in response to new and emerging environmental challenges in the midstream and downstream petroleum sector.<sup>15</sup> These environmental studies play a crucial role in ensuring that Licensees adhere to environmental regulations and take necessary actions to mitigate their impact on the environment. The foregoing studies is not intended to replace, and they do not in fact replace the environmental impact assessment studies and the ensuing environmental impact assessment report and certificate that is required before the commencement of oil and gas projects under the Environmental Impact Assessment Act.

## Environmental Management Plan

The Regulations specify certain activities<sup>16</sup> within the midstream and downstream petroleum sector that necessitate the submission of an Environmental Management Plan (“EMP”) before

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<sup>7</sup> Para 8 of the Regulations

<sup>8</sup> Para. 9(1) of the Regulations.

<sup>9</sup> Para. 9(1)(a) of the Regulations.

<sup>10</sup> Ibid.

<sup>11</sup> Para. 9(1)(b) of the Regulations.

<sup>12</sup> Para. 9(1)(c) of the Regulations.

<sup>13</sup> Para. 9(1)(d) of the Regulations.

<sup>14</sup> Ibid.

<sup>15</sup> Para. 9(2) of the Regulations.

<sup>16</sup> These “activities” refers to onshore and offshore petroleum liquids and gas transportation pipelines and systems; petroleum liquids and gas separation, processing, liquefaction, compression, handling and storage facilities; refineries, petrochemicals, gas-based fertilizer, and other gas derivative plants; product depots and lube blending plants; retail outlets of significant storage capacity equal to or greater than 270,000 litres for refined products and greater than 10 metric tons for gas; petroleum waste management facilities for the collection, treatment or disposal of wastes generated from the midstream

commencing operations.<sup>17</sup> EMP must be prepared by an NMDPRA accredited person in accordance with the guidelines of NMDPRA<sup>18</sup> and submitted within six (6) months after the grant of the applicable licence or permit.<sup>19</sup>

The Regulations set timeframes for NMDPRA to approve an EMP (“**Initial Submission**”) or a re-submitted EMP (“**Re-Submission**”).<sup>20</sup> In deciding whether to approve or reject an EMP, the NMDPRA may consider the Licensees’ financial contribution to the Environmental Remediation Fund.<sup>21</sup> For an Initial Submission, the NMDPRA shall approve an EMP within ninety (90) days from date of submission while for a Re-Submission, the NMDPRA shall approve the EMP, (a) within thirty (30) days from date of Re-Submission, or (b) or within ninety (90) days from the Initial Submission, whichever is later. In the event of NMDPRA’s failure to communicate its decision within the prescribed timeframe, the approval will be deemed granted.<sup>22</sup> The NMDPRA reserves the right to request modifications or resubmissions of EMPs within a reasonable time to meet all criteria stipulated in these Regulations.<sup>23</sup>

Licensees may apply for approval from NMDPRA to revise an approved EMP by stating the grounds for the proposed change or change of circumstances in their petroleum operations.<sup>24</sup> Applications for revision may be made before the commencement of a new petroleum operations or activities, or any significant change or new stage of existing petroleum operations, that is not provided for in the EMP.<sup>25</sup> Revisions may also be sought when a significant new environmental impact, or a significant increase in an existing environmental impact, that is not within the purview of the EMP occurs.<sup>26</sup> Similarly, applications can be made for a series of new environmental impacts or increases in existing environmental impacts that collectively constitute a significant new environmental impact or increase not accounted for in the EMP for the petroleum operation.<sup>27</sup>

## Waste Management

In the midstream and downstream aspect of the petroleum industry, waste generation is an inevitable outcome of various activities such as transportation, processing, refining, and distribution of petroleum products. The type and quantity of waste produced depend on the specific operation in the value chain. Recognizing the environmental implications of waste, the Regulations place significant responsibilities on licensees and permit holders to promote proper waste management practices.<sup>28</sup> By the Regulations, the Licensees are required to submit a Waste

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and downstream petroleum sector; and any other midstream and downstream petroleum operations as may be determined by the NMDPRA. However, following the presidential directive on the “Delineation of Regulatory Oversight Between Nigeria Upstream Petroleum Regulatory Commission (NUPRC) and Nigeria Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), Pending Clarifications by way of Amendment to the Petroleum Industry Act 2021” (the “**Petroleum Industry Presidential Directive, 2021**”) the regulatory oversight of the NMDPRA does not extend to any pipelines and facilities (including export terminals) that are operationally linked from extraction to and including crude export terminals and the gate of the natural gas processing plant. The affected “activities” are therefore no longer covered under the Regulations.

