

**STATUTORY INSTRUMENTS****2014 No....****THE NATIONAL ENVIRONMENT (OIL SPILL PREVENTION, CONTROL AND MANAGEMENT) REGULATIONS, 2014.***(Under section....of the National Environment Act, Cap 153)*

IN EXERCISE of the powers conferred on the Minister responsible for the National Environment Act, by sections **56 and 107**, and on the recommendation of the Policy Committee on the Environment and the Board, these Regulations are made this ..... day of....., 2014.

**PART 1- PRELIMINARY****1. Citation**

These Regulations may be cited as the National Environment (Oil Spill Prevention, Control and Management) Regulations, 2014.

**2. Purpose of Regulations**

The purpose of these Regulations is to provide for-

- (a) the prevention, control and monitoring of oil spill caused by oil and other harmful or dangerous substances in waters and on land under Ugandan jurisdiction and other matters;
- (b) the establishment of basic principles to be observed in handling oil and other harmful or dangerous substances in facilities, platforms and vessels in Uganda;
- (c) role of the NEMA and other spill responders;
- (d) enforcement of spiller responsibility;
- (e) access and right-of-entry to spill sites;
- (f) contractor selection and call-out;
- (g) emergency response to fire and safety hazard;
- (h) confining and containing oil releases;
- (i) corrective action;
- (j) personal health and safety protection during an oil spill;
- (k) equipment training, calibration, and maintenance;
- (l) proper management of spill residuals and debris; and
- (m) quality assurance and quality control procedures.

**3. Application**

(1) These Regulations apply to-

- (a) handling facilities;
- (b) all categories of petroleum products;
- (c) production, storage, transportation, distribution, use and final disposal of used and waste oils;

(d) petroleum activities under the Petroleum (Exploration, Development and Production) Act, 2013, midstream operations under the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013 and activities under the Petroleum Supply Act, 2003 including-

- (i) petroleum activities or midstream operations including crude oil production, processing and conveyance systems, producing wells, refinery, pipelines, central processing units, storage facilities, handling facilities, decommissioning and related infrastructure;
- (ii) any structure, device or other associated installations or infrastructure including oil wells, pipelines, refinery, valve stations, pump stations, compressor stations and equipment constructed, placed or used in order to carry out petroleum activities;
- (iii) vessel, vehicle or craft when stationary and used for drilling or support of on-going petroleum activities;
- (iv) vessel, vehicle or craft for transportation of petroleum in bulk when connected to a facility for loading of petroleum;
- (v) any plant, structure, device or other associated equipment or infrastructure used for midstream operations;
- (vi) all operations, activities, installations, equipment and other facilities directly or indirectly related to the petroleum supply operations including fuel tanks and fuel pump stations; and
- (vii) any oil handling facility or facility which involve a significant risk of discharge of over 10 tonnes of oil especially those located in an area of significant environmental sensitivity, or in an area where a discharge of oil or other substances could cause significant economic damage;

(e) any other facility that handles any type of oil including motor garages, factories that produce cooking oil;

(f) roads and highway incidents or accidents;

(g) shipping and boating in the major lakes (Victoria and Albert); navigational requirements, incidents or accidents; and

(h) any other activity that may result in an oil spill incident.

#### **4. Requirement for facilities regulated under these Regulations**

(1) The facilities regulated under these Regulations including installations, platforms, refinery, pipelines, storage facilities and rigs in Uganda shall -

- (a) have elaborate an internal proceedings manual for the control and management of oil spill and other pollution risks;
- (b) prepare individual oil spill emergency plans to combat pollution by oil and other harmful and dangerous substances approved by NEMA and the relevant lead agency;

- (c) give notification to the competent authority including NEMA, UWA, NFA and the Petroleum Authority of Uganda, of any incident which might cause pollution; and
- (d) give compensation to the competent authorities for expenses made in order to control or minimize the pollution caused by oil spill.

(2) These Regulations apply to every offshore installation in Ugandan waters.

## 5. Exemptions

These Regulations do not apply to-

- (a) a motor vehicle, as defined in the Traffic and Road Safety Act, unless that motor vehicle is an above ground facility or used to transport petroleum commodities or products;
- (b) sewage and sewage sludge; or
- (c) spill of oil used solely for domestic purposes and discharged from within a dwelling-house.

## 6. Interpretation

In these Regulations, unless the context otherwise requires-

“above ground facility” means a facility that is stationary for a period of 30 days or more and is not an underground facility;

“Act” means the National Environment Management Act;

“appraisal well” means a well drilled after the discovery of oil or gas to establish the limits of the reservoir, the productivity of wells in it and the properties of the oil or gas;

“ancillary equipment” means any devices including piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of oil to or from an underground storage system;

“Authority” means the National Environment Management Authority established under section 4 of the Act;

"comprehensive assessment method" means a method including sampling, modelling, and other appropriate scientific procedures to make a reasonable and rational determination of injury and cost-effective restoration alternatives to natural resources resulting from an unauthorized discharge of oil;

“container" includes a fixed tank or a drum even if not connected to fixed pipe or piping;

“contingency plan” means a set of procedures and actions aimed at integrating the various sectoral plans, as well as the definition of human resources, materials and additional equipment for the prevention, control and combat pollution of the waters;

“crisis control” means the control of issues of national importance associated an oil spill incident;

"damages" means and includes any of the following-

- (a) immovable or corporeal movable property - damages for injury to, or economic loss resulting from destruction of, immovable or corporeal movable property, which shall be recoverable by a person who owns or leases that property;

(b) revenues - damages equal to the net loss of taxes, royalties, rents, fees, or net profit share due to the injury, destruction, or loss of immovable or corporeal movable property, or natural resources, which shall be recoverable by the Government;

(c) public services - damages for net costs of providing increased or additional public services during or after removal activities, including protection from fire, safety, or health hazards, caused by a discharge of oil, recoverable by the government;

(d) natural resources- damages for injury to, destruction of or loss of natural resources as defined in this regulation, included the reasonable and any direct, documented cost to assess, restore, rehabilitate or replace injured natural resources or to mitigate further injury and their diminution in value after such restoration, rehabilitation, replacement or mitigation which shall be recovered by government;

“dangerous or harmful substance” means any substance which, if discharged into water is able to generate risk or harm to human health or harm the aquatic ecosystem water use and its surroundings;

”dangerous or harmful substance” means any substance which, if discharged into water is able to generate risk or harm to human health or harm the aquatic ecosystem water use and its surroundings;

“discharge” includes any spilling, leaking, pumping, pouring, emitting, emptying, pumping out, dumping or posting any oil in any quantity from an oil well, pipeline, refinery, transportation or transmission facility, central processing unit, storage facility, drilling rigs, platform and their support facilities but does not include any discharge of oil, which is authorised by a permit issued under any applicable law;

“development well” means a well drilled for the extraction of reservoir hydrocarbons;

“dumping” means any deliberate disposal of wastes or other matter from vessels, platforms, aircraft and other facilities, including intentional sinking in waters under Uganda’s jurisdiction;

“drum” means an oil drum or similar container used for storing oil;

“ecologically sensitive areas” means regions where prevention, pollution control and the maintenance of ecological balance require special measures for the protection and preservation of the environment;

"emergency" means an emergency declared by the President in accordance with the law;

“emergency plan” means set of measures to determine and establish the sectoral responsibilities and actions to be triggered immediately after an incident, as well as define the human, material and equipment designed to prevent, control and combat water oil spill;

“environment” means the physical factors of the surroundings of human beings, including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment;

“environmental body or organ environment” means NEMA or a district environmental committee responsible for monitoring, control and protection of the environment within their competence;

“Executive Director” means the Executive Director of the National Environment Management Authority;

“existing tank system,” means a tank system used to contain an accumulation of oil and for which installation commenced before coming into force of these Regulations;

“exploration well” means a well drilled into a geological structure not previously drilled;

"facility" means any structure, group of structures, equipment, or device other than a vessel which is used for one or more of the following purposes including exploration for, drilling for, producing, storing, handling, transferring, processing, or transporting oil and includes any motor vehicle, rolling stock, or pipeline used for one or more of these purposes;

"general command" means undertaking the entire responsibility during an oil spill incident;

"GT" means gross registered tonnage, and the gross registered tonnage of a ship having alternative gross registered tonnages shall be taken to be the larger of those tonnages;

"harmful quantity" means that quantity of oil the discharge of which is determined by the coordinator to be harmful to the environment or public health or welfare or may reasonably be anticipated to present an imminent and substantial danger to the public health or welfare;

"hotline" means the emergency telephone number established in accordance with Part.... to respond to a threatened or unauthorized discharge of oil;

"incident" means any discharge of oil, due to the fact or action that causes intentional or accidental risk potential harm to the environment or human health;

"incident commander" means person in charge of the Incident Control during an oil spill.

