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**NATIONAL ENVIRONMENTAL STANDARDS AND
REGULATIONS ENFORCEMENT AGENCY (ESTABLISHMENT)
ACT, 2007**

**NATIONAL ENVIRONMENTAL (FOOD, BEVERAGES AND
TOBACCO SECTOR) REGULATIONS 2023**



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S. I. No. 93 of 2023

**NATIONAL ENVIRONMENTAL STANDARDS AND
REGULATIONS ENFORCEMENT AGENCY (ESTABLISHMENT)
ACT, 2007**

**NATIONAL ENVIRONMENTAL (FOOD, BEVERAGES AND
TOBACCO SECTOR) REGULATIONS 2023**

In exercise of the powers conferred on me by section 34 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 (As amended) and all other powers enabling me in that behalf, I, Dr. IZIAQ ADEKUNLE ADEBOYE SALAKO, Honourable Minister of State Environment and Ecological Management makes the following Regulations—

[8th Day of November, 2023]

Commence-
ment.

PART I—OBJECTIVE, EFFLUENT LIMITATION, EMISSION AND NOISE

1. The objective of these Regulations is to prevent and minimize pollution from all operations and ancillary activities of food, beverages and tobacco companies to the Nigerian environment.

●bjective.

2.—(1) Each facility shall submit to the Agency an Environmental Impact Statement (EIS) for new industry, major upgrade of existing facility and major developmental project before commencement of operations.

Statutory
Requirements

(2) Each existing large and medium industry shall submit to the Agency an Environmental Audit Report (EAR) once every three years which shall include its Environmental Management Plan (EMP) and shall be conducted by a NESREA accredited consultant.

(3) Each micro and small scale facility shall submit to the Agency Environmental Management Plan (EMP) once every three years as prescribed in the Ninth schedule to these Regulations.

(4) Without prejudice to sub-regulation (2) of this regulation, where a facility is to be decommissioned or transferred for any reason whatsoever, an environmental assessment shall be conducted by a NESREA accredited consultant and its report submitted to the Agency for verification and approval in line with the Ninth Schedule (B) to these Regulations

(5) Each facility shall apply up-to-date, best practicable environmental option, cleaner production method and green technology to reduce pollution to a minimum.

(6) The National standard for effluent or emission limitations shall represent the minimum standard as prescribed in the First Schedule to these Regulations.

(7) Each facility shall place more emphasis on environmental planning to prevent, reduce or eliminate pollutants at source and less emphasis shall be placed on external hardware, which are end-of-pipe mechanisms.

Emergency
Response
Plan

3.—(1) Each facility shall —

(a) have an emergency response plan and a stock of pollution response equipment, which shall be readily accessible and available to combat pollution hazards in the event of accidental discharges as prescribed in the Eighth Schedule to these Regulations ; and

(b) prepare and implement a functional emergency response plan which shall include measures to be taken —

(i) in the discharge of deleterious substances,

(ii) to prevent any deposit or discharge out of the normal course of events, and

(iii) to mitigate the effects of such deposit or discharge.

(2) Each facility shall take steps to ensure that accidental discharges such as spills or leaks, do not pollute the storm water system, local waterways, public drains or water bodies, the steps include to —

(a) keep chemical including fuel, solvent, oil, electrolyte and coolant within a bund wall, chemical resistant floor and covered storage area ;

(b) have adequately stocked spill kits on hand ; and

(c) train staff on the use of spill kits.

Pollution
Abatement
Equipment

4.—(1) Each facility shall install anti-pollution equipment for the detoxification or treatment of generated effluent and emission as prescribed in the First, Second and Third Schedules to these Regulations.

(2) The installation of anti-pollution equipment made under sub-regulation (1) of this regulation shall be based on the Best Available Technology (BAT) or the Best Practicable Technology (BPT).

(3) Each facility that operates vehicles and equipment in the course of its activities shall do so in a manner that prevents ground and surface water pollution.

Polluter
Pays
Principle

5.—(1) The Polluter-Pays-Principle shall apply to every facility that pollutes.

(2) The collection, treatment, transportation and final disposal of wastes shall be the responsibility of the facility generating such wastes within the specified standards and guidelines.

(3) Where an incident results in an adverse impact on the environment or humans, the facility shall be responsible for —

(a) the cost of assessment, damage, control and clean-up ;

- (b) remediation ; and
- (c) reclamation or restoration.

6.—(1) Each facility shall implement cleaner production processes and pollution prevention measures as prescribed in the Sixth Schedule to these Regulations. Best Practices

(2) Each facility shall reduce the quantity of packaging material utilised and the use of the five 'Rs' namely Reduce, Re-use, Recover, Repair and Recycle as prescribed in the Sixth Schedule to these Regulations.

(3) A Pollution prevention programme shall focus on reduction of use of water and more efficient use of process chemicals.

(4) A damaged and disused packaging material including glass, plastic, metal, paper, wood, nylon shall be recycled.

(5) The environmental conditions of the workplace shall be monitored annually through heat-stress, light intensity assessments and industrial hygiene study as prescribed in the Eighth Schedule to these Regulations.

(6) Each facility shall assess its workplace to develop a current listing of all designated hot work and high hazard areas.

7.—(1) Each facility shall develop a system for pollution control as prescribed in the Ninth Schedule to these Regulations. Pollution Control Organisational System

(2) In addition to capacity building schemes and lecture courses, an assessment shall be conducted to help environmental pollution control managers and operators to obtain required qualification and certification by the Agency as prescribed in the Ninth Schedule to these Regulations.

8.—(1) Each facility shall subscribe to —

- (a) the Extended Producer Responsibility (EPR) Programme ;
- (b) the buy back for bottles ; and
- (c) other packaging materials for products,

as stated in the Tenth Schedule to these Regulations.

Extended
Producer
Responsibility
programme

(2) Each manufacturer, distributor or retailer shall register with the Producer Responsibility Organisation (PRO) and partner with the Agency on the EPR programme.

9.—(1) Each facility shall submit to the Agency —

- (a) a list of chemicals used in the manufacture of its products ;
- (b) details of stored chemicals including safety data sheet and storage compatibility conditions ; and
- (c) a list of obsolete or abandoned chemicals and the proposed plan for their environmentally sound management.

Chemical
Usage

(2) Each facility shall ensure —

- (a) minimal use of organic solvents ;
- (b) phased substitution of mercury and mercury containing products to more environmentally friendly alternatives ; and
- (c) that ozone-depleting substances are in accordance with the provisions of the National Environmental (Ozone Layers Protection) Regulations 2009.

Banned and
Restricted
chemicals

10. Restricted chemical shall be used as directed by the Agency and as prescribed in the Seventh Schedule to these Regulations.

Permits

11.—(1) Each permit including notices, consent or demand shall be in writing.

(2) A facility shall not —

- (a) discharge or cause to be discharged any effluent or oil in any form into waterbody system, public drain, underground injection or land without a permit from the Agency ; or
- (b) release hazardous or toxic substances into the water ,land or air of Nigeria's ecosystem beyond the permissible limits as set out in the First Schedule to these Regulations.

(3) An application for a Permit shall be as set out in Part 3 of these Regulations.

(4) Permit form shall be as prescribed in the official website of the Agency.

Management
of chemicals,
oil stations
and fuel
dumps site

12. Each facility shall —

- (a) ensure that no contamination arises from the leakage of surface or underground oil, used oil, used sulphuric acid, fuel or chemical storage tanks ;
- (b) have an impermeable base for any ancillary equipment and provide bund wall sized to contain 120% capacity of the largest tank within the enclosure in the event of any unanticipated discharge or spillage ; and
- (c) install underground tanks and fuel dumps with leak detection equipment which shall be regularly inspected against leakages.

Equity

13. Each facility shall be given equal treatment without preference, to ensure equity in the enforcement of relevant laws.

Community
relations

14. Each facility, body corporate or organisation shall have sustainable community relation programme as part of its Corporate Social Responsibility (CSR).

15.—(1) The national environmental standards in relation to effluent limitations for the environment shall be as prescribed in the First Schedule to these Regulations

Effluent
Limitation
Standard

(2) An effluent shall be deemed to be polluted, as prescribed in the First Schedule to these Regulations where —

(a) the concentration or level of any of its parameters exceeds the permissible limits ; and

(b) it does not comply with the corresponding limit.

(3) Effluent as described in sub-regulation (2) of this regulation shall be treated to attain the minimum standard as prescribed in the First Schedule to these Regulations before discharge.

16.—(1) A facility shall not discharge effluent onto land, into a watercourse or a water body unless such facility ensures that the parameters of the effluent do not exceed the permissible limits as prescribed in the First and Second Schedules to these Regulations.

Restriction
on the
Release of
toxic effluent

(2) Notwithstanding the provision of sub-regulation (1) of this regulation—

(a) a facility shall not discharge or cause to be discharged any effluent into a water system or water body used or earmarked as source of potable water supply ; and

(b) where discharge is made at the downstream section of such water body or river system, the geographical coordinates of the discharge point such as location of the outfall into the river shall be determined and documented.

17.—(1) Each facility discharging effluent into the receiving environment shall treat the effluent to the permissible limits as prescribed in the First Schedule to these Regulations.

Treatment
of effluent

(2) A receiving environment referred to in sub-regulation (1) of this regulation shall be flowing water body, lagoon and ocean, and discharge shall be in accordance to the provision in regulation 16 (2) of these Regulations.

(3) Discharge into receiving environment other than flowing water body, lagoon or ocean such as agricultural land, open land, un-concreted public drainage system, and concreted public drainage system that are not emptying into a flowing water body, lagoon or ocean are prohibited.

(4) The facility generating the effluent shall maintain the effluent discharge outfall to ensure the free and safe access to the outfall for the purposes of monitoring and sampling.

(5) Each facility shall ensure —

(a) effective treatment of its effluent as long as the factory is in operation ;

(b) environmentally sound management of sludge that contains heavy metals, pathogens or other toxics and dispose same in a landfill or designated disposal site ;

(c) the treatment and disposal of toxic organics contained in both effluent and sludge in an environmentally sound manner ; and

(d) that effluent is not diluted to achieve the standards contained in the First Schedule to these Regulations.

(6) Treated effluent shall be trihalomethanes-free.

(7) Granular Activated Carbon (GAC) or any other approved material shall be used to eliminate chlorine and trihalomethanes in water processing.

(8) Waste that contain toxic organics shall be subjected to thermal treatment to effectively destroy or remove over 99.99% of toxic organics and the resulting residue shall be disposed of in an environmentally sound manner.

Sludge and
Waste water
disposal

18.—(1) Each facility shall not discharge sludge directly into any water body or the environment except under a sludge disposal permit.

(2) Sludge disposed off onto land shall be classified and none of its components shall exceed the prescribed limit in the Second Schedule to these Regulations.

(3) Every sludge, except purely domestic, and purely agricultural or Organic sludge, shall be considered as hazardous waste and shall be subject to the provisions of the Harmful Waste Act (Special Criminal Provisions, etc.) Cap. H1 LFN, 2004.

