GUIDELINES FOR THE ESTABLISHMENT OF LUBE OIL BLENDING/WASTE OIL RECYCLING PLANTS

ISSUED BY

DEPARTMENT OF PETROLEUM RESOURCES

2020
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1. APPLICATION PROCEDURE

Pursuant to the provisions of the Petroleum Act 1969, Petroleum (Amendment) Regulations 1988 and Mineral Oils (Safety) Regulation (MOSR), all applications for Approval to Construct/Modify Lube Oil Blending, Waste Oil Recycling, Oil Treatment, Petroleum Jelly, Transformer Oils, Technical White Oils, Pharmaceutical Oils and Grease Manufacturing Plants, shall be addressed to the Director/CEO, Department of Petroleum Resources.

The application process shall comprise three (3) Statutory approval gates as listed below:

1) Permit to Establish (PTE)
2) Approval to Construct (ATC)
3) License to Operate (LTO)

2. APPLICATION PROCESSES AND ASSOCIATED DELIVERABLES

2.1 Permit to Establish (PTE)

This approval gate prescribes the qualification criteria for companies proposing to establish a lube oil/recycling plant. Application for PTE shall be made on Company’s letter headed paper with the following requirements:

i. Evidence of registration with Corporate Affairs Commission (CAC) – Copy of Certificate of Incorporation.
ii. A Certified True Copy of Company’s Memorandum and Articles of Association.
iv. A Proof of Ownership of land where plant is to be sited.
v. A letter from appropriate Town Planning Authority, authorizing the siting of the plant at the proposed site.
vi. A Certified Copy of Land Survey Map.
vii. A copy of proposed layout drawings of the proposed plant showing relative distances (in meters) of various units within the facility and the interrelationship with adjoining properties.

viii. Evidence of Payment of the Prescribed Application fee of Two Hundred and Fifty Thousand Naira (₦250,000) Only, payable via DPR online payment platform.

Upon submission of the above, a Site Suitability Inspection Exercise shall be conducted by the Department (Requirements for suitability of site are specified in the Appendix).

The Department shall grant a Permit to Establish the plant upon satisfactory appraisal of the above submission, after which an applicant may then proceed to the next statutory approval gate.

2.2 Approval to Construct (ATC)

This section highlights the requisite technical documentations required to obtain Approval to Construct and progress to the construction and installation of the facility. Application for ATC shall be made on Company’s letter headed paper with the following requirements:

i. A copy of PTE earlier granted to the Company

ii. Evidence of Payment of ATC Processing fee of Two Hundred and Fifty Thousand Naira (₦250,000) Only, made payable via DPR online payment platform.

iii. A copy each of the Certificate of Registration of Trade Names and Descriptions under which the company proposes to market its products (where different from the blending company name) obtained from Ministry of Trade and Investment.

iv. Detailed proposal on the project stating clearly:
   a. Formulations, Specifications, Classifications, Grades, Trade Names and
   b. Identifications of the products to be manufactured.
c. Detailed description of laboratory facilities and equipment to be used for products quality control and applicable test methods to be adopted for lubricant quality assurance and control.

d. Effluent handling and disposal methods.

e. Project design basis stating among others the nameplate production capacity of the plant.

v. A letter of introduction for the Engineering Design Firm (must possess a valid DPR Oil and Gas Industry Services Permit for the service to be rendered) nominated by company to carry out the design of the plant.

vi. A schedule for the conduct of Engineering Designs of the plant to enable the attachment of a DPR Engineer to the project. Upon completion of the design, the company shall be expected to submit the following design deliverables (which must be endorsed by a registered Engineer) to the Department:

   a. Architectural and Building Drawings which should include Civil and Structural Engineering Design Drawings, with all associated Sectional and Elevation Details (duly endorsed by State/Local Government Town Planning Authority).
   b. Mechanical Drawings (which shall include sectional details of storage tanks) of the Plant
   c. Electrical Drawings of the Plant
   d. Process Design Drawings which should include Process Flow Diagrams (PFD) and Piping and Instrumentation Diagrams (P&ID) for the Plant.
   e. Utility Flow Diagram (UFD) for the Plant.
   f. Safety and Fire Fighting Diagram for the Plant.

vii. Codes, Standards and Specifications adopted in the design of the plant with specifications of equipment and facilities to be installed.
viii. A Report signed by the Chief Federal/State Fire officer, or an officer authorized by him in that behalf, that he is satisfied with the proposed arrangements for the prevention and containment of fire.

ix. An Environmental Impact Assessment (EIA) Study for the project in conjunction with the Health, Safety & Environment (HSE) Division of the Department.

x. A project execution schedule for the installation/construction stage of the project.

Upon a satisfactory appraisal of the above submission, the company shall be invited to make a Technical Presentation to the Department on the project. If satisfactory, an Approval to Construct (ATC) the lube oil/recycling plant shall be granted by the Department.