"incident control" means management of oil spill response operations;

"initial response" means immediate actions to be taken in-situ, to block the oil discharge, eliminate potential risks associated with the spill, limit the dispersion of oil and initiate the collection or treatment of the oil slicks;

"lead agency" includes any ministry, department, agency, local government system or public officer in which or in whom any law vests functions of control or management of any segment of the environment;

"maintenance" means the normal operational up keep to prevent an underground storage tank system from releasing oil;

"National Contingency Plan" means the national plan for pollution emergencies prepared by the National Environment Management Authority;

"natural resources" means all land, fish, shellfish, fowl, wildlife, biota, vegetation, air, water, groundwater supplies, and other similar resources owned, managed, held in trust, regulated, or otherwise controlled by the government;

"new tank system" means a tank system that shall be used to contain an accumulation of oils and for which installation has commenced after the coming into force of the Regulations;

"crude oil" means a naturally occurring liquid consisting of a mixture of hydrocarbons and other organic compounds found beneath the earth's surface;

"offshore installation" means any fixed or floating offshore installation or structure engaged in oil and gas exploration or production activities or loading or unloading of oil or any fixed or floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or loading or unloading of oil;

"oil" means and includes any petroleum product produced, stored, transported or in use in Uganda.

“oil handling facility” means a facility which presents a risk of an oil pollution incident and includes an oil terminal, pipeline and any other facility handling oil but does not include an offshore installation and facilities which present a risk of oil pollution incident and includes, inter alia, ports, oil terminals, pipelines and other oil handling facilities;

“oil pollution emergency plan” means a contingency plan (other than the National Contingency Plan) setting out arrangements or measures to determine and establish the sectorial responsibilities for responding to incidents and actions to be triggered immediately after the incident as well as define the human, material and equipment designed to prevent, control and combat water pollution which cause or may cause pollution by oil, with a view to preventing such pollution or reducing or minimising its effect;

“oil pollution incident” means an occurrence or series of occurrences having the same origin, which results or may result in a discharge of oil and which poses or may pose a threat to the marine environment, or to the coastline or related interests of the Uganda and which requires emergency action or other immediate response;

"owner" or "operator" means-

(a) any person owning, operating or chartering by demise a vessel;

(b) any person owning a terminal facility, excluding a political subdivision of the state that as owner transfers possession and the right to use a terminal facility to another person by lease, assignment, or permit; or

(c) a person operating a terminal facility by lease, contract, or other form of agreement.

“operator” means, in relation to an oil handling facility a person having, for the time being, the management of such facility in the Uganda, and in relation to an offshore installation, includes any person having the management of the installation;

“oil” means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products such as gasoline, jet fuel and kerosene;

“oil spill” means a discharge of oil into or upon the environment and any of its components;

“oil spill clean-up organization” means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, that have been designated or approved by NEMA to provide required response resources;

“owner” means any person who owns a facility or an underground or above ground storage system used for storage, use, or dispensing of oils;

"person in charge" means the person on the scene who is directly responsible for a terminal facility or vessel when a threatened or unauthorized discharge of oil occurs or a particular duty arises under this Part.

"person responsible", "responsible person", or "responsible party" means-

(a) the owner or operator of a vessel or terminal facility from which an unauthorized discharge of oil emanates or threatens to emanate;

(b) in the case of an abandoned vessel or terminal facility, the person who would have been the responsible person immediately prior to the abandonment;

- (c) any other person, but not including a person or entity who is rendering care, assistance, or advice in response to a discharge or threatened discharge of another person, who causes, allows, or permits an unauthorized discharge of oil or threatened unauthorized discharge of oil;

“petroleum” means—

- (a) any naturally occurring hydrocarbons, whether in gaseous, liquid or solid state;
- (b) any naturally occurring mixture of hydrocarbons, whether in a gaseous, liquid or solid state; or
- (c) any naturally occurring mixture of one or more hydrocarbons, (whether in a gaseous, liquid or solid state) and any other substances; and includes any petroleum as defined by paragraph (a), (b) or this paragraph that has been returned to a natural reservoir,

but does not include coal, shale or any substance that may be extracted from coal or shale;

“petroleum commodities” means produced petroleum which is marketable for sale, can be used as a feedstock for refining or conversion to petroleum products or direct consumption, including energy production;

“petroleum products” means organic compounds, pure or blended, which are derived from the refining and processing of petroleum, including-

- (a) all products resulting from refining or conversion of petroleum commodities;
- (b) asphalts, bitumens, petroleum coke and other residual products;
- (c) bunkers or heavy residual fuel oils for combustion engines or industrial heat processes, such as burners for boilers or heating furnaces;
- (d) commercial gases namely, methane, ethane, propane, butane, and other similar petroleum gases produced in the refining process, or mixtures of those gases, whether in gaseous or liquefied state;
- (e) gas oil or automotive, industrial or marine diesels;
- (f) gasolines (petrol) or naphtha products;
- (g) kerosene or other similar oils for illumination or combustion applications;
- (h) lubricating oils namely base oils and refined and blended finished oils;
- (i) turbo fuels for jet propulsion engines; and
- (j) other products or by-products of petroleum crude processing having a flash point lower than 120 degrees Celsius, as determined in a Pensky-Martens closed test apparatus.

“pipe or piping” means a hollow cylinder or tubular conduit that is not constructed out earthen materials;

“platforms” means installation or structure, fixed or mobile, located in waters under national jurisdiction, for the activity directly or indirectly related to the prospecting and mining of mineral resources coming from the bed of the waters or subsoil;

“release” means any spilling, leaking, discharge, escaping, leaching or disposing from an underground or aboveground storage facility pipeline, refinery, transportation facilities, central processing unit or drilling facility into ground water, surface water, air or subsurface soils;

“release detection” means determining whether a release of oil has occurred from a facility of activity regulated under these Regulations and its secondary barrier or secondary containment around it;

“spill” means above or underground release of oils or any other petroleum products or commodities from a facility or activity regulated under these Regulations that can cause any form of environmental damage or harm to human health;

“secondary containment system” means a drip tray, an area surrounded by a bund or any other system for preventing oil which is no longer in its container from escaping from the place where it is stored;

“support facilities” means any facilities or equipment to support the implementation of the activities of the platforms or facilities handling bulk oil, such as pipelines;

“storage capacity” means the aggregate capacity of all facilities placed together in one location;

“storage facility” includes underground storage system, above ground tank system and includes a tank, pipeline, midstream storage, upstream storage, pipe or any ancillary equipment to such storage systems;

“tank” or “tanktainer” means a stationary device designed to contain an accumulation of oils and constructed of non-earthen materials such as concrete, steel or plastic that provides structural support;

“tier 1 spill” means a spill of less than 10 tonnes or 70 barrels;

tier 2 spill” means a spill between 10-1,000 tonnes or below 7,000 barrels;

tier 3 spill” means a spill over 1,000 tonnes or above 7,000 barrels;

“transporter” means an owner of oil being transported, not being the owner of the tank or tanktainer and includes transmission under the Petroleum (Refining, Conversion, Transmission and \midstream Storage) Act, 2013;

“used oil” means any used oil from an industrial or mechanical operation, which can be re-used in any other industrial or mechanical plant such as in furnaces or any other form.

“underground facility” means a facility having more than 10% of its structure beneath ground level;

“oil mixture” means oil and water mixture in any proportion;

“regulator of the oil industry” means the Petroleum Authority of Uganda and the Directorate of Petroleum, responsible for the regulation, contracting and supervision of economic activities of the oil industry;

“waste oil ” means any oil from an industrial or mechanical operation including a refinery for which there is no further primary economic demand or use and which shall be disposed of

“waste tank” means any tank designed specifically for temporary storage of liquid drainage and cleaning of tanks and other mixtures and residues;

“ waters under Ugandan jurisdiction” include-

- (a) lakes;



- (b) rivers and their estuaries;
- (c) ponds
- (d) canals

"removal costs" means, with respect to an actual or threatened discharge of oil, all costs incurred in an attempt to prevent, abate, contain, and remove pollution from the discharge, including costs of removing vessels or structures under these Regulations, and costs of any reasonable measures to prevent or limit damage to the public health, safety, or welfare, public or private property, or natural resources.