(4) Hazardous sludge or wastewater shall be treated and disposed of as approved by the Agency.

Emission
Standards

19.—(1) Each facility shall comply with the prescribed emission standards in the Third Schedule to these Regulations.

(2) Each facility shall be required to quantify and report sources, emission data also undertake emission reduction and implementation plan which shall be reviewed every three years by the Agency.

Emission
Control

20.—(1) Each facility with any source or potential source of emission shall be required to measure the emission, develop and implement a plan to control it in accordance with the standards as prescribed in the Third Schedule to these Regulations.

(2) Each facility shall report the emission data, including the sources with a view to undertaking its reduction in accordance with the implementation plan which shall be reviewed every three years by the Agency.

(3) Each facility that causes or allows the generation of odour from any source, that unreasonably interferes, or is likely to unreasonably interfere,

with any other person's lawful use or enjoyment of that persons' property, shall identify the odorous chemical element and use recognized best practices and procedures to reduce the emission of such odorous chemical element to a reasonable minimum level below or within the odour threshold specified for such odorous chemical element in Table 2 of the Third schedule to these Regulations.

(4) Odorous chemical element shall not be limited to those specified in Table 2 of Third Schedule to these Regulations

(5) The exposure of people, either workers or other members of the public around and within the environment where emission of odorous chemical element is occurring shall not exceed the permissible exposure limit provided in Table 2 of the Third Schedule to these Regulations.

(6) Each facility shall not burn, or be permitted to burn, light fuel oil containing over 0.5 percent sulphur by weight in an existing source or in a new source.

(7) Each facility shall not burn, or be permitted to burn medium fuel oil containing over 1.1 percent sulphur by weight.

(8) Notwithstanding the provisions of sub-regulations (1) and (2) of this regulation, heavy fuel oil with no more than 3% sulphur may be burnt at a new or existing facility with new fuel combustion sources or a combination of both where —

(a) one or more of such sources operate in a manner that sulphur dioxide is absorbed by coming into contact with the product or with a scrubbing device or other material ; and

(b) the actual total sulphur-dioxide emission from the entire facility is less than the allowable Sulphur-dioxide emission limit as specified in the Third Schedule to these Regulations.

21.—(1) Each facility which discharges gaseous emission shall treat it to the permissible exposure limit as prescribed in the Third Schedule to these Regulations.

Abatement
technologies
for air
emissions

(2) Treatment can be achieved through the use of appropriate treatment technologies for minimizing the release of significant pollutants to the air, such as—

(a) stack gas scrubbing, carbon adsorption or combustion, for toxic organic compounds ;

(b) bag houses or cyclone, for particulate matter removal ; and

(c) biological filters or other appropriate technology.

22. A facility shall evaluate its installations and ensure that routine control is sufficient to prevent risk of noise pollution.

Noise
standards

Noise
abatement

23. Noise abatement measures shall be in place to achieve either the limits prescribed in the Fifth Schedule to these Regulations or a maximum increase in background levels of 3 decibels, measured on the A scale [dB(A)].

Hearing
Conservation
Program

24.—(1) Each facility shall administer a continuing effective hearing conservation program, where employee noise exposures equal or exceeds an 8-hour time-weighted average sound level (TWA) of 90 decibels measured on the A scale, slow response, or equivalent to a dose of 80 decibels as stipulated by Occupational Safety and Health Administration (OSHA 18001).

(2) For the purposes of the hearing conservation program, employee noise exposures shall be computed, regardless of the provision and the use of Personal Protective Equipment-(PPE).

(3) An 8-hour time weighted average of 90 decibels shall be referred to as the action level.

Noise
monitoring

25. Monitoring shall be repeated where a change in production, process, equipment or control, increases noise exposure to the extent that —

(1) additional employee may be subjected to risk at the action level ; or

(2) the attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet requirements of sub-regulation (1) of this regulation.

PART II — SAMPLING PROCEDURES

Collection
and analysis
of samples

26.—(1) Each facility shall examine samples according to standard analytical method in a laboratory accredited by the Agency or Federal Ministry responsible for environment for the purpose of determining license classification and license compliance.

(2) Each facility shall collect and analyse effluent samples regularly in accordance with the effluent limitation standard as prescribed in the First Schedule to these Regulations.

(3) Each facility undertaking sampling shall maintain traceable and verifiable sample chain of custody for all samples collected, which shall contain the following information —

(a) date of sampling;

(b) sample point geographical coordinates;

(c) time of sampling;

(d) brief description of prevailing weather condition at the time of sampling ;

(e) name of sampler ;

(f) name of at least two witness to the sampling one of whom shall be the facility representative ;

(g) sampling equipment used and their calibration certificates ; and

(h) purpose of sampling.

(4) A completed chain of custody form shall accompany result or data sheet of the analysed samples and also be attached as an appendix to the effluent report submitted to the Agency.

27. A spot sample for the purpose of analysis for all tests including oil and grease, dissolved oxygen, pH, chlorine and sulphide shall be taken as follows the —

Spot sampling for physical or chemical parameters

(a) whole sample volume is to be taken at one time, at the point of discharge or, where the discharge has stopped, at the nearest practicable point within 20 metres upstream and 20 metres downstream of the point of discharge ; and

(b) sample shall be analysed immediately after collection for the unstable parameter pH, Temperature, Dissolved Oxygen (DO), Conductivity and Total Dissolved Solid (TDS) and the more stable parameters where possible but not later than 48 hours after taking the sample ;

28. A composite sample for the purpose of analysis for all tests other than those for temperature and pH shall be taken by combining individual sample as follows —

Composite sampling for physical or chemical parameters

(a) a minimum of three samples of equal volume of not less than 500 ml each shall be taken at the point of discharge or, where the discharge has stopped, at the nearest practicable point within 20 meters upstream and 20 meters downstream of the point of discharge, at approximately equal intervals of time over a minimum period of two hours within any 24 hour period ;

(b) two of the composite samples, collected when the discharge has been stopped, shall be used as control to prove the source and extent of pollution ;

(c) the samples shall be preserved as at site conditions licence ;

(d) sample analysis shall commence not later than 24 hours after taking the last sample ; and

(e) where the discharge has stopped or is intermittent, two grab samples shall be collected at the nearest practicable point within one kilometre upstream and one kilometre downstream of each of the point of discharge.

29. The whole volume of spot samples for further laboratory analysis shall be taken at one time at the point of discharge.

Sampling for licence classification

30. Where full laboratory facility do not exist on the site, or in the absence of a calibrated Dissolved Oxygen (DO) meter, the oxygen in the sample may be "fixed" at the time of sampling by adding any of the following reagents 1 ml of manganese (II) sulphate followed by 1 ml of alkali-iodide-azide solution, alkaline azide reagent, sulphuric acid, permanganate, oxalate, manganous sulphate and alkaline iodide or any other approved scientific method, provided that the —

Sampling for other parameters

- (a) stopper of the sample container shall be replaced and the solution shall be well mixed by shaking ; and
- (b) remaining steps shall be carried out later in the laboratory.

Sampling for
microbiological
analysis

31.—(1) When a number of samples for different purposes are to be taken from the same sampling point, the following precautions are to be observed, the—

- (a) sample for bacteriological examination shall be collected first unless special investigation is necessary ;
- (b) sample for bacteriological examination shall be kept strictly separate from all others to avoid contamination ; and
- (c) boxes for the transportation of samples shall be made of materials that can be disinfected regularly, and they shall not be used for carrying anything other than samples of water for bacteriological examination.

(2) A sterile bottle used exclusively for bacteriological purposes that are fit for immediate use shall be provided by the laboratory performing the examination.

(3) An officer shall ensure that the volume of each sample is at least 500 ml, and at least one sample is taken at each sampling point.

Air sampling
for Analysis

32.—(1) A measurement of air quality parameter shall take place at any facility, downwind and upwind as listed in this regulation.

(2) Measurement of total suspended particulate shall be by gravimetric method using air sampler or by any other recommended scientific method and the following shall be observed —

- (a) a minimum of two sampling periods both 1-hour and 8-hour shall be adopted ; and
- (b) the heavy metals level of Total Suspended Particulate shall be determined using atomic absorption spectrometer or any referenced standard method.

(3) Gaseous pollutant shall be measured in a manner as may be approved by the Agency in any of the following ways —

- (a) passive sampling method shall require the submission of analysis certificate along with results ;
- (b) a three-sampling periods morning 8-10am, afternoon 12-2pm and evening 4-6pm shall be adopted ;
- (c) active sampling for NOX shall use the Saltzman or any other recommended standard method ;
- (d) active sampling for SO₂ shall use the West-Gaeke, hydrogen peroxide, conductimetry or any other recommended standard method ;
- (e) active sampling for hydrocarbons shall use the adsorption on activated charcoal method, or any other recommended standard method ;

(f) continuous sampling of any gaseous air pollutant shall use instrument with detection range accommodating the maximum allowable limit of measured parameter ; and

(g) measurement shall last for at least 1 hour in every sampling location.

33.—(1) Noise level shall be measured with instrument having both A and C weighting, a resolution not more than 0.1 dB and fast or slow responses.

Noise
measurements

(2) Measurement shall be taken at least 3 metres from any barrier or other sound reflecting sources, at about 1.2 – 1.5 metres above ground level or working platform and shall last for at least 10 seconds.

(3) Daytime measurements within the hours of 07:00 – 22:00 and night time measurements within the hours 22:00 – 7:00 shall be taken at the fence line of any Facility.

PART III — PERMIT

34.—(1) Every permit shall be in writing and as set out in the National Environmental (Permitting and Licensing Systems) Regulations, 2009.

Permit

(2) Each facility shall obtain the relevant permit relating to its operations from the Agency yearly.

PART IV — INDUSTRIAL EFFLUENT MONITORING AND REPORTING

35.—(1) A permit holder shall comply with reporting requirements under the Agency's permit including incidence report and quarterly effluent data as prescribed in the First Schedule to these Regulations.

Reporting
requirements

(2) A permit holder shall include in the monthly effluent data sheet submitted to the Agency quarterly, on dates specified in the —

(a) description of the nature of effluent ;

(b) pollutants concentration ;

(c) effluent discharge volume cumulative for the period covered by the report ;

(d) evidence of flow meter reading attach picture of flow meter reading as an appendix ;

(e) discharge flow rate ; and

(f) direction of flow of the discharged effluent.

(3) The report shall be based on sampling analysis performed in the period covered by the report.

(4) Every report shall be in compliance with the format as prescribed in the Twelfth Schedule to these Regulations.

(5) A permit holder shall report all sample results for parameters listed on the effluent limitations and monitoring requirement, on the industrial or commercial discharge monitoring report forms prescribed in the Twelfth Schedule to these Regulations.

(6) A permit holder shall install at its own cost, monitoring equipment approved by the Agency to facilitate the accurate observation, sampling and measurement of the quality of waste discharges as required by the permit, the equipment shall be in working order, kept safe and accessible to all authorized officials at all times with evidence of valid calibration certificates.