3. MINIMUM REQUIREMENTS FOR THE CONSTRUCTION AND OPERATION OF LUBE OIL BLENDING/WASTE OIL RECYCLE PLANTS

3.1 Storage Tanks Spacing

For all storage tanks, the minimum distances shall be as follows:

1. Between the perimeter of the tank and the outer boundary of the installation, it shall be at least 6.096 m (20 ft).
2. Between two adjacent tanks, it shall be at least 0.9144m (3 ft).
3. Between perimeter of tank and sidings on which working locomotive pass it shall be at least 15.24m (50 ft).

3.2 Storage Tank Design Specifications and Fittings

1. All the storage tanks shall conform to the existing approved standards of the Standards Organisation of Nigeria (as a minimum) and shall be constructed from mild steel or any other non-flammable material as approved by the Department.
They shall be externally coated to protect them from rusts and be conspicuously marked with their capacities in cubic meters.

2. All tanks shall be protected against atmospheric static electricity discharges and shall be painted in aluminium grey or other bright colors as approved by the Department.

3. When installed wholly or partly above the surface of the ground, the tank shall be firmly supported with materials of structural integrity to meet the approval of the Director/CEO, Department of Petroleum Resources and be surrounded with a retaining bund wall that is large enough to contain 110% of the tank full contents.

4. Every permanently placed bulk storage tank containing liquid petroleum shall:
   i. Be installed within a bund wall capable of containing the contents of the largest tank plus ten per cent of the volume of the remaining tanks.
   ii. Have provisions made for containing any leakage to prevent contamination of water by oil for tanks installed in marine environments.
   iii. Be provided with efficient electrical earth connections, having an electrical resistance value not exceeding ten ohms when measured by an earth resistance tester of the Megger or similar type.
   iv. Be fitted with adequate lightning protective device.
   v. Be fitted with manholes of minimum diameter of 60.96 cm to facilitate easy access to the tank interior.
   vi. Be fitted with vents capable of relieving excess pressure or vacuum.
   vii. Have access to their roofs by means of a ladder or staircase constructed and attached to the outer tank shell.
5. General
   i. All electrical wirings shall conform to applicable NIS Standards and other Internationally recognized fire protection standards.
   ii. All fire protection devices shall conform to applicable National/International Fire Protection Standards.
   iii. Non-flammable materials shall be used for all constructions within the plant.
   iv. All electrical lamp fittings shall be flameproof.
   v. During operation, no storage tank shall be filled to more than 95% of its capacity. All maintenance requiring hot works on storage tanks shall be carried out under a permit issued by a competent person specifying detailed safety precautions that must be taken in the process.

4. ENVIRONMENTAL PROTECTION
   1. All storage tanks shall be surrounded by bund walls constructed with concrete.
   2. There shall be adequate piping facilities for evacuating any liquids retained within the bund walls.
   3. There shall be installed in the enclosure, an efficient oil interceptor with an isolating valve leading to the drainage system.
   4. Water shall not be allowed to accumulate within the enclosure or any part thereof where the storage tanks are on concrete foundations and the bed of the enclosure is also concrete; drainage of the enclosure shall be evacuated by means of a pipe fitted with a valve, to be kept close when not in use, and which is capable of being activated from outside the enclosure.
   5. The quality of the effluent generated from the drainage system in the plant shall be monitored at such intervals as specified in the existing environmental guideline.
issued by the Department and reports of analysis submitted to the Director/CEO, Department of Petroleum Resources on monthly basis.

6. All other precautions and provisions of up-to-date equipment for preventing pollution as specified in the Department’s environmental guidelines shall be put in place to the satisfaction of the Director/CEO, Department of Petroleum Resources.

5. FIRE FIGHTING AND PROCEDURE MEASURES

1. Adequate equipment for firefighting approved by the Chief Federal/State Fire Officer and protection shall be provided for the facility.

2. Each item of firefighting equipment shall be inspected and tested at appropriate intervals by a competent person and records of such inspections/tests provided on demand.

3. All the personnel employed in the installation shall be trained on the use of firefighting equipment.

4. Instruction to personnel in case of fire shall be clearly and concisely expressed in writing and prominently displayed at the site.

5. “NO SMOKING” and other safety signage shall be conspicuously displayed at strategic locations in the plant and be illuminated for ease of identification in dull brightness.

6. Whenever a fire or any accident occurs in the installation, a report of the circumstances and probable causes shall be forwarded to the nearest office of the Department of Petroleum Resources by the licensee within twenty-four hours and to the Director/CEO, Department of Petroleum Resources within forty-eight hours of occurrence.

7. Automatic fail-safe emergency alarm devices shall be incorporated in the critical sections of the plant.
6. PRODUCT QUALITY AND ASSURANCE

A laboratory for quality control shall be established within the plant to test for the under listed parameters and others as prescribed by the Nigerian Industrial Standards (NIS) for lubricants using international test methods (ASTM and IP) as applicable to:

1) Specific Gravity
2) Flash point
3) Pour Point
4) Viscosity
5) Water content
6) Insoluble Content
7) Acidity Level
8) Total Base Number (TBN)
9) Sulfated Ash content (Trace metals Pb, Fe, Na, K, Va, Ni, Co)
10) Penetration
11) Drop point
12) Acidity

7. TRIAL BLEND APPROVAL

All trial blending activities shall be closely monitored by representatives of the Department and an Approval issued upon successful conduct. The blend quality shall conform with respective Nigerian Industrial Standard (NIS) specifications for lubricants.