"tank vessel" means a vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue;

"terminal facility" means any waterfront or offshore pipeline, structure, equipment, or device used for the purposes of drilling for, pumping, storing, handling, or transferring oil and operating where a discharge from the facility could threaten waters of the state, including but not limited to any such facility owned or operated by a public utility or a governmental or quasi-governmental body;

"unauthorized discharge of oil" means any actual or threatened discharge of oil not authorized by a NEMA;

"vessel" includes every description of watercraft or other contrivance used or capable of being used as a means of transportation on water, whether self-propelled or otherwise, including barges;

"negotiated assessment" means a restoration plan agreed upon by the coordinator, in consultation and agreement with any other state trustees, and the responsible party.

"offshore installation" means any fixed or floating offshore installation or structure engaged in gas or oil exploration or production activities, or loading or unloading of oil and includes drilling rigs, offshore platforms, floating production storage and offloading vessels and floating storage units and any structure or other thing in or under Uganda territorial waters, or which is used for the purposes of, or in connection with, the exploration, development or production of petroleum;

"oil" means for the purposes of ensuring a robust response to potential oil pollution operators shall take account of oil which shall include substances included within the following-

- (a) petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products;
- (b) liquid hydrocarbon or substitute liquid hydrocarbon, including dissolved or dispersed hydrocarbons;  
or
- (c) substitute hydrocarbons that are not normally found in the liquid phase at standard temperature and pressure, whether obtained from plants or animals, or mineral deposits or by synthesis and hydrocarbon chemicals, and substitute hydrocarbon chemicals;

"oil handling facility" means a facility which presents a risk of an oil pollution incident and includes, inter alia, an oil terminal, pipeline and any other facility handling oil but does not include an offshore installation.

"oil pollution emergency plan" means an emergency plan (other than the National Contingency Plan) setting out arrangements for responding to incidents which cause or may cause pollution by oil, with a view to preventing such pollution or reducing or minimising its effect;

"oil pollution incident" an occurrence or series of occurrences having the same origin, which results or may result in a discharge of oil and which poses or may pose a threat to the environment or related interests of the Uganda and which requires emergency action or other immediate response;

“operator” in relation to an offshore installation means any person who operates the offshore installation and includes any person who owns it at the time any powers conferred by these Regulations are exercised in relation to the offshore installation;

“well work over and intervention operations” means operations involving entry to the well bore, with or without removal of the Xmas tree and including well work over and well servicing operations such as those involving wire-line and coiled tubing techniques;

“ecologically sensitive areas” means regions defined by NEMA, where prevention, oil spill control and the maintenance of ecological balance require special measures for the protection and preservation of the environment, with respect to oil spills;

“platforms” means installation or structure, fixed or mobile, located in Uganda for the activity directly or indirectly related to the petroleum activities;

“support facilities” means any facilities or equipment to support the implementation of the activities of the platforms or facilities handling bulk petroleum commodities and products including pipelines, refinery, storage tanks, transportation and transmission single point mooring buoys for mooring framework of ships and other;

## **PART II- PREVENTION OF OIL SPILL**

### **7. Oil Spill Prevention**

(1) A licensee under the Petroleum (Exploration, Development and Production) Act, 2013, the Petroleum (Refining, Gas Processing and Conversion, Transmission and Midstream Storage) Act, 2013 or the Petroleum Supply Act, 2003 or a person who stores, transports, distributes or uses oil or oil products shall put in place oil release detection equipment to determine whether a release of oil has occurred either underground or above ground from any facility and its secondary barrier or secondary containment around it.

(2) Where any spill is detected or occurs, the owner of the facility, transporter, distributor or user of oil shall ensure that further spillage is prevented.

(3) The duty to prevent oil spills shall include the duty to-

- (a) store or transport the oil in certified and approved facilities and containers;
- (b) dispose of used oil in an environmentally friendly manner;
- (c) identify and eliminate potential negative impacts of the oil products stored or transported;
- (d) restore the environment;
- (e) give immediate notice of the spillage, if it occurs, to the Executive Director of the Authority or any other lead agency responsible for petroleum commodities and products in Uganda;
- (f) immediately begin clean-up operations using the best available clean-up technology;
- (g) pay the cost of removal, clean-up which may be incurred by any government agency or organ in the restoration of the environment damaged or destroyed as a result of the oil spillage;
- (h) pay costs of the third parties in the form of reparation, restoration, restitution or compensation as may be determined by an approved valuer; and
- (i) comply with such direction as the Executive Director of the Authority may from time to time prescribe.

(2) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to a fine not exceeding.....currency points or imprisonment not exceeding ....years or both.

### **9. Transportation of oils**

(1) A person who transports or transmits oil or oil products shall transport in well designed, constructed and calibrated tanks or tanktainers certified and approved by the Uganda National Bureau of Standards or any other Certification Bureau approved by NEMA.

(2) Owners of new tank systems shall comply with the requirements of subregulation **(10) (a)**.

(3) Owners of existing tanks or tanktainers, which do not meet the required standards referred to in subregulation **10 (a)**, shall be required to decommission them as soon as the time of their decommissioning is due.

(4) Oil imported into or through Uganda shall only be transported through routes specified and approved by a competent Government authority.

(5) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to a fine not exceeding .....currency points or imprisonment not exceeding ....years or both.

### **10. Periodic gauging of plating thickness for oil carrying commercial vessels.**

Owners of oil carrying commercial vessels shall conduct periodic gauging of plating thickness for their tanks or tanktainers and also carry out regular and timely maintenance of such tanks or tanktainers.

### **11. Use of overfill and tank level or monitoring devices on oil carrying commercial vessels.**

(1) A person who owns an oil storage facility or a commercial oil carrying tank or tanktainer shall acquire and use an overfill and tank level monitoring device to regularly gauge or monitor the level of oil in the storage system or vessel.

(2) An Inspector appointed under the National Environment Act shall, at any reasonable time without notice, enter any premises or stop any commercial oil carrying tank or tanktainer for the purpose of ascertaining that the owner of the premises, facility or commercial oil carrying tanker or tanktainer complies with the requirements of these Regulations.

(3) Upon entry of such a facility or vehicle, the inspector shall have powers to examine, take samples or take any appropriate measures to ensure compliance with these Regulations.

(4) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to a fine not exceeding...currency points or imprisonment not exceeding...years or both.

### **12. Storage of oils**

(1) All oils or oil products shall be stored in containers, vessels or storage facilities approved and certified by the **Uganda National Bureau of Standards/NEMA/PEPD** and in such places approved and certified by the Authority.

(2) In order to keep abreast with technological development, a person who stores, transports or distributes oil shall keep a user update records, which shall be availed to an inspector on demand.

(3) When **NEMA/PEPD** is satisfied that the owner of an oil storage facility meets the set standards for operating a facility, he or she shall issue a licence to the owner of that facility on application.

(4) A licence issued under subregulation (3) shall be renewed every after twelve months.

(5) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding .....currency points or imprisonment not exceeding.....years or both.

### 13. Distribution of oils

(1) A person shall not distribute petroleum commodities or products without a licence issued by **NEMA/Minister of energy under the Petroleum Supply Act, 2013.**

(2) A person shall not be issued with an oil distribution licence unless he or she has complied with the requirements relating to siting, location or storage facility specifications or any standards set for oil distribution facilities or vehicles by the **Authority or the Uganda National Bureau of Standards or any certification bureau approved** by the government of Uganda.

(3) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding .....currency points or imprisonment not exceeding...years or both.

### 14. Packaging of oil

(1) The condition of the drums, or smaller containers and the bulk tankers into which the oil is filed shall have no detrimental effect on the quality of the oil during normal transportation or storage.

(2) Only containers of the same size filled with oil of the same batch identification shall be packed together in a carton.

(3) The following information shall appear in indelible and legible marking on each container and each carton (if used)-

- (a) the manufacturer's identification or distributor's name;
- (b) the **API** service classification;
- (c) the **SAE** viscosity grade;
- (d) the batch identification; and
- (e) the quantity.

(4) Where oil is packed in bulk tankers, the batch identification shall be marked on the consignment documents.

(5) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding .....currency points or imprisonment not exceeding.....years or both.