<sup>17</sup> Para 12(1) of the Regulations.

<sup>18</sup> Para. 13 of the Regulations.

<sup>19</sup> Para 12(2) of the Regulations.

<sup>20</sup> Para. 15(1) of the Regulations

<sup>21</sup> Para. 15(5) of the Regulations.

<sup>22</sup> Para. 15(2) of the Regulations.

<sup>23</sup> Para. 15(3) of the Regulations.

<sup>24</sup> Para. 16(1) of the Regulations.

<sup>25</sup> Para. 16(2)(a) of the Regulations.

<sup>26</sup> Para. 16(2)(b) of the Regulations.

<sup>27</sup> Para. 16(2)(c) of the Regulations.

<sup>28</sup> Para. 17(2) of the Regulations.

Management Plan (WMP) alongside their EMP to ensure proper waste management.<sup>29</sup> licensees and permit holders have a duty to promptly notify the NMDPRA in writing within one month of generating any new hazardous waste not previously captured in the approved WMP.<sup>30</sup>

The Regulations prohibit the discharge or disposal of hazardous waste after treatment into the environment without the approval of the NMDPRA.<sup>31</sup> Moreso, the transportation of these wastes must be in an approved fit-for-purpose containers or vessels approved by the NMDPRA.<sup>32</sup> Subject to the explicit consent and approval of the NMDPRA, the discharge of Produced Formation Water (PFW) originating from midstream petroleum facilities shall exclusively occur within designated Offshore Discharge Zones (ODZ) or through the utilization of approved re-injection wells. However, discharge into Zero Discharge Zones (ZDZ) is only allowed in cases of emergencies, safety concerns, or threats to life and must be authorized accordingly.<sup>33</sup>

### Addressing Environmental Challenges

The Regulations also recognize international environmental challenges and makes specific codification on some of them.

#### Climate Change

The Regulations require Licensees to monitor Green House Gases (“GHG”) generated from their operations and report the information to the Authority periodically in accordance with the guidelines to be issued. They are also required to come up with strategies to achieving net-zero targets in their operations.<sup>34</sup> Although Nigeria does not contribute to greenhouse pollution as much as the developed countries, it has recorded a consistent rise in the rate of carbon dioxide (CO<sub>2</sub>), which accounts for the largest share of GHG associated with global warming.<sup>35</sup> This requirement will therefore ensure the participation of the midstream and downstream petroleum industry in achieving net-zero<sup>36</sup> by 2060.<sup>37</sup>

#### Combating Methane Emission

Licensees are to monitor and control methane emissions from new and existing facilities. Particularly, monitoring is required in places (a) where the processing, transportation and distribution of hydrocarbons occurs; and (b) where petroleum liquids and gas are stored.<sup>38</sup> To combat and reduce methane emissions,<sup>39</sup> licensees and permit holders are to take an inventory

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<sup>29</sup> Para. 17(1) of the Regulations.

<sup>30</sup> Para. 17(3) of the Regulations.

<sup>31</sup> Para. 17(5) of the Regulations

<sup>32</sup> Para. 17(4) of the Regulations.

<sup>33</sup> Para. 18 of the Regulations.

<sup>34</sup> Paras. 20-21 of the Regulations.

<sup>35</sup> Trading Economics, “Nigeria CO<sub>2</sub> Emissions,” <<https://tradingeconomics.com/nigeria/co2-emissions>> accessed July 31, 2023.