8. LICENSING PROCEDURE

Upon completion of the construction of lube blending/waste oil recycling plant, an application for issuance of license to operate (LTO) the plant shall be forwarded to the
GUIDELINES FOR THE ESTABLISHMENT OF LUBE OIL BLENDING/WASTE OIL RECYCLING PLANTS

Applicable to all Oil & Gas Operators

Director/CEO, Department of Petroleum Resources. The application shall be accompanied with the following:

1) Evidence of payment of the Prescribed Statutory Operating License fee made payable via the DPR online payment portal.
2) Evidence of payment of Processing fee of Two Hundred and Fifty Thousand Naira (N250,000) Only for issuance of license to operate the plant
3) A photocopy of Approval to Construct (ATC) earlier issued for the project.
4) A copy of the product trial blend approval in line with NIS specifications earlier granted.
5) A final Fire Certificate signed by the Chief Federal/State Fire Officer or any officer designated by him in that behalf, that he is satisfied with the provisions for the prevention and containment of fire.
6) Integrity Tests Reports and Calibration Certificates of Base Oils Storage Tanks as witnessed by DPR representatives.
7) Laboratory accreditation letter from the DPR.
8) Emergency Response Plan (ERP)
9) A set of plant operating manuals.

Upon a review of the above submissions, a pre-license inspection of the plant shall be conducted and a license to operate the plant granted if the outcome is satisfactory.
APPENDIX

SITE SUITABILITY CONSIDERATIONS FOR ESTABLISHMENT OF LUBE OIL BLENDING PLANT (LOBP)

The following are the requirements for suitability of site for the establishment of LOBP:

1. Minimum land area of 10,000 ft²
2. Site must not be situated in residential area.
3. Site must not traverse a Pipeline Right of Way (ROW). Minimum setback from existing ROW shall be 30 meters.
4. Site must not be situated under electrical high-tension installation.
5. Site must not be situated close to sensitive institutions which includes Schools, Hospitals, Churches/Mosques, Orphanages, Hotels etc
DEPARTMENT OF PETROLEUM RESOURCES (DPR)

APPLICATION FORM FOR GRANT/RENEWAL OF LICENSE TO OPERATE LUBE BLENDING PLANT

SECTION A

1. Name of Company………………………………………………………………………..

2. Registered Address in Nigeria …………………………………………………………….

3. Plant Location Address
   a  ……………………………………………………………………………………………
   (Specify Area)
   b  ……………………………………………………………………………………………
   (Town)  (LGA)  (State)

4. State whether application is for a new or renewal license ……………………………
   (If renewal, please attach photocopy of expired license)

5. Production Data
   Base Oil Requirements  Lubricants Produced by Company
   ……………………  Litres  ……………………………  Litres
   ……………………  Litres  ……………………………  Litres
   ……………………  Litres  ……………………………  Litres

Annual Cumulative Base Oil Requirements ……………………………………….. Litres
Applicable to all Oil & Gas Operators

GUIDELINES FOR
THE ESTABLISHMENT OF LUBE OIL BLENDING/WASTE OIL RECYCLING PLANTS

Code: DPR Guide 0021 - 2020
Revision Date: 1st August 2020

Annual Production Projections @ 100% or 50% etc capacity ..........

6. Training & Maintenance Programme:
List of Proposed Training for Staff .........................................................
...............................................................................................................
...............................................................................................................

7. Preventive Annual Maintenance Programme for Plant .................
...............................................................................................................

8. I/We hereby certify that all the information contained in this application and supporting documents are in the best of my knowledge correct.
...............................................................................................................

..........................................................                           ..........................................................
FeePaid                           (Amount in Words)
...............................................................................................................

..........................................................                           ..........................................................
(Authorizing Company Signature)   (Company Stamp and Date)

SECTION B: FOR DEPARTMENT OF PETROLEUM RESOURCES USE ONLY

9. Remita Retrieval Reference No.: ....................................Amount Paid:.........................

10. Recommendation of the Processing Officer:..........................
.............................................................................................................
GUIDELINES FOR THE ESTABLISHMENT OF LUBE OIL BLENDING/WASTE OIL RECYCLING PLANTS

Code: DPR Guide 0021 - 2020
Revision Date: 1st August 2020

GLOSSARY

**ATC** – Approval to Construct

**ASTM** – American Society for Testing and Materials

**CAC** – Corporate Affairs Commission

**DPR** – Department of Petroleum Resources

**EIA** – Environmental Impact Assessment

**ERP** – Emergency response plan

**HSE** – Health, Safety & Environment

**LTO** – License to operate

**NIS** – Nigerian Industrial Standard

**P&ID** – Piping and Instrumentation Diagrams

**TBN** – Total Base Number

**UFD** – Utility Flow Diagram

Approved by

Engr. Sarki Auwalu, *MNSE*
(Director/CEO, Department of Petroleum Resources)

Date 1st August 2020