### 15. Labelling of petroleum commodities and products

(1) Each container or package of petroleum commodities and products shall have a label written in the English language affixed to it which shall at least contain the following-

- (a) identity of the petroleum commodity or product;
- (b) name and address of the producer of the petroleum commodity or product;
- (c) net contents;
- (d) normal storage stability and methods for safe storage;

- (e) name and percentage by weight of active ingredients and names and percentages by weight of other ingredients or half-life of radio-active material;
- (f) warning or caution statements which, may include all, some or either of the following as appropriate-
  - (i) the words “warning” or “caution”;
  - (ii) the words “danger! Keep away from unauthorized person”;
  - (iii) the word “poison” marked indelibly in red on contrasting background;
  - (iv) a pictogram of skull and crossbones; and
  - (v) expiry date, if applicable.
- (g) a statement of first aid measures including the antidote when inhaled or ingested and direction that a physician shall be contacted immediately; and
- (h) any other information that the lead agency or the Executive Director of the Authority may deem necessary.

(2) The label shall be written in characters easily legible.

(3) The label shall contain no warranties, guarantees or liability exclusion clauses inconsistent with the National Environment Act or these Regulations.

(4) Any warranties, guarantees, and liability exclusion clauses shall be void to the extent of their inconsistency with the National Environment Act or these Regulations

(7) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding ....currency points or imprisonment not exceeding....years or both.

#### **16. Duty to treat waste oils**

(1) Generators of waste oil shall ensure that their activities do not contravene the provisions of the **National Environment (Waste Management) Regulations** before such waste oil is disposed into the environment.

(2) A generator of waste oil who contravenes subregulation (1) commits an offence and is liable on conviction to a fine not exceeding.....currency points or imprisonment not exceeding....years or both.

#### **17. Application for a licence to operate an oil treatment plant or oil disposal site.**

(1) A person who wishes to own or operate an oil treatment plant or a used oil disposal site shall apply for a licence from the Executive Director of the Authority.

(2) The licence issued by the Executive Director of the Authority shall specify the environmental requirements to be complied with by the licensee.

#### **18. Compliance with other Environmental Laws.**

(1) An owner of an oil storage, transportation or distribution facility and a person disposing of waste shall be required to comply with the **National Environment (Waste Management) Regulations** to ensure good environmental management.

(2) A person who fails to comply with subregulation (1) commits an offence and is liable on conviction to a fine not exceeding....currency points or imprisonment not exceeding.....years or both.

### **19. Refundable performance bonds. (Section 94, National Environment Act)**

(1) The Executive Director may require an owner of an oil storage, transportation, distribution facility to execute a bond with Authority if he or she is satisfied that the activities of the owner of an oil storage, transportation, distribution facility are likely to cause serious harm to the environment if no adequate mitigation measures are put in place.

(2) The Executive Director of the Authority shall determine the amount of money deposited as a refundable bond after assessing the likely impact of oil spill emanating from the facility in respect of which the bond shall have been executed.

(3) The money deposited with the Authority in accordance with the provisions of sub-regulation (a) of this regulation shall be forfeited to the Government of Uganda if the activity for which it was so executed occurs.

(4) Where the Executive Director of the Authority is satisfied that the person who executed the bond has put in place adequate mitigation measures to contain the damage likely to be caused by the oil spill emanating from his or her activities, he or she may direct that the money so deposited be refunded to the person who executed the said bond.

(5) A person who fails to comply with subregulation (1) commits an offence and is liable on conviction to a fine not exceeding...currency points or imprisonment not exceeding...years or both.

### *Systems for Prevention, Control and Combat Oil Spill*

#### **20. Requirements for facilities**

(1) All facilities and platform and their supporting facilities shall have in place adequate facilities for the receipt and processing of various types of waste and to combat oil spill, in accordance with these Regulations and guidelines issued by the NEMA.

(2) The definition of the characteristics of the facilities and means for the receipt and treatment of waste and combating oil spill shall be made by a technical study, which shall as a minimum state-

(a) the dimensions of the installations;

(b) the appropriate location of the facilities;

(c) the capacity of the facilities for receiving and processing of various types of waste, quality standards and local discharge their effluents;

(d) the parameters and methodology of operational control;

(e) the amount and type of equipment, materials and vehicles designed to meet emergency situations of oil spill;

(f) the number and qualifications of the personnel to be employed;

(g) the implementation schedule and the start of operation of the facilities.

(3) The technical study referred to in subregulation (2) shall take into account the size, the type of cargo handled or busy and other characteristics of organized port, port facility or platform and its supporting facilities.

(4) Facilities or facilities for the receipt and treatment of waste and combating oil spill may be required port facilities specialized cargoes , other oil and hazardous and noxious substances, as well as shipyards, marinas, yacht clubs and similar the discretion of the competent environmental agency.

(5) The operators of organized facilities and the owners or operators of platforms shall develop internal procedures manual for managing the risk of oil spills and for the management of various waste generated or from the movement activities and storage of oil and hazardous and noxious substances, which shall be approved by NEMA.

(6) Facilities and platforms and their support facilities, shall have individual plans for combating oil spill and hazardous and noxious substances approved by NEMA.

(7) Where facilities or platforms, individual plans shall be consolidated in the form of a single emergency plan for the entire area subject to the risk of oil spill, which shall establish mechanisms joint action to be implemented, subject to the Act, these Regulations and other applicable laws and guidelines.

(8) Responsibility for the consolidation of individual plans into a single emergency plan for the area involved lies with the operating entities of the organized ports and port facilities, and the owners or operators of platforms, under the coordination of NEMA.

(9) The NEMA shall consolidate contingency plans in local and regional shape of the National Contingency Plan, in conjunction with the relevant lead agencies.

(10) The operators of facilities and the owners or operators of platforms and their support facilities shall conduct environmental audits biennial, independent, in order to assess management systems and environmental control in their units.

## **21. Transportation of oil and hazardous and noxious substances**

(1) Platforms and facilities with a gross tonnage exceeding fifty, carrying oil or use for their handling or operation, the board, shall carry with it an oil record book, approved by the NEMA or the Petroleum Authority of Uganda and in which notes shall be made concerning all movements of oil, ballast and oily mixtures, including deliveries made to the reception facilities and waste treatment.

(2) The record book shall contain information on-

- (a) loading;
- (b) unloading;
- (c) transfers of cargo residues or mixtures to slop tanks;
- (d) cleaning of oil tanks;
- (e) transfers from oil tanks;
- (f) ballasting of oil tanks;
- (g) transfers of dirty ballast water into the aquatic environment;
- (h) discharges into waters in general.

(2) The packaging of the oil and noxious substances shall contain their identification and warning about the risks, using the symbols provided by NEMA and national standards and international standards.

## **22. Discharge of oil, noxious or hazardous substances and waste**

(1) The water subsequently added to the wash tank in excess of five percent of its total volume can only be discharged if the following conditions are cumulatively met-

- (a) the situation in which the release occurs fits in the cases allowed by NEMA;
- (b) the vessel is not within the boundaries of ecologically sensitive area; and
- (c) the procedures for discharge are duly approved by NEMA.

(2) A person shall not discharge water subsequently added to the tank washed in quantity less than five percent of its total volume.

(3) Except as permitted by NEMA, discharge of waste, ballast water, tank washings and basements or other mixtures containing oil or noxious or dangerous in any category can be performed only in reception facilities and waste treatment , according to these Regulations and the National Environment (Waste Management) Regulations

(4) The discharge of oil, oily mixtures, noxious or dangerous in any category, and trash in the waters, may in exceptional circumstances be permitted in order to protect human lives, safety or research vessel, under these Regulation.

(5) For research purposes, the following minimum requirements shall be met-

- (a) the discharge is authorized by NEMA, after review and approval of the research program;
- (b) NEMA is present at the place and time of discharge, at least one representative from the environmental agency that any authorized; and
- (c) The person responsible for unloading makes available at the place and time at which it occurs, specialized personnel, equipment and materials proven in the containment and disposal of effects.

(6) The discharge of solid waste from drilling operations of oil wells shall be subject to specific regulations issued by NEMA under the upstream Act.

(7) Any incident in facilities, pipelines, vessels, platforms and their support facilities, which may cause oil spill of the waters in Uganda shall be immediately reported to NEMA/ competent authority in accordance with these Regulations, regardless of the measures taken to control it.