(7) A permit holder who discharges effluent shall have in place —

- (a) flow meters ;
- (b) point inspection chambers ;
- (c) recording apparatus ; and
- (d) sampling test points or points of inspection.

(8) A permit holder who discharges or proposes to discharge effluent to a general sewer or public treatment plant shall maintain the following —

- (a) records of production ;
- (b) water consumption and discharge flow records ;
- (c) complete monitoring records as specified in these Regulations ;
- (d) process monitoring records ;
- (e) incident reports ;
- (f) waste handling records ; and
- (g) any other records necessary to demonstrate compliance with these Regulations.

(9) A permit holder shall be required to file report with the Agency where the permit holder —

- (a) commits a serious violation or fails to submit a completed monthly effluent data sheet ;
- (b) exceeds an effluent limitation for the same pollutant at the same discharge point source by any amount for four out of six consecutive months ; and
- (c) has emergency discharge that may cause problems to the environment, including any sludge loadings.

Authorized
Signatory

36.—(1) A permit holder shall sign the report and attach a copy of the certificate of analysis from any of the Agency's accredited laboratories.

(2) Each report shall be signed by an appropriate officer as follows —

- (a) a responsible corporate officer, where the permit holder submitting the reports is a corporation ;
- (b) for the purpose of sub-regulation 2 (a) of this regulation , a responsible corporate officer means Chief Executive, Managing

Director or Chairman, of the corporation in charge of a principal business function, or any designated person who performs similar policy or decision making function for the corporation.

(3) Each report shall include the attestation as provided in Twelfth Schedule to these Regulations.

37. Such records shall be made available to the Agency, and shall be retained for a minimum of six years and throughout the course of any litigation.

Monitoring
records

38.—(1) The Agency shall charge fees —

Fees

(a) for processing application for permit ;

(b) for reviewing discharge permit, environmental audit report, environmental management plan, prevention procedure and construction ; and

(c) any other fees that may be deemed necessary to carry out the requirements contained in this regulation which may include emergency incident response and cost of personnel and equipment.

(2) The fees under this regulation relate to the matters covered by these Regulations and are separate from all other fees chargeable by the Agency and subject to review.

39.—(1) Without prejudice to any extant law, public access to records shall be governed by NESREA Act.

Confidential
information
and public
access to
records and
disclosure

(2) Information or report on effluent constituents and characteristics shall not be recognized as confidential information.

PART V — ENFORCEMENT

40.—(1) The Agency shall enforce all applicable standards and requirements and on the basis of any information available to it, take any enforcement action at any time as appropriate.

Duty of the
Agency to
ensure
compliance
with
conditions

(2) The Agency shall where the permit is in force take such action under these Regulations as may be necessary in order to ensure that the conditions of the permit are complied with.

41.—(1) An enforcement notice shall be served where the Agency is of the opinion that a facility has contravened, is contravening or is likely to contravene any condition of the permit.

Enforcement
notices

(2) An enforcement notice shall specify the —

(a) matter which constitutes the contravention or which makes it likely that the contravention will arise, as the case may be ;

(b) steps that shall be taken to remedy the contravention or to remedy the matter which makes it likely that the contravention will arise, as the case may be ; and

(c) period within which those steps shall be taken.

(3) Sub-regulation (2) of this regulation shall apply whether or not the particular manner of operating the facility in question, is regulated by or contravenes a condition of the permit.

(4) An officer of the Agency shall, in the course of carrying out the officer's duty under these Regulations, at any reasonable time —

(a) enter and search any premises or facility to take sample or specimen for analysis, and measurements in length or of levels of standards to which these Regulations relate ; and

(b) detain and seize for such time as may be necessary, for the purpose of these Regulations, any article by means of or in relation to which the officer reasonably believes any provision of these Regulations has been contravened.

Mode of
entry

42. An enforcement notice shall be delivered by hand, registered post, electronic transmission, newspaper publication, or pasted at the facility or registered premises of the facility.

Enforcement
notice
reminder

43.—(1) Where a person fails to comply with an enforcement notice issued under regulation 41 (2) of these Regulations, within the specified period, a second notice shall be served.

(2) Where the second notice is served within the specified time limit as prescribed in the notice, it may lead to the issuance of a suspension notice or any other punitive action as may be necessary.

Suspension
of permit

44.—(1) Where a suspension notice is served on a facility under these Regulations, the permit shall, on the service of such notice cease to have effect.

(2) The Agency may withdraw a suspension notice after verifying that the facility has complied.

Sealing of
facility

45. Notwithstanding the provisions of regulation 41 of these Regulations, the Agency shall have the power to enter and seal with court order any facility which contravenes any of the provisions of these Regulations.

Power to
enter and
seal a facility
while
obtaining
court order

46. Without prejudice to regulations 41 and 42 of these Regulations, where a contravention is of imminent danger to the environment and human health, the Agency shall have the power to enter and seal such contravening facility while obtaining a court order.

PART VI — OFFENCES

47.—(1) A facility which fails to comply with —

- (a) condition of a permit ;
- (b) the requirements of an enforcement notice, or a closure notice under these Regulations ; and
- (c) any requirement imposed by a notice served by the Agency, commits an offence.

Contravention
of permit
condition

48.—(1) A facility that makes statement which is known to be false or misleading, particularly, where the statement is made —

False
Statement

- (a) with a requirement to furnish any information imposed by or under any provision of these Regulations ;
- (b) for the purpose of obtaining a permit for the company for variation, transfer or surrender of a permit ;
- (c) to intentionally make a false entry in any record pertaining to the permit ; or
- (d) with intent to deceive, to forge or use a document issued or authorized to be issued under a condition of a permit or required for any purpose under a condition of the permit, commits an offence.

(2) Each facility that makes a statement or has in possession a document that is likely to mislead or deceive the Agency, commits an offence.

49.—(1) A facility which fails to —

Failure to
comply with
abatement
measures

- (a) take reasonable measures as specified in these Regulations to remove or otherwise treat and dispose of any effluent to minimize adverse effects ;
- (b) take measures required by the Agency after unauthorized release of effluent ;
- (c) remediate the environment to the standard prescribed by the Agency ;
- (d) furnish all information to the Agency's inspector ;
- (e) remove equipment or contain materials causing release into the environment from a place when requested by the inspector ;
- (f) produce document when requested by the inspector ;
- (g) comply with the guidelines with respect to the handling, storing and transport of any effluent ; or
- (h) ensure the use of Personnel Protective Equipment (PPE) while handling, storing, treating, or disposing of effluent, commits an offence.

(2) A facility that —

- (a) handles effluent in a manner which causes or is likely to cause adverse effect to humans and the environment ;
- (b) knowingly obstructs the inspectors from performing their duties;

(c) dismisses, suspends or sanctions an employee who reports contravention of the NESREA Act ;

(d) imposes penalty on an employee who reports cases of contravention of these Regulations to the Agency ;

(e) transports any effluent and sludge which is not covered by a manifest ;

(f) transports effluent and sludge which is not completely enclosed, covered and secured ; or

(g) transports effluent and sludge in bulk without prior authorization from the Agency ;

commits an offence.

Failure to report

50. A facility which fails to maintain records of all discharges especially as prescribed in regulation 35(2) of these Regulations by filing quarterly and annual reports of all discharges commits an offence.

Discharge of effluent beyond permissible limit

51. A facility that —

(a) releases effluent and sludge into the environment in excess of the permissible level ;

(b) fails to report release of effluent and sludge into the environment in excess of permissible level as contained in the First and Second Schedules to these Regulations ;

(c) fails to take reasonable measures to prevent, reduce or remedy the adverse effect of effluent, sludge and emissions released into the environment ;

(d) fails to carry out sampling and analysis in line with the provisions of Part 2 of these Regulations ; or

(e) fails to properly complete sample chain of custody form and attach same to the result sheet and quarterly effluent report ;

commits an offence.

Extended producer responsibility (EPR)

52. A facility that fails to subscribe to the Extended Producer Responsibility programme of the Agency commits an offence.

PART VII — PENALTIES

Penalties

53. A facility that fails to conduct Environmental Audit as required by these Regulations commits an offence.

Revocation

54. A facility that fails to comply with decommissioning conditions or plan as may be prescribed or approved by the Agency commits an offence.

Savings and transition

55.—(1) A person who violates the provisions of regulations 47-54 of these Regulations commits an offence and shall on conviction, be liable to a fine not less than ₦2,000,000.00 or to imprisonment for a term not exceeding

six months or to both, and an additional fine of ₦20,000.00 for every day the offence subsists.

(2) Where an offence under sub-regulation (1) of this regulation is committed by a body corporate, it shall on conviction, be liable to a fine not less than ₦10,000,000.00 and an additional fine of ₦50, 000.00 for every day the offence subsists.

PART VIII — MISCELLANEOUS, ETC

56. In these Regulations —

Interpretation

“*Act*” means the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007 ;

“*Agency*” means the National Environmental Standards and Regulations Enforcement Agency (NESREA) ;

“*air emission*” means any emission or entrainment process emanating from a point, non-point or mobile source that results in air pollution ;

“*air pollution*” means any change in composition of the air caused by smoke, soot, dust including fly-ash, cinders, solid particle of any kind, gases, fumes, aerosols and odorous substances ;

“*ambient air*” means air occurring at a particular time and place out of structure ;

“*designated officer*” means a person who has been appointed by the Agency to carry out activities designated under these Regulations ;

“*Director General and Chief Executive Officer (DG and CEO)*” means the Director General of the National Environmental Standards and Regulations Enforcement Agency (NESREA) ;

“*effluent*” means waste water treated or untreated that flows out of a treatment plant, sewer, or industrial outfall resulting from the commercial or industrial use of water ;

“*enforcement*” means actions to obtain compliance with environmental laws, rules , regulations or agreements or obtain penalties or criminal sanctions for violations ;

“*environment*” means the sum of all external conditions affecting the life, development and survival of an organism.

“*environmental audit*” means :

(i) an independent verification of current status of a party’s compliance with applicable legislative requirement, and

(ii) an independent evaluation of a party’s environmental compliance policies, practices and control ;

“*Environmental Impact Assessment (EIA)*” means the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions being taken and commitments made ;

“Environmental Impact Statement (EIS)” is a structured document issued to a proponent after the completion of an Environmental Impact Assessment (EIA) process and mitigation of various aspects or phases of a development or project, which is intended to indicate how the project may likely affect the environment and how the proponent shall mitigate those impacts. If it is realized that the proposed development may damage the environment, the statement presents alternatives ;

“emission” means the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in a facility into the “air, water or “land environment ;

“emission limit” means the mass, expressed in terms of specific parameters, concentration or level of an emission, which may not be exceeded during one or more periods of time ;

“EPR” means Extended Producer Responsibility, it is an environmental protection strategy with the objective of decreasing total environmental impact from a product including its packaging by making the producers of the product responsible for the entire life cycle of the product and in particular, the take-back, recycling, and final disposal of the product including its packaging ;

“extension” means an increase in size, volume or other physical dimensions of an activity such that the increase may cause an adverse effect if not properly mitigated ;

“Facility” means a Food, Beverages and Tobacco manufacturing and processing outfit ;

“Five Rs” means Reduce, Re-use, Recover, Repair and Recycle ;

“grey water” means waste water resulting from the use of water for domestic purposes, but does not include human excreta ;

“hazardous wastes” means —

(i) solid, liquid, or gaseous wastes that can cause death, illness, or injury to people or destruction of the environment if improperly treated, stored, transported, or discarded,

(ii) substances that are ignitable capable of burning or causing a fire, corrosive able to corrode steel or harm organisms because of extreme acidic or basic properties, reactive able to explode or produce toxic cyanide or sulfide gas, or toxic containing substances that are poisonous, and

(iii) mixtures, residues, or materials containing hazardous wastes (Listed hazardous wastes).