<sup>36</sup> Net-zero is a process whereby the amount of GHG emitted into the atmosphere is equal to the amount removed from the atmosphere.

<sup>37</sup> The Cable, “Net-Zero Target: Nigeria’s Greenhouse Gas Emissions Increased by 46% in 18 years,” July 28, 2022, <<https://www.thecable.ng/net-zero-target-nigerias-greenhouse-gas-emissions-increased-by-46-in-18-years>> accessed July 31, 2023.

<sup>38</sup> Para. 21(1) of the Regulations.

<sup>39</sup> The United Nations reports that methane emission is responsible for over 25% of global warming today, and the energy sector releases huge amounts of methane into the atmosphere. See United Nation Environment Programme, “What’s the Deal with Methane?,” October 18, 2022 <<https://www.unep.org/news-and-stories/video/whats-deal-methane>> accessed July 31, 2023.

of equipment that could be possible sources of methane emissions in new and existing facilities and implement Leak Detection and Repair (LDAR) and Monitoring Reporting and Verification programmes.

### **Pollution Reduction and Emergency Response**

Licensees are to submit their existing Spill or Release Contingency Plan (SRCP) document to the Authority during the last quarter of each year for review.<sup>40</sup> A contingency plan is a detailed oil spill response and removal plan that addresses the control, containment, and recovery of the spillage.<sup>41</sup> Another innovation is that licensees or permit holders are required to contain and recover any spill from known or unknown sources.<sup>42</sup> This duty is to be performed even while a joint investigation process has not been concluded.<sup>43</sup> This provision is important because it will encourage prompt recovery of spillage and prevent adverse effects to affected communities and the environment.

### **Reporting of Spill of Petroleum Products**

Licensees are to report incidences of spillage to the Authority within 24 hours.<sup>44</sup> Categories of products include: (a) refined and unrefined petroleum; (b) natural gas; and (c) industry chemicals and products. Reporting is to be according to the Spill or Release Notification Reporting format as prescribed in the guidelines issued by the Authority. However, the spectrum of oil spillage covered does not extend to oil spillage occurring within the upstream sector and in integrated facilities, which fall under the regulatory purview of the NUPRC as clarified in the Petroleum Industry Presidential Directive, 2021.

### **Establishing the Joint Spill Investigation Team**

This will comprise of (a) the Licensee, (b) the spiller- in cases where different from the licensee or permit holder, (c) the affected community as may be applicable, and (d) relevant stakeholders. The Licensee is to also convene the team within twenty-four 24 hours of the spill to conduct a Joint Investigation Visit.<sup>45</sup> The Authority is to necessarily approve any remediation and rehabilitation method for cleaning up the affected site.<sup>46</sup> Licensees will bear responsibility for cleaning up spills and are to keep a register of spill sites. While the joint investigations ongoing in the upstream petroleum industry, the Regulation also codifies the establishment of investigation teams for the midstream and downstream industry.

### **Remediation.**

Licensees must obtain the Authority's approval before commencing any remediation and restore the affected area to its original state.<sup>47</sup> In cases where the licensee or permit holder fails to carry out the remediation process, the incidence qualification prescribed in the Midstream

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<sup>40</sup> Para. 26(1) of the Regulations.

<sup>41</sup> United States Environmental Protection Agency, "What is an Oil Spill Contingency Plan?" June 23, 2023, <<https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/what-oil-spill-contingency-plan>> accessed July 31, 2023.

<sup>42</sup> Para. 27 of the Regulations.

<sup>43</sup> Ibid.

<sup>44</sup> Para. 28(1) of the Regulations.

<sup>45</sup> Para. 28(2) of the Regulation.

<sup>46</sup> Para. 28(4) of the Regulation.