(8) The operator of organized a facility, the owner or operator platform or ship, and the dealer or company authorized to carry on petroleum activities, responsible for the discharge of polluting matter in waters under Ugandan jurisdiction shall reimburse the appropriate agencies for expenses made by them to the control or minimization of oil spill, regardless of prior authorization and payment of a fine.

(9) Where a vessel does not discharge holder of the certificate required by NEMA, the vessel shall be retained and shall only be released after the security deposit as security for payment of expenses from oil spill.

## **23. Prevention of Pollution from oil disposal sites and treatment plants**

(1) A person who owns an oil storage, transportation, and distribution or disposal treatment facility shall prevent pollution of the environment from oil spills.



(2) A person who owns an oil storage facility or depot shall make available at his or her outlets a used oil collection facility into which all used oil shall be collected.

(3) A person who generates waste oil shall regularly audit the subcontractors used in the waste oil transport and disposal chain even if the subcontractor is duly certified, in order to minimize risks and exposure to the environment except where the subcontractors shall provide regular audit reports of audits performed by certified outside auditors.

(4) A person who generates waste oil shall carry out periodic independent and positive management actions to avoid incidents, which shall reasonably be expected to cause harm to the environment and shall provide evidence to that effect.

(5) The dealer at a waste outlet plant shall regularly inform the depot owner to collect the used oil for appropriate disposal.

(6) Waste oil shall only be sent to licensed furnace owners for disposal.

(7) A person who fails to comply with the provisions of this regulation commits an offence and is liable on conviction to a fine not exceeding ...currency points or imprisonment not exceeding...years or both.

#### **24. Insuring against risk**

(1) An owner of upstream facility, midstream facility, oil storage facility, and transportation, distribution or disposal facility shall take up an insurance policy with a recognized insurance company in Uganda or any other country covering the risk involved in handling of the oil.

(2) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding...currency points or imprisonment not exceeding...years or both.

#### **25. Reporting procedures**

(1) A person licensed to store, transport or dispose of any petroleum commodities or products under these Regulations shall submit bi-annual reports on the conduct of the licensed activities to the Executive Director of the Authority.

(2) Subregulation (1) does not apply in circumstances where a holder of a licence under these Regulations is a subject of special reporting procedures under any law in force in Uganda.

(3) A person who contravenes this regulation commits an offence and is liable on conviction to a fine not exceeding...currency points or imprisonment not exceeding...years or both.

#### **26. Duty to Keep records**

Any person dealing in petroleum commodities or products shall keep records in relation to storage, maintenance, transportation and control of in-house documents relating to all aspects of oil management.

### **PART III- NEED TO AMEND THE ACT AND ESTABLISH A BODY WITHIN NEMA RESPONSIBLE FOR OIL SPILL, PREVENTION, DETECTION AND RESPONSE**

#### *Establishment of the National Oil Spill Prevention, Detection and Response Committee*

#### **27. Establishment of the National Oil Spill Detection and Response Committee**

(1) There is established a body to be known as the National Oil Spill Prevention, Detection and Response Committee responsible for preparedness, detection and response to oil spillages in Uganda.

(2) The Committee shall consist of-

- (a) one representative each of the following sectors-
  - (i) environment;
  - (ii) defence;
  - (iii) petroleum;
  - (iv) transport;
  - (v) aviation (Department of Meteorology);
  - (vi) communications;
  - (vii) NEMA
  - (viii) works, housing and urban development;
  - (xi) Police;
  - (xiv) water resources; and
  - (xv) wildlife.

## 28. Purpose of the Committee

The Committee shall co-ordinate and implement the National Oil Spill Contingency Plan of Uganda through-

- (a) safe, timely, effective and appropriate response to major or disastrous oil spills;
- (b) identification of high-risk areas as well as priority areas for protection and clean up;
- (c) establishment of the mechanism to monitor and assist or where expedient direct the response, including the capability to mobilise the necessary resources to save lives, protect threatened environment, and clean-up to the best practical extent of the impacted site;
- (d) maximising the effective use of the available facilities and resources of corporate bodies, their international connections and oil spill co-operatives, in implementing appropriate spill response;
- (e) ensuring funding and appropriate and sufficient pre-positioned pollution combating equipment and materials, as well as functional communication network system required for effective response to major oil spills;
- (f) providing a programme of activation, training and drill exercises to ensure readiness to oil spill preparedness and response and the management and operational personnel;
- (g) co-operating with and providing advisory services, technical support and equipment for purposes of responding to major oil pollution incident in the East African Region upon

request by any neighbouring country, particularly where a part of Uganda's territory may be threatened;

- (h) providing support for research and development in the local development of methods, materials and equipment for oil spill detection and response;
- (i) co-operating with other national, regional and international organisations in the promotion and exchange of results of research and development programme relating to the enhancement of the state of the art of the oil pollution preparedness and response, including technologies, techniques for surveillance, containment, recovery, disposal and clean-up to the best practical extent;
- (j) establishing agreements with neighbouring countries regarding the rapid movement of equipment, personnel and supplies into and out of the countries for emergency oil spill response activities;
- (k) determining and proposing vital combat equipment at most strategic areas for rapid response;
- (l) establishing procedures by which the Uganda Customs Service and the Uganda Immigration Services shall ensure rapid importation of extra support response equipment and personnel;
- (m) developing and implement an appropriate audit system for the entire plan; and
- (n) carrying out any other activities necessary or expedient for the full discharge of its functions and the execution of the Plan.

## **29. Functions of the Committee**

(1) The committee shall-

- (a) be responsible for surveillance and ensure compliance with all existing environmental legislation and the detection of oil spills in the petroleum sector;
- (b) receive reports of oil spillages and co-ordinate oil spill response activities throughout Uganda;
- (c) develop a nationwide oil spill prevention and response plan, taking into account any plans being developed by the local government;
- (a) provide a coordinated response effort from all appropriate state agencies in the event of an unauthorized or threatened discharge of oil affecting or potentially affecting the land, coastal waters, or any other waters of Uganda;
- (b) coordinate the operational implementation and maintenance of the oil spill prevention program as provided under these Regulations;
- (c) administer a fund to provide for funding its activities;**
- (d) co-ordinate the implementation of the Plan as may be formulated, from time to time, by the Government;
- (e) co-ordinate the implementation of the Plan for the removal of hazardous substances as may be issued by the Government;

- (f) undertake surveillance, reporting, alerting and other response activities as they relate to oil spillages;
- (g) encourage regional co-operation among member States of East African subregion or combating oil spillage and pollution in our contiguous waters;
- (h) strengthen the national capacity and regional action to prevent, control, combat and mitigate pollution;
- (i) promote technical co-operation between Uganda and member States of the East African sub-region;
- (j) facilitate-
  - (i) the arrival and utilisation in and departure from Uganda of ships, aircrafts and other modes of transport engaged in responding to oil pollution incidents or transporting personnel, cargo, materials and equipment required to deal with such an incident;
  - (ii) the expeditious movement into, through and out of Uganda of personnel, cargoes, materials and equipment; and
  - (iii) the National Control and Response Centre shall for the purposes of a Tier 3 oil spill response, undertake such functions as specified under these Regulations; and
- (k) perform such other functions as may be required to achieve the aims and objectives of the Committee under this Act or any plan as may be formulated by the Government.

### **30. Secretariat**

The National Oil Spill Response Committee shall have a Secretariat responsible for the day to day running of the Centre and guarantying the reproduction and distribution of all the documentation necessary to the good operation of the National Oil Spill Response Committee and keeps records of all the activities developed by the Committee and execute all the tasks attributed to it by the Committee.

### *National Oil Spill Control and Response Center*

### **31. Establishment of National Oil Spill Control and Response Centre**

- (1) There is established for purposes of these Regulations, a National Oil Spill Control and Response Centre which shall-
- (a) act as a report processing and response co-ordinating centre for all oil spillage incidents in Uganda;
  - (b) receive all reports of oil spillages from the zonal offices and control units of the Committee;
  - (c) serve as the command and control centre for compliance monitoring of all existing legislation on environmental control, surveillance for oil spill detection and monitoring and co-ordinating responses required in plan activations.

(2) The Centre shall be headed by an officer of the Oil Spill Detection and Response Committee as may be designated from time to time.

(3) The officer designated under subregulation (2) shall report to the Committee on all activities of the Centre.