“influent water” means either processed waste water or raw water from a river, stream, spring or canal, or water abstracted from underground and used by a facility ;

“inspection officer or inspector” means a provincial officer who has the legal authority to enter a company to conduct an inspection under Environmental Act, guidelines and policies ;

"large scale facility" means any facility that has more than fifty employees ;

"medium scale facility" means any facility that has from ten to fifty employees ;

"Minister" means the Minister responsible for environment ;

"modification" means a change in any activity that may cause an adverse effect if not properly mitigated and includes the expansion of the same process, addition of product lines and replacement of equipment with different technology other than that presently in use ;

"other facility wastewater" means effluent originating from the washing and general maintenance of a facility ;

"permit" means an official document, authorization, license, or equivalent control document issued by the Agency to implement the requirements of these Regulations to discharge effluent especially for a limited period of time ;

"permit holder" means an individual or group of individuals, organizations or facilities that have been empowered by the permit to discharge effluent ;

"person" means a natural juristic personality including a company ;

"producer" means the most responsible entity which may include the brand owner, manufacturer, franchisee, assembler, filler, distributor, retailer or importer of the product who sells, offers for sale or distributes the product ;

"Producer Responsibility Organization (PRO)" means —

(i) *"Third-Party"* organisation formed to enable producers to collectively manage or manage on their behalf, the mandatory take back scheme or other product stewardship programme, and

(ii) collective entity created and administered by Producers to manage their individual responsibilities in relation to EPR performance objectives ;

"sludge" means liquid or solid sediments and other residue from a municipal sewage collection and treatment system and liquid or solid and other septic from septic or holding tank pumping from commercial, industrial or residual establishments ;

"small scale facility" means any facility that has less than ten employees ;

"source of potable water supply" means such water bodies identified, characterized and documented in previously conducted EIAs or EERs of the same facility or another EIA or EER conducted within a proximal location to the Facility ;

"spot sampling" means sample of liquid or sediments obtained at a specific depth inside a tank using a bottle and spot samples are analysed to determine the gravity of the oil, base sediment and water of the fluid in the tank ;

"treated sludge" means the sludge which has undergone biological, chemical, heat treatment, long term storage or any other appropriate process so as to reduce or completely eliminate its toxicity or hazards to humans and the environment ;

“*water bodies*” means underground water, river, stream, spring, canal, reservoir, well, lake, lagoon or ocean ;

“*wastewater system*” means a sewer, conduit, pump, engine or other appliance used or intended to be used for the reception, conveyance, removal, treatment and disposal of liquid effluent; and does not include house hold sewers ; and

“*watercourse*” means any natural or artificial channel, pipe or conduit, excluding the sewerage system, which carries, or that may carry, and discharges water directly or indirectly into a water body.

Citation

57. These Regulations may be cited as the National Environmental (Food, Beverages and Tobacco Sector) Regulations, 2023.

FIRST SCHEDULE
POLLUTION ABATEMENT TECHNOLOGY

(regulations 11(2)(b); 15(1), (2)(a), (3);
16(1); 17(1); and 51(b))

EFFLUENT LIMITATION STANDARDS FOR FOOD, BEVERAGES AND TOBACCO SECTOR

Parameter	Unit	Maximum permissible limit
Colour	-	7(436nm, yellow) 5(525nm, red) 3(620nm, blue)
Appearance		Clear
Temperature	°C	40
Temperature increase	°C	<3 ^a
pH	-	6.5 – 8.8; 6-9
Alkalinity	mg/l	200
Chloride	mg/l	250
Conductivity	µS/cm	1000
Total Solid	mg/l	
Sodium	mg/l	200
Total Suspended Solids (TSS)	mg/l	50
Total dissolved Solid	mg/l	500
Sulphate	mg/l	250
Turbidity	NTU	5.0
Nitrate as N	mg/l	10
Chemical Oxygen Demand (COD)	mg/l	60; 90
Biochemical Oxygen Demand (BOD ₅)	mg/l	30; 50
Sulphide	mg/l	0.2
Ammonia as Nitrogen	mg/l	1.0
Total Nitrogen	mg/l	10
Free Chlorine	mg/l	0.5
Total Hardness	mg/l	500
Magnesium	mg/l	50
Total Phosphorus	mg/l	2.0
Dissolved Oxygen	mg/l	>2.0
Metals (mg/L)		
Chromium (hexavalent)	mg/l	0.05
Lead	mg/l	0.05
Nickel	mg/l	0.05
Manganese	mg/l	0.2
Cadmium	mg/l	0.05
Cobalt	mg/l	0.05
Copper	mg/l	0.5
Iron	mg/l	3.0

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Aluminium	mg/l	3.0
Molybdenum	mg/l	0.01
Total Chromium	mg/l	0.5
Zinc	mg/l	2

OTHER PARAMETERS

Phenol	mg/l	0.5
Oil & Grease	mg/l	10
Total Pesticides	mg/l	0.025
Pesticides (each) [◇]	mg/l	0.05 ^b
Cyanide	mg/l	0.01
Total organic halides	mg/l	1
Detergents (as LAS [◇])	mg/l	15

MICROBIAL PARAMETER

Coliform bacteria [◇]	MPN/100ml	400
E-coli (faecal Coliform)	CFU/ml	negative (-ve)

^a At the edge of scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity. The effluent shall result in a temperature increase of no more than 3.0 °C at the edge of the zone where initial mixing and dilution takes place. Where the zone is not defined, use 100 meters from the point of discharge.

^b 0.05 mg/L for total pesticides (organophosphorus pesticides excluded); 0.10 mg/L for organophosphorus pesticides.

Note : effluent requirements are for direct discharge to surface waters. The liquid effluent should be clear.

[◇] Linear Alkylate Sulphonate
World Bank value

SECOND SCHEDULE

1. It is prohibited to apply sludge on land especially agricultural land if the limits value provided in this schedule are already exceeded in such soil.

2. It is prohibited to spread sludge on the following lands irrespective of the limit values provided in this Schedule :

(a) grazing, pasture land ; or

(b) land on which vegetables and fruits are grown.

TABLE 1. LIMIT VALUES FOR HEAVY METALS IN SLUDGE (mg/kg DM)

Heavy Metals	Limit Values
Cadmium	20
Chromium	70
Copper	1000
Nickel	300
Lead	750
Zinc	2500
Arsenic	20
Molybdenum	20
Cobalt	10

TABLE 2. LIMIT VALUES FOR PATHOGENS IN SLUDGE

Pathogens	Limit Values
Salmonella	Ocfu/10g DM
Shigella	Ocfu/10g DM
Klebsiella, Citrobater	Ocfu/g/ml
faecal coliform	Ocfu/g/ml
Helminths egg	3/10g of DM

Note :

DM : Dry Mass

MPN : Most Probable Number

MPCN : Most probable Cytophatic Number

*No egg of worm likely to be contagious

CFU : Colony forming unit

THIRD SCHEDULE

*(regulations 19(1); 20(1) and 21(1))*AIR EMISSION OR EMISSION CONTROL GUIDELINES FOR FOOD,
BEVERAGES AND TOBACCO SECTOR

The ambient air quality standards of the Agency shall be strictly complied with :

TABLE 1 : AMBIENT AIR QUALITY FOR NIGERIA

PARAMETER	DURATION	CONCENTRATION
SULPHUR DIOXIDE	1 HOUR	425 µg/m ³
NITROGEN DIOXIDE	1 HR	313 µg/m ³
PARTICULATE MATTER	1HR	250 µg/m ³
CARBON MONOXIDE	1HR	30,000 µg/m ³
HYDROGEN SULPHIDE (H ₂ S)	1 HR	5.0mg/Nm ³
AMMONIA (NH ₃)	1HR	0.28ppm
METHANE (CH ₄)	1HR	5.0mg/Nm ³

TABLE 2 : EXPOSURE LIMITS AND ODOR THRESHOLDS

<i>Chemical</i>	<i>PEL (PPM)</i>	<i>TLV (PPM)</i>	<i>STEL (PPM)</i>	<i>Odour Threshold (PPM)</i>	<i>IDLH (PPM)</i>
Acetic Acid	10	10	15	2	50
Acetone	1000	500	750	2-100	2500
Acetonitrile	40	2	-	20	500
Benzene	1	0.5	2.5	30	500
N-Butyl Alcohol	100	50	50	0.1-3	1400
Carbon Tetrachloride	10	5	10	75	200
Chloroform	50c	10c	-	100	500
Diethyl Amine	10	5	15	0.02-25	200
Formaldehyde	0.75	-	0.3	1	20
Hexane	500	50	-	-	1100
Methyl Alcohol	200	200	250	10	6000
Phosgene	0.1	0.1	-	0.5	2
Pyridine	5	5	-	0.01	1000
Toluene	200	20	-	0.2	500
Triethylamine	25	5	15	1	200
Xylene	100	100	150	0.5	900
Methyl Mercaptan	10	0.5			
	-	0.56	-		
Hydrogen Sulphide	20	1	5	1.4	-
Ammonia	50	25	35	0.043-60.3	-
Chlorine	1	0.5	1	0.021-4.9	-
Chlorine Dioxide	0.1	0.1	0.3	15	-
Note: PEL: Permissible Exposure Limit, OSHA Standard 29 CFR 1910.1000 TWA-TLV: Time weighted Average – Threshold Limit Values, 1999-2000 ACGIH TWA-STEL: Time Weighted Average Short Term Exposure Limit IDLH: Immediately Dangerous to Life or Health, NIOSH PPM: Parts of Chemical Per Million of Air C: Maximum Allowable Exposure					

FOURTH SCHEDULE

regulation 16(1)

SOIL QUALITY STANDARDS FOR FOOD, BEVERAGES AND TOBACCO
SECTOR

During routine operations of the industry specifics, there may be soil contamination and to preserve the environment, the soil quality levels provided in this Schedule shall not be exceeded in any area of the industrial activities.