<sup>47</sup> Para. 30(1-2) of the Regulations.

and Downstream Environmental Remediation Fund Regulations (the “**Remediation Fund Regulations**”) is to be applied. The Authority will be permitted to carry out remediation from the remediation fund established under the Remediation Fund Regulations.<sup>48</sup> The incidence qualification will arise where a licensee is declared bankrupt or subject to winding up proceedings or has its license suspended or revoked and is consequently unable to carry out the remediation process.<sup>49</sup>

### Sanctions for Non-Compliance.

The Regulations set out the procedure for the Authority in cases of a negative environmental impact incident. Where a permit holder or licensee fails to comply with the environmental provisions under the Regulations, the Authority is to issue a *notice of potential incidence of non-conformity* and investigate whether: (a) the licensee or permit holder adhered to the EMP and took measures to avoid the spill; and (b) steps were taken to mitigate the negative environmental impact.<sup>50</sup> Licensees that failed to do the above will be liable for an administrative penalty equal to 100% of the contribution to the Environmental Remediation Fund; (b) carry out the measures to mitigate the impact in accordance with the EMP; or (c) be issued a *notice of non-compliance* and liable to pay 150% of its annual contribution to the ERF. Those not contributing to the ERF are liable to pay penalties as provided in Schedule 2 of the Regulations and under the Act. Failure to reduce negative impact may lead to the revocation of a licence or permit.<sup>51</sup> A major challenge in this provision is that the Regulation does not define a “negative environmental impact.”

Offences under the Regulations range from (a) failing to obtain the required licence; (b) not permitting inspection as required; (c) making false declarations; and (d) failing to comply with the Regulations. Offenders will be liable to administrative penalties contained in the Act or Second schedule of the Regulations. As a last resort, the Authority may suspend or revoke the license or permit of perpetual offenders.<sup>52</sup>

### Dispute Resolution.

The Authority may mediate in disputes relating to midstream and downstream petroleum environmental related issues.<sup>53</sup>

### Possible Impact of the Regulations

The Authority’s attempt to codify the specific steps for addressing environmental issues in the midstream and downstream petroleum industry is applaudable. With effective implementation and compliance, the Regulations would address pertinent environmental concerns in the midstream and downstream petroleum industry. The implementation of the Regulations will target pollutants and harmful substances that can adversely affect human health. By controlling emissions and limiting exposure to hazardous materials, these regulations help reduce the incidence of respiratory problems, cancers, and other health issues caused by pollution. The Regulations are also instrumental in reducing greenhouse gas emissions and combatting climate change as they encourage the use of renewable energy sources, promote energy efficiency, and

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<sup>48</sup> Para. 9 of the Remediation Fund Regulations.

<sup>49</sup> Ibid.

<sup>50</sup> Para. 32(1) of the Regulations.

<sup>51</sup> Para. 32(2) of the Regulations.

<sup>52</sup> Para. 35 of the Regulations.

<sup>53</sup> Para. 34 of the Regulations.

set emission standards for industries, all of which contribute to the global effort to limit global warming.

Nevertheless, the Regulations create overlapping environmental compliance obligations for operators in the oil and gas sector. The Regulations overlap with, and in some cases conflict with the provisions of the Environmental Impact Assessment Act (EIAA), the Harmful Waste (Special Criminal Provisions etc) Act, 1988 (“Harmful Waste Act”) and environmental regulations of the NUPRC. The Petroleum Industry Presidential Directive, 2021 has clarified the conflicting regulatory oversight of the NUPRC and NMDPRA over integrated oil and gas facilities thereby excluding the application of the Regulations to the upstream sector and its integrated facilities. On the other hand, it would appear that midstream and downstream licencees will have to comply with the Regulation, the EIA Act, and the Harmful Waste Act, which will certainly increase the regulatory compliance burden and costs of the affected midstream and downstream companies.

### **Conclusion**

The Regulations create a demand for cleaner and more sustainable technologies. This will drive businesses to invest in research and development of eco-friendly alternatives, which can lead to technological advancements and new economic opportunities. They also help ensure the stability and resilience of ecosystems, which are essential for maintaining a healthy economy in the face of environmental challenges and climate-related risks. Overall, the Regulations help to preserve the ecosystem and improve the elimination and containment of environmental hazards, which will improve the living conditions of host communities, businesses, and petroleum activities.



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