### *The National Oil Spill Response Committee*

#### **32. Executive Technical Committee**

(1) There is established the National Oil Spill Response Committee which shall comprise of representatives of -

- (a) the Office of the Prime Minister;
- (b) the Ministry of Defence;
- (c) the Ministry of Internal Affairs;
- (d) the National Environment Management Authority;
- (e) the Ministry of Finance, Planning and Economic Development;
- (f) the Ministry of Energy and Mineral Development;
- (g) the Directorate of Fisheries Resources;
- (h) the Petroleum Authority of Uganda;
- (i) the Ministry of Water and Environment
- (j) the Uganda Wildlife Authority,
- (k) the Physical Planning Authority;
- (l) the Ministry of Works and Transport; and
- (m) the Ministry of Trade and Industry.

(2) The National Oil Spill Response Committee may-

- (a) co-opt other government agencies or individuals with expertise and competence relevant to the issue to the nature of oil spill being handled;
- (b) assume the organizational structure which suits best the good execution of the activities; and
- (c) propose the creation of ad-hoc groups or subcommittees as may be deemed necessary.

(4) The National Oil Spill Response Committee shall be coordinated by the Office of the **Prime Minister/NEMA.**

#### **33. Functions of the National Oil Spill Response Committee**

The National Committee for Oil Spill Response shall-

- (a) ensure the timeliness and operability of the National Contingency Plan against oil spills in Uganda;
- (b) propose to the government the respective budget and manage it after approval;
- (c) propose the creation of an oil spill Fund, operation mechanisms, access and management, contributions and minimum rates;

- (d) propose, program and carry out regular communication exercises, crisis management and deployment of equipment at on the water body, at all levels of response;
- (e) propose the realization of projects that aim at the upgrade of the plan and increase of prevention and response capacity of the Uganda;
- (f) elaborate, implement and keep updated the national policy on the use of chemical dispersants in Uganda;
- (g) elaborate continuous training plans of the staff involved, including the carrying out of high level seminars in national territory and participation in other seminars overseas;
- (h) propose procurement of crisis management instruments, spill response and communications equipment;
- (i) coordinate the elaboration and operability of the local and regional contingency plans;
- (j) propose reviews and updates to the National Oil Spill Contingency Plan;
- (k) propose access of the government of Uganda to relevant international agreements and conventions, as well as coordinate the respective implementation of the international conventions and agreements;
- (l) promote interaction and cooperation with similar organs, non-governmental organizations and communities;
- (m) propose to the government of Uganda, the regional and international corporations with other governments and organizations;
- (n) represent the Government of Uganda in relevant events of international organizations;
- (o) serve as contact for the agreements, conventions and international organizations which Uganda ratified or is integrant part of.
- (p) during emergency situations, the National Oil Spill Response Committee shall-
  - (i) requisition, under proposal of the **National Committee of Disaster Preparedness**, the necessary national resources either of public or of private organizations;
  - (ii) act on behalf of the Government of Uganda to requisition or provide international support, establishing adequate procedures for that purpose;
  - (iii) coordinate access to national finances to face the initial expenses with the oil spill response operations;
  - (iv) coordinate the Access to compensation for costs of cleaning operations of spills and losses caused to national assets; and
  - (v) work together with the representatives of the organizations responsible for that compensation including facility owners, oil industry operators, International Oil Pollution Compensation– IOPC Funds, among others.

### **34. National Incident Command**

- (1) The National Incident Command shall coordinate the operations and execution during the crisis, respecting the previously defined national policies and priorities.
- (2) The National Incident Command shall have a modular structure, where each team performs the functions necessary to activate the response at the level of the incident.
- (3) The level of involvement of the members of the team and the number of people mobilized for the National Incident Command may vary, according to the various situations which may rise as a result of an oil spill.
- (4) The effectiveness of management of the oil spill response operation shall depend on a well- coordinated and competent team of the National Incident Command and the individuals and the organizations involved in the management of spill response operations shall be identified and trained for the functions they shall perform.
- (5) The National Incident Command shall-
  - (a) mobilize in due course all the human resources necessary to successfully face the crisis situation;
  - (b) assess the need for international support in case of severe spills;
  - (c) assess the possible legal aspects associated with the oil spill incidents;
  - (d) ensure that claims related with activities of the governmental bodies are prepared and duly documented;
  - (e) keep the press informed of the emergency situation and its progress;
  - (f) ensure that the mobilized resources of the Government receive timely attention, including logistics associated with its effective implementation of the National Oil Spill Contingency Plan; and
  - (g) ensure that all the government bodies involved in the spill response operations keep records of all the expenses and that the expenditure procedures are adequately applied.

### **35. Structure of the National Incident Command**

- (1) The National Incident Command shall consist of the ministry responsible for petroleum (coordinator), the ministry responsible for defence (assistant Coordinator), the presidential press secretary and NEMA.
- (2) The National Incident Commander shall be appointed by the Ministry responsible for petroleum/Office of the President/NEMA in consultation with the Ministry responsible for defence.
- (3) The persons responsible for the planning, operations, logistics, communications and finances teams shall be directly accountable to the National Incident Commander.
- (4) The Commander may activate only the necessary teams and deactivate them when they are no longer serviceable and this principle shall also apply to the number of people involved.
- (5) The number of people referred to under subregulation (4) shall be calculated based on the principle of manageable control amplitude according to which the number of responsibilities assumed by an individual and the number of resources reported to him or her shall not outbalance the value seven nor be lesser than three.

(6) The ideal number of people is five but, depending on the dimensions of the crisis and on the individual's experience it may reach ten.

(7) When the incident has a dimension inferior to the national one, the response general command shall fall under the jurisdiction of the regional or local government structure, and the regional or local command shall keep the National Command informed of all the adopted procedures.

(8) The National Oil Spill Response Committee may, whenever the situation so requires, transfer the command of the operations to the National Incident Commander.

### **36. National Incident Commander**

(1) The National Incident Commander shall be in-charge of the National Incident Command and is in addition responsible for-

- (a) identification of the incident severity in terms of potential impact on the environment and the socio-economic activities;
- (b) assess the need to mobilize external resources and equipment or technical know-how;
- (c) keep the government informed of the progress of the situation, through the National Incident Command;
- (d) appoint the commanders on the scene responsible for the coordination of the oil spill response operations at the site, when deemed necessary;
- (e) mobilize, near the public or private organizations, the necessary national resources;

(2) The National Incident Commander may assume the functions of the Commander on the scene, in case the progress of the situation so justifies.

### **37. Responsibility of the initial response**

(1) In order to limit the potential impacts of a spill, the initial response action shall be taken without delay especially where there are risks associated with the spill.

(2) The responsibility of the initial response is on the in-situ organization of the response, that is the operator of the facility or installation that caused the oil spill, in case of a spill originated in oil handling facilities, storage or oil exploration and production facilities.

(4) In case of incident of unknown origin, the National Coordinator shall appoint the organization responsible for the initial response actions.

(5) The organisation appointed under subregulation (4) shall be the closest facility with makeup capacity against spills and may be a regional or local spill response centre, an operator of the oil industry or a government agency.

### **38. Spills in petroleum exploration and production offshore installations**

(1) The responsibility for the general command of the spill response operations in petroleum offshore installations is on the respective operator, in which case the National Incident Commander shall restrict himself or herself to a monitoring position.

(2) The National Incident Commander may also activate the module of the National Incident Command necessary to act as support to the operation or provide assistance in the customs and migration clearance for resources mobilized outside Uganda.



(3) Notwithstanding any additional requirements of internal notification or any other applicable law in force, the operator shall notify the National Coordinator, informing him or her of the incident circumstances and the actions taken to mitigate the effects of the oil spill, as established in the Communications Plan.

(4) In exceptional circumstances and when the national interest so requires, the National Coordinator may assume the general command of the response action in an offshore installation.

(5) The response measures to be taken at the beginning of a spill incident shall be, as possible, defined beforehand in the context of the oil spill contingency plan of the installation or facility.

***Other Officers of the National Oil Spill Response Committee***

**39. Spill response structure members**

(1) The spill response structure members shall-

- (a) be in- charge of the oil spill response operation;
- (b) coordinate of all the logistics and resources to support the Commander on the scene;
- (c) confirm the initial assessment of the incident; and
- (d) decide on the initial response strategy in consultation with the Commander on the scene.

(2) The spill response structure shall carryout the following initial actions-

- (a) activate the Incident Command Centre;
- (b) instruct the Incident Command Team (ICT); and
- (c) decide who shall be present in permanence at Incident Command Center.