PARAMETER	UNIT	STANDARD
ARSENIC	MG/KG DRY WEIGHT	20
BARIUM	MG/KG DRY WEIGHT	400
CADMIUM	MG/KG DRY WEIGHT	3
CHROMIUM (TOTAL)	MG/KG DRY WEIGHT	100
COBALT	MG/KG DRY WEIGHT	50
COPPER	MG/KG DRY WEIGHT	100
LEAD	MG/KG DRY WEIGHT	164
MERCURY	MG/KG DRY WEIGHT	4
MOLYBDENUM	MG/KG DRY WEIGHT	40
NICKEL	MG/KG DRY WEIGHT	70
TIN	MG/KG DRY WEIGHT	50
ZINC	MG/KG DRY WEIGHT	421
BENZENE	MG/KG DRY WEIGHT	0.1
TOLUENE	MG/KG DRY WEIGHT	0.1
XYLENE	MG/KG DRY WEIGHT	0.1
STYRENE	MG/KG DRY WEIGHT	0.1
HEXANE	MG/KG DRY WEIGHT	0.5
HEPTANE	MG/KG DRY WEIGHT	0.5
FLUORINE	MG/KG DRY WEIGHT	100
CYANIDE	MG/KG DRY WEIGHT	5
PHENOL	MG/KG DRY WEIGHT	10

SOIL QUALITY LIMIT RANGE VALUES FOR UNPOLLUTED SOIL.

<i>Parameter</i>		<i>Limit Range Values</i>
pH (H ₂ O)		6.00–9.50
TPH(mg/kg)		50.0
TOC (g/kg)		100–300
Nutrients* (mg/kg)	Ext. Nitrate	1.00–20.0
	Ext. Sulphate	100–500
	Ext. Nitrite	1.00–20.0
Exchange-able Cations (mg/kg)	Magnesium	40.0–500
	Potassium	50–500
	Sodium	2–200
	Calcium	100–2000
Heavy Metals (mg/kg)	T. Chromium	10.0–20.0
	Total Iron	50–1,000
	Copper	0.1–3.00
	Lead	2–20.0
	Nickel	5.0–500
	Barium	-
	Mercury	0.10–1.00
	Zinc	10.0–50.0
	Cadmium	0.03–0.30
	Vanadium	-

FIFTH SCHEDULE

(regulation 23)

NOISE STANDARDS

PERMISSIBLE NOISE EXPOSURE LEVELS

Duration per day (hours)	Permissible Exposure Limit (dB)
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

Note : Exposure to impulsive or impact noise shall not exceed 140 dB peak sound pressure level.

SIXTH SCHEDULE

regulation 6 (1)

BEST PRACTICES

1. All effluent generated shall be quantified in volume.
2. Each facility shall install —
 - (1) anti-pollution equipment for the detoxification of effluent and sludge ;
 - (2) efficient effluent treatment plant based on the Best Practicable Technology (BPT) ; and
 - (3) containment equipment for spills in case of accidental discharge.
3. Each facility shall—
 - (1) adopt in-plant waste reduction and pollution prevention strategies ;
 - (2) have a buffer zone between it and the nearest human settlement ;
 - (3) embrace cleaner production with emphasis on water reuse and recycling ;
 - (4) maintain good housekeeping at all times and pay attention to fire precursors such as dust, oily rags, papers ; and
 - (5) reduce the quantity of packaging material utilised and ensure the use of the five 'Rs' namely Reduce, Re-use, Recover, Repair, and Recycle.
4. An unusual or accidental discharge of waste from a Facility shall be reported to the nearest office of the Agency within 24 hours of the discharge.
5. There shall be appropriate bund walls around tank farms for containment in case of accidental discharges.

SEVENTH SCHEDULE

regulation (10)

BANNED OR RESTRICTED CHEMICALS

I. LIST OF BANNED CHEMICALS

<i>Chemical/Pesticide</i>	<i>CAS Number</i>
2,4,5-Trichlorophenoxy-acetic acid and its salts and esters	93-76-5
Aldrin	309-00-2
Binapacryl	485-31-4
Captafol	2425-06-1
Chlordane	57-74-9
Chlordimeform	6164-98-3
Chlorobenzilate	510-15-6
Dichloro-diphenyltrichloroethane (DDT)	50-29-3
Dieldrin	60-57-1
<u>Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)</u>	534-52-1; 2980-64-5; 5787-96-2; 2312-76-7
<u>Dinoseb and its salts and esters</u>	88-85-7
<u>EDB (1,2-dibromoethane)</u>	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Fluoroacetamide	640-18-7
<u>HCH (mixed isomers)</u>	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-2
Phorate	298-02-2
Toxaphene	8001-35-2

All tributyltin compounds including:	
-Tributyltin oxide	56-35-9
-Tributyltin fluoride	1883-10-4
-Tributyltin metacrylate	2155-70-6
-Tributyltin benzoate	4342-36-3
-Tributyltin chloride	1461-22-9
-Tributyltin linoleate	24124-25-2
-Tributyltin naphthenate	85409-17-2
Dustable powder (DP) formulations containing a formulations of :	
-Benomyl at or above 7 percent	17804-35-2
-Carbofuran at or above 10 percent	1563-66-2
-Thiram at or above 15 percent),	137-26-8
Methamidophos (soluble liquid formulations of the substances that exceed 600g active ingredient/l)	10265-92-6
Phosphamidon (soluble liquid formulations of the substances that exceed 1000g active ingredient/l)	13171-21-6 23783-98-4 297-99-4
Methyl-parathion (emulsifiable concentrate at or above 18.5% active ingredient and dusts at or above 1.5% active ingredient)	
Pentachlorophenol	87-86-5
Toxaphene (Camphechlor)	8001-35-2
dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	17804-35-2; 1563-66-2; 137-26-8
Actinolite asbestos	77536-66-4
Amosite, asbestos	12172-73-5
Anthophyllite asbestos	77536-67-5
Crocidolite asbestos	12001-28-4
Tremolite asbestos	77536-68-6
Tetraethyl lead	78-00-2
Tetramethyl lead	75-74-1
Tremolite	77536-68-6
Tri(2,3 dibromopropyl)phosphate	126-72-7
Alachor	15972-60-8
Aldicarb	116-06-3

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Dioxins	1746-01-6
Endrin	72-20-8
Furans	110-00-9
	76-44-8
Mirex	2385-85-5
α - hexachlorocyclohexane	318-84-6
β - hexachlorocyclohexane	318-85-7
Chlordecone	143-50-0
Hexabromobiphenyl	36355-01-8
Hexabromodiphenyl ether and heptabromodiphenyl	68631-49-2 189084-68-2
Pentachlorobenzene	608-93-5
Tetrabromodiphenyl ether and pentabromodiphenyl ether	5436-43-1 32534-81-9
perfluorooctanesulfonic acid (PFOS) its salt and perfluorooctanesulfonyl fluoride (PFOS)	2795-39-3307-35-7
Trichlorofluoromethane	75-69-4
Dichlorodifluoromethane	75-71-8
Trichlorotrifluoroethane	76-13-1
Dichlorotetrafluoroethane	76-14-2
Bromochlorodifluoromethane	353-59-3
Bromotrifluoromethane	75-63-8
Dibromotetrafluoroethane	76-15-3
Chlorotrifluoromethane	75-72-9
Pentachlorofluoroethane	354-56-3
Tetrachlorodifluoroethane	76-12-0
Tetrachloromethane or carbon tetrachloride	56-23-5
Trichloroethane or methyl chloroform	71-55-6
Chlorodifluoromethane	75-45-6
Dichlorotrifluoroethane	306-83-2
Chlorotetrafluoroethane	2837-89-0
Dichlorofluoroethane	1717-00-6
Chlorodifluoroethane	75-68-3
Azinphos-methyl	86-50-0
Octabromodiphenyl ether commercial mixture	32536-52-0
Dicofol	115-32-2
Perfluorooctanoic Acid (PFOA)	335-67-1

Hexachlorobutadiene	87-68-3
Chlorinated naphthalenes	70776-03-3
Decabromodiphenyl ether	1163-18-5
Short-chain chlorinated paraffins (C10-I 3; chlorine content > 48 %)	85535-84-8, 68920-70-7, 71011-12-6, 85536-22-7, 85681-73-8, 108171-26-2

2. LIST OF RESTRICTED CHEMICALS

<i>Chemical/Pesticide</i>	<i>CAS Number</i>
Polybrominated Biphenyls (PBBs)	36355-01-8(hexa-) 27858-07-7(octa-) 13654-09-6(deca-)
Polychlorinated Biphenyls (PCBs)	1336-36-3
Polychlorinated Terphenyls (PCTs)	61788-33-8
Methyl Bromide or Bromoethane	74-83-9
	106-93-4
All wastes arising from the hazardous chemicals	
Others	
Acetic acid	64-18-7
Acetyl bromide	506-96-7
Allyl isothiocyanate	57-06-7
Ammonia (35% or greater)	7664-41-7
Ammonia (less than 35%)	7664-41-7
Antimony pentachloride	7647-18-9
Antimony trihydride	7803-52-3
Arsine	7784-42-1
Arsenical substances	
Boric acid; Sodium borate	10043-35-3, 1330-43-4
Boron tribromide	10294-33-4
Boron trichloride	10294-34-5
Boron trifluoride	7637-07-2
Bromine; Bromine solutions	7726-95-6,
Captafol	2939-80-2, 2425-06-1

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Carbamates,	598-55-0
Bendiocarb	22781-23-3
BPMC (Fenobucarb)	3766-81-2
Mercaptodimethur (methiocarb)	2032-65-7
Carbon monoxide	630-08-0
Carbon tetrafluoride	75-73-0
Chlorinated hydrocarbons	85422-92-0
Chlorine	7782-50-5
Chlorine trifluoride	7790-91-2
Chlorobenzenes	108-90-7
Chlorophenols	25167-80-0
Chlorophenoxyacids; their salts, esters, amines	94-74-6,
Chlorosilanes	13465-78-6
Chlorosulphonic acid	7790-94-5
Chronic acid	1333-82-0
Cyanides	
Diborane	18287-45-7
Dibromochloropropane	96-12-8
Diethyl sulphate	77-78-1
Epichlorohydrin	106-89-8
Ethyl mercaptan	75-08-1
Ethylene imine	151-56-4
Ferric chloride	7705-08-0
Fipronil	120068-37-3
Fluorine	7782-41-4
Formic acid	64-18-6
Germane	7782-65-2
Hydrazine anhydrous; Hydrazine aqueous solutions	302-01-2
Hydrochloric acid	7647-01-0
Hydrofluoric acid	7664-39-3
Hydrogen chloride	7647-01-0
Hydrogen cyanide; Hydrocyanic acid	74-90-8,
Hydrogen selenide	7783-07-5