(3) The other actions to be undertaken by the spill response structure are to -

- (a) approve the response strategy;
- (b) approve the cleaning operations plans of the offshore and onshore and the disposition of the oil waste;
- (c) get an agreement on the cleaning and disposition plans;
- (d) ensure mobilization of resources, experts and labour adequate to the response;
- (e) approve expenses with resources, labour and services;
- (f) establish regular planning meetings with the ECI and the Commander on the Scene;
- (g) regularly submit progress reports to the authorities referred to under paragraph (f);
- (h) collaborate with the Public Relations agent of the operators in the approval of communications to the press;
- (i) speak at press conferences;
- (j) receive the press representatives upon request of the Press Officer;

- (k) collaborate with ECI to choose the sites of the operations base;
  - (l) appoint managers of the operations base;
  - (m) keep regular contact with the local and regional authorities and inform them of the situation and proposed actions;
  - (n) ensure the customs and migration clearance, and the control of restricted areas;
  - (o) study the potential risks for the populations, activities and sensitive areas of the site; and
  - (p) continue to assess and, if necessary, adjust the spill response strategies;
- (4) The final action of the spill response structure shall be to call a meeting after the incident not later than 4 weeks after completion of cleaning operations.
- (5) In carrying out its functions under this regulation, the spill response structure shall-
- (a) plan for the worst case scenario and where a major spill occurs, assume that the coast is affected;
  - (b) anticipate the usage of dispersants as soon as possible;
  - (c) make frequent declarations to the press and public meetings may increase the public's trust and reduce negative reactions;
  - (d) not give contradictory information to the press as this may lead to negative publicity and in case of a major incident, keep communication with the press officer of the responsible party/operator;
  - (e) assess the efficacy of the response operation;
  - (f) verify that correct dispersant application techniques are being employed;
  - (g) whenever it is possible, carry out site inspections;
  - (h) attend Press conferences when requested by the Incident Commander; and
  - (i) Obtain/contract opinion of experts for assessment of potential and immediate risks to the environment sensitive areas and contaminated wildlife, to be communicated to the public.
- (6) The final actions shall be to-
- (a) determine completion of operations;
  - (b) assist the Incident Commander in the demonstration to the local authorities that the cleaning norms have been accomplished; and
  - (c) ensure that oil damaged containment barriers and other equipment destroyed or disposed of in accordance with the law.

#### **40. Logistics Officer**

- (1) The Logistics Officer shall-

- (a) localize, acquire and organize the transportation of all the equipment, materials and services necessary to the cleaning operations;
- (b) contract temporary workers to help in the cleaning operation;
- (c) arrange airplanes for air surveillance and transport of personnel;
- (d) organize trucks and other vehicles for transportation of the recovered oil;
- (e) organize local transportation for workers and land transport for the CCI personnel; and
- (f) organize food and accommodation for all the personnel and visitors including representatives of the Government of the Republic of Uganda.

(2) The initial actions of the Logistics Officer in collaboration with the representative of the **Ministry of Finance/Finance Officer of the National Oil Spill Response Committee/Operator** shall-

- (a) authorize and justify the expenses;
- (b) acquire materials, equipment and local services;
- (c) contract with local companies the supply of labour, non-specialized equipment and vehicles;
- (d) contact contractors and foreign consultants in order to prepare all the documentation necessary for the customs and migration clearances;
- (e) establish in-situ hiring office and comply with the labour laws in Uganda;
- (f) plan training for company personnel and contractors;
- (g) keep stock of pre prepared order forms, open order files and stock cards in support to the control point of the field services;
- (h) keep resupplying, maintenance and garage facilities;
- (i) process approved orders of materials, services and labour; and
- (j) receive and verify invoices.

#### **41. Planning Officer**

(1) The functions of the Planning Officer shall-

- (a) assess the incident and identification of the emergency level (Level 1, 2 or 3);
- (b) assess the possible trajectory of the oil slicks;
- (c) assess of the behaviour of the spilled oil;
- (d) provide advice on the form of minimizing the impact of the spill, considering the existence of sensitive areas;
- (e) define the best response technique(s); and

(f) prepare cleaning operation offshore and onshore and destination to give to the oil waste

(2) The initial actions of the Planning Officer shall be to-

- (a) attend planning meetings and provide updated information;
- (b) assess the flow path of oil slicks;
- (c) ensure regular air surveillance;
- (d) carryout continuously follow up the flow path of the slicks on a map;
- (e) follow up the model of the slicks in a computer with the assistance of specialized organizations;
- (f) prepare air surveillance reports;
- (g) analysis of samples, if necessary;
- (h) establish the spill response strategy;
- (i) identify areas where dispersants may be applied;
- (j) estimate the necessary quantity of dispersants; and
- (k) notify the Commander on the Scene about the chemical products and recommendable procedures and the approval of the Government.

(3) In addition to the functions listed under subregulation (2), the Planning Officer shall-

- (a) watch the application and efficacy of the dispersant;
- (b) assess the probability of success of the retention and recovery operations;
- (c) define priorities of protection and cleaning of sensitive areas;
- (d) prepare plans for-
  - (i) cleaning operations to justify environmentally and economically the proposed techniques;
  - (ii) land cleaning to justify the selection of the areas to be cleaned and the proposed level of cleanliness;
  - (iii) destination to give to the oily waste and provide inventory of appropriate and economic methods upon consultation with the authorities about the transportation requirements, storage and destination to be given;
- (e) meet regularly with the Operations Officer to-
  - (i) determine the requirements of equipment, labour and services;
  - (ii) estimate the necessary storage capacity for the recovered oil and oily debris;
  - (iii) assess the efficacy of the response operation;

- (iv) verify that correct dispersant application techniques are being employed;
  - (v) whenever it is possible, carry out site inspections;
  - (vi) attend press conferences when requested by the Incident Commander;
  - (vii) obtain/contract opinions of experts for assessment of potential and immediate risks to the environment sensitive areas; and
- (f) call a meeting after the incident not later than 4 weeks after completion of cleaning operations.

#### **42. Operations Officer**

(1) The functions of the Operations Officer are to-

- (a) provide expert know-how of spill cleaning operations;
- (b) provide advice to the Planning officer on cleaning procedures;
- (c) cooperate with the Planning Officer in the surveillance operations and propose adjustments to the response strategy; and
- (d) identify additional resources of support to the efforts in-situ.

(2) The initial actions to be undertaken by the Operations Officer shall be to-

- (a) assist the Incident Commander and the Planning Officer in the definition of the response strategy and in the identification of necessary resources of labour and equipment;
- (b) define, organize and manage the response teams;
- (c) cooperate with the Logistics Officer in the procurement of equipment and materials;
- (d) submit a daily report on the successes, shortages and adjustment need of the spill response operations including a progress report;
- (e) cooperate with the spill cleaning coordinators in safety matters;
- (f) inform on the implementation of the agreed plan;
- (g) assist the Planning Officer to obtain approval of local authorities for the cleaning plans and destination to give to the waste; and
- (h) watch the spill response efficacy and provide advice on necessary adjustments.

#### **43. Communications Officer**

(1) The communications Officer shall-

- (a) establish, operate and maintain an effective communication network which supports the oil spill response operation;
- (b) establish a powerful and effective communication system;
- (c) attribute radio frequencies and call signals to the members of the Command Centre on the Scene;

- (d) provide communication equipment to the response team member;
- (e) provide training for the usage of the communication equipment;
- (f) keep accounts of all the communication expenses;
- (g) keep good relations with the Press;
- (h) inform the public in general that all the information requests shall be directed to the Press Officer or to the Incident Commander;
- (i) prepare Press releases with the Press Advisor of the national Coordinator; and
- (j) issue Press releases upon approval by the Incident Commander and in accordance with the General Manager
- (k) ensure continuous registration of all the communications; and
- (l) where necessary, obtain the respective release from the governmental body with jurisdiction over radio and telephone communications.

(2) The Communications Officer shall also make proper arrangements for the maintenance of the communication equipment and contract when necessary, energy source for the system, tape recorders for the meetings and conferences, battery chargers, fax machines among others.

#### **44. Finance Officer**

(1) The Functions of the Finance Officer are to-

- (a) establish proper procedures for control of expenses;
- (b) keep records of all the payments, receipts, contracts; and
- (c) determine the costs of the cleaning operations.