Isocyanates	
Mercury compounds including inorganic mercury compounds, alkyl mercury compounds, alkyloxyalkyl and aryl mercury compounds, and other organic compounds of mercury	
Metanil yellow (sodium salt of metanilylazo-diphenylamine)	587-98-4
Methyl chloride	74-87-3
Methyl mercaptan	74-93-1
Monomethyltetrachloro diphenyl methane	76253-60-6
Monomethyl-dichloro-diphenyl methane	76253-60-24
Monomethyl-dibromodiphenyl methane	99688-47-8
Neonicotinoid compounds used as pesticides	138261-41-3
Nitric acid (95% or greater)	7697-37-2
Nitric acid (less than 95%)	7697-37-2
Nitric oxide	10102-43-9
Nitrogen trifluoride	7783-54-2
Oleum	8014-95-7
Orange II [sodium salt of p-(2-hydroxy-1-naphthylazo) benzenesulphonic acid]	
Organic peroxides	
Organo-tin compounds	
Perchloromethylmercaptan	594-42-3
Perfluorooctane sulfonate (PFOS)	29457-72-5
Phenols	108-95-2
Phenol ethoxylate	9016-45-9
Phosgene	75-44-5
Phosphides	
Phosphine	603-35-0
Phosphorus compounds, excepting	
Dimethoate	
Fenchlorphos	
Fenitrothion	
Phenthoate	
Profenophos	
Prothiophos	
Quinalphos	

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Phosphorus oxybromide	7789-59-5
Phosphorus oxychloride	10025-87-3
Phosphorus pentabromide	7789-69-7
Phosphorus pentachloride	10026-13-8
Phosphorus pentafluoride	7647-18-0
Phosphorus trichloride	7718-12-2
Polybrominated diphenyl ethers	
Potassium hydroxide	1310-58-3
Prochloraz	67747-09-5
Pyrethroid compounds used as pesticides	
Sodium azide	26628-22-8
Sodium hydroxide	1310-73-2
Sulphur tetrafluoride	7783-60-0
Sulphur trioxide	7446-11-9
Sulphuric acid	7664-93-9
Sulphuryl chloride	7791-25-5
Sulphuryl fluoride	2699-79-8
Titanium tetrachloride	7550-45-0
Tungsten hexafluoride	7783-82-6
Liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat ion at or above 200g/L	4685-14-7
Hexabromocyclododecane (HBCD)	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3184-55-6
Phorate	298-02-2
PRECURSOR CHEMICALS	
CHEMICALS COMMONLY USED AS PRECURSOR FOR THE MANUFACTURE OF EXPLOSIVES	
Ammonium Nitrate	6484-52-2
Ammonium Perchlorate	87110-01-8
Barium nitrate	10022-31-8
Guanidine nitrate	506-93-4
Hydrogen peroxide	7722-84-1
Potassium chlorate	3811-04-9
Potassium nitrate	7757-79-1

Potassium perchlorate	7778-74-7
Sodium chlorate	7775-09-9
Sodium nitrate	7631-99-4
Sodium nitrite	7632-00-0
Sodium perchlorate	7791-07-3
Perchloric acid	95998-58-6
Tetranitromethane	509-14-8
Mercury Fulminate	628-86-4
Arsenic trichloride;	7784-34-1
Benzilic acid;	76-93-7
Diethyl ethylphosphonate	78-38-6
Diethyl methylphosphonite	15715-41-0
Diethyl-N,N-dimethylphosphoroamidate;	2404-03-7
N,N-Diisopropyl-beta-aminoethane thiol;	5842-07-9
N,N-Diisopropyl-beta-aminoethyl chloride hydrochloride	4261-68-1
N,N-Diisopropyl-beta-aminoethanol;	96-80-0
N,N-Diisopropyl-beta-aminoethyl chloride;	96-79-7
Dimethyl ethylphosphonate;	6163-75-3
Dimethyl methylphosphonate	756-79-6
Ethyl phosphonous dichloride [Ethyl phosphinyl dichloride;	1498-40-4
Ethyl phosphonus difluoride [Ethyl phosphinyldifluoride];	430-78-4
Ethyl phosphonyl dichloride;	1066-50-8
Pinacolyl alcohol;	464-07-3
3-Quinuclidinol;	1618-34-7
Thiodiglycol;	111-48-8
Methylphosphonic acid;	993-13-5
Diethyl methylphosphonate	683-08-9
N,N-dimethylamino-phosphoryl dichloride;	677-43-0
Methylphosphonothioic dichloride.	676-98-2
Diethyl phosphate	762-04-9
Dimethyl phosphate	868-85-9
Phosphorus oxychloride	10025-87-3
Phosphorus pentachloride	10026-13-8
Phosphorus trichloride;	7718-12-2

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Sulfur monochloride;	10025-67-9
Sulfur dichloride;	10545-99-0
Thionyl chloride;	7718-09-7
Triethanolamine;	102-71-6
Triethylphosphite;	122-52-1
Trimethyl phosphate	121-45-9
Ethyldiethanolamine.	139-87-7

EIGHTH SCHEDULE

*regulation 3(1) and (2)*GUIDE TEMPLATE FOR EMERGENCY RESPONSE
PROCEDURES IN INDUSTRY*Contents*

1.—(1) STEP 1 – Establish a Planning Team

There shall be an individual or group in charge of developing the emergency management plan which include —

- (a) form the team ;
- (b) establish authority ;
- (c) issue a mission statement ;
- (d) establish a schedule and budget.

(2) STEP 2 – Analyze Capabilities and Hazards

This step entails gathering information about current capabilities and about possible hazards and emergencies, and then conducting a vulnerability analysis to determine the company capabilities for handling emergencies, such as —

- (a) where do you stand right now ;
- (b) meet with outside groups ;
- (c) identify codes and regulations ;
- (d) identify critical products, services and operations ;
- (e) identify internal resources and capabilities ;
- (f) identify external resources ;
- (g) do an insurance review ;
- (h) conduct a vulnerability analysis ;
- (i) list potential emergencies ;
- (j) estimate probability ;
- (k) assess the potential human impact ;
- (l) assess the potential business impact ;
- (m) assess the potential property impact ;
- (n) assess internal and external resources ; and
- (o) add the columns.

(3) STEP 3 – Develop the Plan

- (a) Emergency planning shall become part of the corporate culture.
- (b) The following shall be part of developing the plan —

(i) look for opportunities to build awareness, to educate and train personnel, test procedures, and involve all levels of management, departments and the community in the planning process, and

(ii) to make emergency management part of what personnel do on a day-to-day basis ;

(c) plan components ; and

(d) the development process.

(4) STEP 4 - Implement the Plan

(a) implementation means more than simply exercising the plan during an emergency ;

(b) it means acting on recommendations made during the vulnerability analysis, integrating the plan into company operations, training employees and evaluating the plan ;

(c) integrate the plan into company operations ; and

(d) conduct training, drills and exercises.

NINTH SCHEDULE

regulation2 (1) (b and c)

GUIDELINE FOR PREPARING ENVIRONMENTAL MANAGEMENT PLAN (EMP)

1. An Environmental Management Plan (EMP) describes the process that an organisation shall follow to maximize its compliance and minimize harm to the environment.

2. The plan helps an organisation map its progress towards achieving continual improvements.

3. Regardless of the organisation's situation, all environmental plans shall include the following elements —

(1) policy ;

(2) planning ;

(3) implementation and operation ;

(4) checking and corrective action ; and

(5) management review and commitment.

4. POLICY

(1) Policy statements are important to an organisation because they help anchor the organisation on a core set of beliefs.

(2) These environmental guiding principles may enable all members of an organisation to focus on the same objective and provide an opportunity for outside interests to understand the operation of the organisation.

(3) The policy shall be focused, concise and easy to read and address the following —

(a) compliance with legal requirements and voluntary commitments ;

- (b) minimise waste and preventing pollution ;
- (c) continual improvement in environmental performance, including areas not subject to regulations ; and
- (d) Sharing information on environmental performance with the community.

5. PLANNING

- (1) The planning shall define the organisation's environmental footprints and set goals.
- (2) Goals and objectives shall be focused on maximising their positive impacts on the environment.
- (3) When evaluating, the following elements shall be considered —
 - (a) impacts on the environment through its activities, products and services ;
 - (b) legal requirements associated with protecting the environment ; and
 - (c) meaningful and focused environmental objectives and targets.

6. IMPLEMENTATION AND OPERATION

- (1) Implementation and operation shall define the activities that the organisation shall perform to meet its environmental objectives and targets.
- (2) It shall identify activity each person is responsible for, ensure completion and set targets for each of the identified activity.
- (3) In addition, this area shall specify employee training, communication and outreach activities that are necessary to ensure successful implementation of the plan.

7. CHECKING AND CORRECTIVE ACTION

- (1) The EMP shall describe the process that shall be followed to verify proper implementation and how problems will be corrected in a timely manner
- (2) Routine evaluation and continual improvement to the process is necessary to make sure that the plan successfully leads towards the completion of environmental objectives and targets.

8. MANAGEMENT REVIEW AND COMMITMENT TO IMPROVEMENT

- (1) Routine management review and support is a necessary and meaningful tool for the organisation.
- (2) This shall identify the routine management evaluations that will be conducted to ensure that the plan is appropriately implemented to meet its environmental objectives.

9. CLASSIFICATION OF FACILITIES

(1) In order to ensure that facilities are treated fairly across board in terms of compliance with environmental regulations and standards, the Agency came up with criteria for classifying facilities into micro, small or medium scale.

(2) This is to grant exemption to micro and small facilities from preparing EARs.

(3) The criteria are listed as follows —

- (a) size of the facility (landmass) ;
- (b) number of personnel (staff strength) ;
- (c) automated or mechanized level ;
- (d) wet or dry process ;
- (e) production turnover (per day or week and month) ;
- (f) waste streams – type or handling ; and
- (g) paints, chemicals, tanneries, quarries, crushing or asphaltting sites can never be classified as micro because of their process line and toxicity of their waste.

10. MICRO & SMALL SCALE FACILITIES

(1) The criteria listed in this paragraph are to aid the categorisation and classification of micro and small scale facilities as follows —

(a) facilities with staff strength less than 10 without mechanisation are classified as micro scale and if mechanised they are small ;

(b) facilities with staff strength greater than 10 and less than 50 without mechanisation are classified as small but if mechanised they are in the medium category ;

(c) facilities that occupy a land mass less than 2 plots without mechanisation are classified as micro scale and if mechanised they are in the small category ; and

(d) facilities that occupy a land mass greater than 2 plots without mechanisation are classified as small scale and if mechanised they are in the medium category.

(2) An Environmental Audit is a multidisciplinary process of objectively reviewing the environmental performance of an operating facility including its processes, material storage, operating procedures and environmental management to identify potential environmental impacts and liabilities.

(3) The conduct of environmental Audit is the statutory function of NESREA.

(4) Environmental audit is designed to protect the environment with the aim to —

(a) assess performance against a set of requirements or targets related to specific issues ;

(b) evaluate compliance with environmental legislation and corporate policies ;

(c) measure performance against the requirements of an environmental management system standard ; and

(d) explore the potential economic, social and environmental benefits that an improved performance may achieve.

(5) A new guideline for EA in Nigeria has been developed to Assist Environmental Consultants and Auditors to conduct environmental audits in facilities.

(6) The guideline shall be useful for Government inspectors, clients and the regulated community in assessing the credibility of the EA.

(7) The guidelines may be replaced, amended or updated periodically.

(8) It is the responsibility of the Environmental Consultants and Auditors, Government Inspectors, Clients and the Regulated Communities to keep abreast of updates of these guidelines.

11. ENVIRONMENTAL AUDIT (EA) FOR MEDIUM AND LARGE SCALE FACILITY

(1) Medium and large scale facilities are required to provide EAR and EMP every three (3) years.

(2) The EMP shall be a chapter in the EAR medium and large scale facilities shall apply for permits which are renewed yearly.

(3) Environmental Audit shall be carried out by a NESREA Accredited consultant.

GUIDELINE FOR PREPARING ENVIRONMENTAL SITE
ASSESSMENT (ESA)

1. An Environmental Site Assessment (ESA) is a process of evaluating the environment liability on derelict or on-use site. Specifically,

2. ESA is the process of conducting all appropriate inquiry into the past, or present uses of a site to determine whether the site is impacted by a 'Recognized Environment Condition (REC).

3. ESA process includes a site inspection, a review of historical records of the site and research of records available at the appropriate government agencies.

4. In line with Part 1, regulation 2(4) of this Regulation; the following guidelines shall be followed in the conduct of ESA —

(1) ESA shall proceed from Phase 1 ESA to Phase 2 ESA subject to the findings of the Phase 1 ESA.

(2) The detail of the Phase 1 ESA is as follows —

(a) phase 1 ESA shall be completed in accordance to the ASTM E1527-13 to research the current and historical uses of the candidate site. The intent at this stage is to assess if current or historical uses of the site have impacted the soil or groundwater beneath the site and may pose a threat to the environment or human health ;

(b) the specific purpose of the Phase 1 Environmental report is to identify, to the extent feasible, Recognized Environmental Conditions (RECs) in connection with the subject property ;

(c) the assessment shall include a site reconnaissance as well as research and interviews with representatives of the public, property or site management, and regulatory agencies ;

(d) the assessment shall identify the —

(i) REC,

(ii) Historical RECs (HREC), and

(iii) Controlled RECs (CREC) associated with the subject site ;

(e) "*Recognized environmental conditions*" means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property or site —

(i) due to any release to the environment,

(ii) under conditions indicative of a release to the environment, or

(iii) under conditions that pose a material threat of a future release to the environment ;

(f) the term shall not include de minimis conditions that generally do not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies ;

(g) conditions determined to be de minimis shall not be recognized as environmental conditions ; and

(h) the identification of recognized environmental conditions in connection with the subject site or property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation (Phase II ESA) may be warranted to evaluate the scope and extent of potential environmental liabilities.

(3) The scope of the Phase I ESA shall include —

(a) site reconnaissance to identify presence of hazardous materials and also to inspect properties adjacent to the subject site ;

(b) gather information from the site owner through a completed disclosure questionnaire structured in line with ASTM E1527-13 ;

(c) review title report if available ;

(d) review federal, state and local authority documents related to the subject site ;

(e) review historical maps, historical occupant's records, and the nature of subject site usage ;

(f) review readily available soil, geology or environmental reports for the candidate site and that of proximal vicinity ;

(g) Conduct interview of persons knowledgeable about the site including past and present owners, operators and occupants; local or state government officials ; and

(h) prepare report which summarizes observations, sources used, findings, conclusions and recommendations relating to the presence or likely presence of any environmental liens on the candidate site.

(4) In accordance with ASTM 1527-13 Standard, additional issues that are non-scope considerations outside of the scope of the Phase I but are critical shall be considered and they include —

(a) asbestos-containing building materials ;

(b) biological agents ;

(c) cultural and historic resources ;

(d) ecological resources ;

(e) endangered species ;

(f) health and safety ;

- (g) indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment ;
- (h) industrial hygiene ;
- (i) lead-based paint ;
- (j) lead in drinking water ;
- (k) mold, radon ;
- (l) regulatory compliance ; and
- (m) wetlands.

(5) the report of the Phase I ESA shall detail such information as —

- (a) description of the subject site or property including site ownership and occupant information (current and previous owners and occupants) ;
- (b) existing structures ;
- (c) current uses of adjoining sites and properties ;
- (d) physical settings ;
- (e) analysis of owner provided information such as title record, environmental liens or Activity and Use Limitations (AULs) ;
- (f) specialized knowledge experience which includes information regarding the environmental condition of the subject site or property that may not be available in public records or other sources as referenced in this report and may only be obtained from disclosure by the owner, occupants, or operators on the subject site or property from personal experience ;
- (g) reasonably ascertainable information from within the local community ;
- (h) detail of interviews conducted ;
- (i) detail of records reviewed including historical use information of the site and other environmental reports pertinent to the site ;
- (j) site reconnaissance detailing methodology and limiting conditions ;
- (k) observations ;
- (l) detail of non-scope considerations ;
- (m) findings and opinions detailing REC, CREC, HREC and non-scope concerns ; and
- (n) conclusion.

(6) Phase II ESA shall proceed in accordance with ASTM: E1903-97 if the conclusion of the Phase I ESA identified a probable REC or non-scope environmental liens.

(7) The purpose of the Phase II ESA shall be —

- (a) to evaluate the suspected recognized environmental conditions identified in the Phase I ESA ;
- (b) to provide sufficient information regarding the nature and extent of contamination to assist in making informed decisions about the site or property ; and

(c) where applicable to provide the level of knowledge necessary for environmental response, compensation or claim of liability.

(8) The suspected recognized environmental conditions in connection with the subject site or property may —

- (a) impose an environmental liability on owners or operators of the site ;
- (b) reduce the value of the site ; or
- (c) restrict the use or marketability of the site which may lead to investigation to evaluate the scope and extent of potential environmental liabilities.

(9) the non-scope environmental conditions shall be investigated at the stage referred to in sub-paragraph (8) of this paragraph.

(10) the scope of the Phase II ESA shall cover —

- (a) review of existing information ;
- (b) field exploration ;
- (c) sampling and chemical analyses ;
- (d) evaluation of results ; and
- (e) discussion of findings and conclusions.

(11) The report of the investigation shall detail field investigation methods, analysis and analyses methods, result discussion, conclusions and objective recommendations.

TENTH SCHEDULE

regulation 8 (1)

EXTENDED PRODUCER RESPONSIBILITY PROGRAMME (EPRP)

1. As part of the strategic alliance programme of the Agency, all manufacturers and importers of food Beverage and Tobacco products shall partner with the Agency to ensure an effective EPRP implementation in accordance with the provisions of the guidelines for the implementation of the EPR programme.

2. Sufficient evidence of commitment to implementation of the Extended Responsibility (EPR) shall constitute part of the condition for the acceptance, consideration and approval of Environmental Audit Report (EAR) and Environmental Management Plan (EMP) submitted to the Agency by all manufacturers and importers of Food, Beverage and Tobacco products

3. It shall be the responsibility of manufacturer —

(1) distributor or retailer to take back their packaging materials and set up collection points or centres ; and

(2) producer to ensure environmentally sound management of the packaging materials from collection points to NESREA accredited recyclers.

4. The manufacturers and distributors of products such as bottle, can or tin, teflon or polyethylene packaging, paper, glass, PET bottle of water or soft drink, high density polyethylene bottle, metal can or hard paper (Tetrapak) pack of beverages, fruit drinks, beer or wine shall be responsible for the management of the end-of-life waste of their products which shall include information, physical and financial commitment.

5. The manufacturer and distributor of products referred to in paragraph 4 of this Schedule shall —

(1) subscribe to the Extended Producer Responsibility (EPR) or Product Stewardship Programme (PSP) of the Agency under the Producer Responsibility Organisation who shall —

(a) establish a process for the collection, handling, transportation and final treatment of a post-consumer beverage products regardless of who is the original brand owner of the products or the consumer ;

(b) employ various types of processes to reduce, recovery, repair and reuse, recycle or recover post-consumer products, including details of efforts to incorporate the priorities of a pollution prevention hierarchy by moving progressively from disposal to reduction, reuse, recycling and recovery of post-consumer products ;

(c) establish the location of any long-term containment or final treatment and processing facilities for post-consumer products ;

(d) monitor the types of educational information and programs provided.

(1) submit quarterly report to the Agency, on their EPR or PSP which include—

(a) the total amount of consumer beverage products sold and post-consumer products collected ;

(b) the total amount of post-consumer beverage products processed or in storage ;

(c) the percentage of post-consumer beverage products that were treated or contained, reduced, reused, recycled or recovered ;

(d) efforts taken through consumer beverage products marketing strategies to reduce post-consumer products and packaging waste ;

(e) the types of processes used to reduce, reuse, recycle or recover post-consumer beverage products, including but not limited to details of efforts to incorporate the priorities of a pollution prevention hierarchy by moving progressively from disposal to reduction, reuse, recycling and recovery of post-consumer paint products ;

(f) the location of return collection facilities or depots ;

(g) the location of any long-term containment or final treatment and processing facilities for post-consumer beverage ;

(h) the types of educational information and programs provided ; and

(i) the process of internal accountability used to monitor environmental effectiveness ; and

(2) any other information requested by the Agency.

6. Failure to participate shall attract penalties.

ELEVENTH SCHEDULE

Regulation 7 (1) and (2)

Pollution Control Organisational System

In order for every facility to ensure that its environmental aspects are properly managed, it shall assign responsibility for adequate management of all environmental issues to competent personnel and ensure that they forward statutory reports to NESREA and ensure that they liaise with environmental consultants and other government authorities when necessary.

TWELFTH SCHEDULE

Regulation 35(3) and (4)

FORM I

MONTHLY DISCHARGE MONITORING REPORT (MDMR)
[NESREA Discharge Monitoring Report]PLEASE COMPLETE AND SUBMIT ONE COPY EACH MONTH
THIS REPORT MUST BE POSTMARKED NO LATER THAN THE
28TH OF THE FOLLOWING MONTH

FACILITY NAME AND ADDRESS

Facility e-mail Address

Mail To :
National Environmental Standards and
Regulations Enforcement Agency
(NESREA).
No. 4x, Lome Crescent
Zone 7, Wuse,
Abuja.SAMPLING POINT LOCATION :

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MONTH YEAR

SAMPLING DATES & TIME :

TYPE OF SAMPLING

PARAMETERS		WEEKLY RESULTS					NESREA's Regulatory Limits
PHYSICAL:	UNITS	1ST	2ND	3RD	4TH	Average	
Appearance							
Odour							
Temperature	OC						
pH							
Conductivity	µs/cm						
Turbidity	NTU						
Dissolved Oxygen (DO)	mg/l						
Total Suspended Solids (TSS)	mg/l						
Total Dissolved Solids (TDS)	mg/l						
BOD	mg/l						
COD	mg/l						
INORGANIC :							
Chloride	mg/l						
Nitrate	mg/l						
Sulphate	mg/l						
Sulphite	mg/l						

[illegible]

FORM 2

NATIONAL ENVIRONMENTAL STANDARDS AND REGULATIONS
ENFORCEMENT AGENCY (NESREA)

INCIDENT REPORT FORM

This report is to be completed when accidental discharge, occupational illness or incident occurs. If an employee is injured or develops gradually a job-related illness as a result of his/her employment at the facility, S/he must complete and submit the "Incident Report". If the employee is unable to complete the form, the supervisor must complete on his/her behalf.

Incident reporting ensures there is a record on file with the employer. In no way does this waive the employee's right to workers' compensation benefits. If an injury occurs, first aid may be appropriate treatment.

All accidental discharges/emergencies/accidents should be reported to NESREA within 48 hours.

1. FACILITY:

2. DISCHARGE:

Cause(s) of discharge ;

Did the discharge occur as a result of mechanical/technical/unskilled application?

Was the discharged gaseous, liquid or solid ? Please specify :

What was the nature of discharge, sludge, effluent or influent? Please specify.

Into which medium was it discharged to i.e. water body, land, or air? Please specify.

* If water body, specify type of water; pond, stream, lake, river etc.

.....
* if land ;

o Name and location (Geo-reference) of the land where discharge occurred.

o Ways of disposing of discharge; i.e. burying, burning etc please specify.

Was there any previous accidental discharge of this kind ? Yes ☐ No ☐

regulation 36(3)

Attestation

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information herein submitted is, to the best of my knowledge and belief, true, accurate, and complete."

THIRTEENTH SCHEDULE

Regulation 6 (5)

ASSESSMENT OF WORK ENVIRONMENT

1. HEAT STRESS

(1) Operations involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for inducing heat stress in employees engaged in such operations.

(2) Heat exposure and unsuitable lighting are therefore two physical hazardous agents in many workplaces for which there are historical evidences regarding their mental effects.

(3) In job task which requires using cognitive functions like attention, vigilance, concentration, cautiousness, and reaction time, the work environment shall be optimized in terms of heat and lighting level.

(4) Heat stress exposure limits based on wet-bulb globe temperature (WBGT) have been set to limit exposures to those that may be sustained for 8 hours per day.

(5) In general, sustainable exposure are heat stress levels at which thermal equilibrium can be achieved while unsustainable exposures occur when there is a steady increase in core temperature. The Table 1 provided in this paragraph specifies the Permissible Heat Exposure Threshold Limit Value.

TABLE I—PERMISSIBLE HEAT EXPOSURE THRESHOLD LIMITS

<i>Work/rest regime</i>	<i>Light</i>	<i>Moderate</i>	<i>Heavy</i>
Continuous work	30.0°C(86°F)	26.7°C(80°F)	25.0°C(77°F)
75% Work, 25% rest, each hour	30.6°C(87°F)	28.0°C(82°F)	25.9°C(78°F)
50% Work, 50% rest, each hour	31.4°C(89°F)	29.4°C(85°F)	27.9°C(82°F)
25% Work, 75% rest, each hour	32.2°C(90°F)	31.1°C(88°F)	30.0°C(86°F)

*Values are in °C and °F, WBGT.

Note :
These TLV's are based on the assumption that nearly all acclimatized, fully clothed workers with adequate water and salt intake shall be able to function effectively under the given working conditions without exceeding a deep body temperature of 38°C(100.4°F). They are also based on the assumption that the WBGT of the resting place is the same or very close to that of the workplace.

Source: ACGIH 1992 (ACGIH – American Conference of Governmental Industrial Hygienists)

2. LIGHT INTENSITY (ILLUMINANCE) AS

(1) Every Facility in Nigeria shall provide and maintain sufficient and suitable lighting whether from a natural source or artificial source in every part of the facility in which persons are working.

(2) This is to avoid incidence of fatigue, eyes damage and mistakes resulting from poor lightening condition.

(3) Industrial accidents are common when light levels are low and in addition, good lighting condition at work place affects how well people can perform.

(4) Generally these are established guidelines and specifications on the minimum amount of lighting (Illuminance) required for various types of work stations in companies which are detailed in section 10(c) of the Factories Act CAP F1 LFN 2004 and section 6.4 of schedule 1 of OSHA Regulation SOR 86-304.

(5) These were put in place in order to identify locations of potential light intensity risks such as work areas with poor Illuminance, so that improvement plans can be implemented in those areas.

(6) Illumination (lighting) means —

(a) the deliberate use of light to achieve a practical or aesthetic effect. It refers to the amount of light falling on a unit area of a work surface and its measurement unit is lux, which is expressed as (lx) and measures luminous flux per unit area. It is used to evaluate the adequacy of lighting in carrying out work functions ; and

(b) is measured with a luxmeter, which is a handheld instrument with a sensor for light intensity detection. Table 1.2 and 3 provided in this paragraph are from the OSHA Regulations SOR/86-304 of showing the threshold of lighting in office , industrial and general areas respectively.

TABLE I— MINIMUM REQUIRED LEVELS OF LIGHTING IN DIFFERENT
UNITS OF OFFICE WORK AREAS

S/N	Work Area	Type Of Activity	Minimum Required Lux
1.	Desk Work	(a) Task position at which cartography, designing, drafting plan-reading or other very difficult visual task are performed	1000
		(b) Task positions at which business machines are operated or stenography, accounting, typing, filling, clerking, billing, continuous reading or writing or other difficult visual tasks are performed.	500
2.	Other Office Work	Conference and interview rooms file storage areas, switch board or reception areas or other areas where ordinary visual task are performed	300
3.	Service Area	(a) Stairways and corridors that are :	
		(i) Used frequently	100
		(ii) Used infrequently	50
		(b) Stairways that used only in emergencies	30

Source : Occupation Health and Safety Regulation (SOR/86-304) Section 6.4 of Schedule I

TABLE 2— MINIMUM REQUIRED LEVELS OF LIGHTING IN DIFFERENT UNITS OF INDUSTRIAL WORK AREAS

S/N	Work Area	Type Of Activity	Minimum Required Lux
1.	Garage	(a) Main repair maintenance area	300
		(b) Fuelling areas	150
		(c) Battery rooms	100
		(d) Other areas of the garage in which there is:	
		(i) A high or moderate level of activity	100
		(ii) A low level of quality	30
2.	Laboratories	(a) Areas in which instruments are read and where errors in such activity may be hazardous to the health or safety of an employee	750
		(b) Areas in which hazardous substances are handled	500
		(c) Areas in which laboratory work requiring close and prolong attention is performed.	500
3.	Loading Platforms, Storage Rooms and Warehouse	(a) Area in which packages are frequently checked or sorted	250
		(b) Areas in which packages are infrequently checked or sorted	75
4.	Machine and workshop section	(a) Area in which medium or fine bench or machine work is performed	500
		(b) Areas in which rough bench or machine work is performed	300
5.	Manufacturing and processing areas	(a) Major control rooms or rooms with dial display	500
		(b) Areas in which a hazardous substance is processed, manufactured or used ;	
		(i) In main work areas	500
		(ii) In surround areas	30
6.	Service Areas	(a) Stairways and elevating devices that are :	
		(i) Used frequently	100
		(ii) Used infrequently	500
		(b) Stairways that are used only in emergencies	30
		(c) Corridors and aisles that are used by persons and mobile equipment :	

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	(i) At main intersections	100
	(ii) At other location	50
	(d) Corridor and aisles that are used by mobile equipment only	50
	(e) Corridors and aisles that are used by persons only and are used frequently by employees.	50

Source : Occupational Health and Safety Regulation (SOR/86-304) Section 6.5 schedule II

TABLE 2— MINIMUM REQUIRED LEVEL OF LIGHTING IN GENERAL AREAS OF WORK ENVIRONMENT

S/N	Area	Activity	Minimum Required Lux
1.	Building Exteriors	(a) Entrances and exits that are :	
		(i) Used frequently	100
		(ii) Used infrequently	50
		(b) Passageways used by persons	
		(i) At vehicular intersection	30
		(ii) At other locations	10
		(c) Areas used by persons and mobile equipment in which there is :	
		(i) A high or moderate level of activity	20
		(ii) A low level of activity	10
		(d) Storage area in which there is :	
		(i) A high or moderate level of activity	30
		(ii) A low level of activity	10
2.	First Aid Rooms	(a) In treatment and examination area :	1000
		(b) In other areas	500
3.	Food preparation		500
4.	Personal Service rooms		200
5.	Boiler Room		200
6.	Rooms in which principal heating ventilation or air conditioning equipment is installed		50
7.	Emergency shower facilities and emergency equipment locations		50
8.	Parking Area	(a) Covered	50
		(b) Open	10
9.	Lobbies and Atria		1000

Source : Occupation Health and Safety Regulation 9SOR 186-304) Section 6.6 of schedule III

3. INDUSTRIAL HYGIENE ASSESSMENT

(1) A facility is by this provision required to assess its workplace to develop a current listing of all designated hot work areas and High hazard areas.

(2) High hazard areas shall include flammability or combustibility hazards related to potential hot work in the area.

(3) Such assessment and listing shall either be a stand-alone document or included as part of the EAR conducted in line with regulation 2(2) of these Regulations.

(4) The listing shall be updated whenever there are changes in processes, equipment or facilities that may alter the already Designated Hot Work Areas and in addition shall be reviewed periodically.

(5) In order to ensure adequate protection of the health of workers within the hot work areas, facilities shall assess personnel exposures to potential toxic contaminants during Hot Work, including fumes from welding rods and fluxes.

(6) At a minimum, facilities shall conduct baseline industrial hygiene assessments for welding operations in designated hot work areas, and other areas if identified through the site's Risk Assessment, to verify that exposures are below the exposure limit set in permissible heat exposure threshold limit value of this Schedule.

(7) Assessments shall be updated annually and reported as part of the year's last quarter monitoring report submitted to the Agency.

TABLE 2 : PERMISSIBLE EXPOSURE LIMIT

<i>Parameter</i>	<i>PEL-TWA (mg/m³)</i>
Aluminium (Al) Fume	5.00
Arsenic	0.010
Barium	0.500
Beryllium	0.002
Calcium Oxide	2.000*
Cadmium (Cd) Fume	0.100
Cobalt	0.10
Chromium, Hexavalent	0.001
Chromium (Cr) Metal	1.00
Copper (Cu) Fume	0.100
Iron Oxide Fume	10.00
Lithium	-
Magnesium (Mg) Oxide	15.00
Manganese	5.00
Molybdenum	5.00
Mercury	-
Nickel (Ni)	1.000
Lead	0.050
Phosphorus	0.100
Platinum	0.002
Selenium	0.200
Silver	0.010
Sodium (Na)	-
Tellurium	0.100
Thallium	0.100
Titanium Dioxide	15.00
Vanadium Pentoxide	0.100
Yttrium	1.000
Zinc (Zn) Oxide Fume	5.000
Zirconium	5.000

MADE at Abuja this 8th day of November, 2023.

DR. IZIAQ ADEKUNLE ADEBOYE SALAKO
*Honourable Minister of State Environment
and Ecological Management*