(2) The Finance Officer shall in addition-

- (a) provide to the Incident Commander support in obtaining the necessary authorizations for the expenses;
- (b) open record of accounts in cash;
- (c) provide a book for orders and purchase orders for immediate usage;
- (d) create a daily inventory system for control of personnel, equipment and consumables;
- (e) provide to the General Manager; daily if possible, data of the expenses made;
- (f) provide to CCI and ensure adequate supply of pre prepared forms to claim expenses and money advances;
- (g) prepare a bookkeeping or control of expenses book;
- (h) make banking arrangements by cash or cheque;

- (i) establish quantity accounting arrangements;
- (j) create a registration system for contractors, work orders, orders, invoices and correspondence;
- (k) cooperate with a **Superintendent of Field Activities and Support Foreman** to ensure that the contractors are aware of the invoicing and auditing requirements;
- (l) make payments to contractors;
- (m) together with the Support Officer, approve warehouse inventories and stock control procedures;
- (n) provide money advances to the cleaning superintendents, as requested;
- (o) prepare and update the informational report "Summary of Costs to date";
- (p) obtain necessary cash for each day;
- (q) process invoices and make payments;
- (r) carry out inspections in loco to ensure that the material charged is used, that the contracted personnel is working on the project and that the equipment is well utilized;
- (s) keep a record; and
- (t) assist in the preparation of contracts and orders and speed up the delivery process including, if necessary, the customs clearance.

(3) The Finance Officer shall in addition-

- (a) provide to the administrative/documentation coordinator a copy of any notes or observations made during the operation, to be used in the post incident meeting; and
- (b) work with the Risk Control Coordinator in the preparation of a cost summary.

**45. Legal Manager**

The Legal Manager shall-

- (a) anticipate any legal action which may result from the oil spill or from the cleaning operation and provide appropriate recommendations and legal;
- (b) inform the Incident Commander about the contacts with local and provincial organisms and ensure compliance with the respective applicable law;
- (c) ensure that all the relevant regulatory organisms have been informed of the oil spill incident;
- (d) assist the National Coordinator and the Incident Commander and his or her team, assessing the legal implications of the proposed response actions;
- (e) make recommendations about any legal action;
- (f) keep informed about all the decision made or planned;
- (g) cooperate with the Press Advisor in all the communications to be made;

- (h) certify that all the documents issued are aligned with the legal requirements;
- (i) collaborate in the selection of legal representatives and coordinate their actions;
- (j) study the complaints made against the company and determine their authenticity;
- (k) study the contracts; and
- (l) make recommendations about contractual arrangements for the supply of equipment and personnel.

#### **46. Security Advisor**

The security advisor shall-

- (a) monitor and ensure maintenance of the awareness level related to the entire active and to be developed situation, assess dangerous and unsafe situations and develop measures which guarantee national and personnel safety;
- (b) activate trained and experienced security personnel to manage and supervise the response actions;
- (c) support the local workforce in conducting cleaning activities as long as they have or receive the necessary competency;
- (d) assess the site to identify and document hazards;
- (e) identify personal protective equipment and the exclusion zones; and
- (f) identify the decontamination areas;
- (g) develop and implement a Health and Safety Plan specific to the site;
- (h) take part in safety meetings to identify problems inherent to the daily work plan;
- (i) implement corrective measures, preferably through the implanted command system;
- (j) investigate accidents or promote investigation; and
- (k) establish First Aid facilities and medical assistance in accordance with the Health and Safety Plan developed.

#### **47. On-Scene Commander**

The On-Scene Commander is responsible for-

- (a) the on-scene command of response operations;
- (b) the distribution of responsibilities to the personnel involved in the Command Centre on the Scene;
- (c) the implementation, efficacy and cost of the cleaning operation;
- (d) the ensuring safety of facilities and personnel;
- (e) the evacuation of injured personnel; and



(f) the notification of the Incident Commander as soon as possible after the occurrence of the oil spill incidence.

(2) The On-Scene Commander shall in addition-

- (a) activate the CCEC;
- (b) give instructions to the On-Scene Response Team members;
- (c) keep contact with the Incident Commander to coordinate the response;
- (d) decide on the initial response strategy and start the actions;
- (e) request the Incident Commander for support or extra mobilization of equipment, labour and services;
- (f) regularly submit to the CCI progress reports which shall include information on the quantities of oil still in water, recovered and dissipated, affected coastal areas, cleaned extensions of the coast and quantity of oily waste to be destroyed;
- (g) meet regularly with EREC; and
- (h) inspect the incident site in order to verify if the objectives are accomplished

***Government Intervention in Case of an Oil Spill Incident.***

**48. Government intervention.**

(1) The National Oil Spill Response Committee shall-

- (a) in the event of a major or disastrous oil spill, in collaboration with other government agencies co-opt, undertake and supervise the management of oil spill incidents in Uganda;
- (b) assess the extent of damage to the ecology by matching conditions following the spill against what existed before the oil spill;
- (c) undertake a post-spill impact assessment to determine the extent and intensity of damage and long-term effects;
- (d) advise the Government on possible effects on the health of the people and ensure that appropriate remedial action is taken for the restoration and compensation of the environment;
- (e) assist in mediating between affected communities and the oil spiller;
- (f) monitor the response effort during an emergency, with a view to ensuring full compliance with existing legislation on such matters;
- (g) assess any damage caused by an oil spillage;
- (h) expeditiously process and grant approval for any request made to it by an oil spiller for the use of approved dispersant or the application of any other technology considered vital in ameliorating the effect of an oil spill;

- (i) advise and guide the response efforts as to ensure the protection of highly sensitive areas, habitats and the salvation of endangered or threatened wild life; and
- (j) monitor the clean-up operations to ensure full rehabilitation of the affected areas.

(2) The Committee shall act as the Lead Agency for all matters relating to oil spills response management and liaise with the other government agencies for the implementation of the National Oil Spill Contingency Plan.

(3) The Committee shall-

- (a) co-operate with an oil spiller in the determination of appropriate measures to prevent excessive damage to the environment and the communities;
- (b) expeditiously consider any proposal made for response effort by the oil spiller;
- (c) mobilise internal resources and also assist to obtain any outside human and financial resources that may be required to combat any oil spill; and
- (d) assist in the assessment of damage caused by an oil spillage.

#### **49. Directives by the Minister**

The Minister may give to the National Oil Spill Response Committee such directives of a general nature or relating generally to matters of policy with regard to the exercise of its functions as the Minister may consider necessary and it shall be the duty of the Committee to comply with the directives or cause them to be complied with.

#### **50. Responsibility of other Government Agencies**

(1) The Committee shall in the event of a major Tier 2 or Tier 3 oil spill incident co-opt and collaborate with the various ministries, departments and agencies in respect of their various functions as provided for under these Regulations.

(2) Directorate of Water Resources shall-

- (a) monitor the extent of impact in the water body and water environment;
- (b) monitor the effectiveness of clean-up exercises and advise on least-damaging techniques for quick recovery of impacted areas;
- (c) monitor the recovery rates of impacted areas and document for future use the most acceptable methods for clean-up in each ecotype;
- (d) recommend rehabilitation and restoration methods for the recovery of impacted areas; and
- (e) provide technical and scientific support services for the Committee.

(3) The Ministry of Works and transport shall-

- (a) mobilise human and equipment resources to evacuate affected human communities to safer grounds;

- (b) construct temporary or semi-permanent structures and shelters for the resettlement of victims;
- (c) provide access roads to the scene of an oil spill;
- (d) mobilise the fire service to combat fires that may result after an oil spill and for general rescue operations;
- (e) mobilise all nearby port facilities to assist in any response effort;
- (f) provide barges and storage for recovered oil; and
- (g) facilitate berthing for vessels involved in an oil spill combat.

(4)The Ministry responsible for health shall-

- (a) set up medical outposts around the scene of an oil spillage to provide medical treatment to affected communities;
- (b) mobilise medical personnel, drugs and other relief materials to check epidemic;
- (c) monitor the effect of an oil spill on the general health of a community;
- (d) observe for possible outbreak of new health conditions that might be attributable to the incidence of an oil spill especially health impacts on potable water supplies; and
- (e) mobilise requirements in hospitals to respond to the emergency.

(5)The Ministry responsible for information and communications shall-

- (a) provide up-to-date information in consultation with the Communications Officer about an oil spill and give an unbiased view of the response effort to avail the affected communities and the general public with a clear and true picture of Government's efforts; and
- (b) monitor the response activities work in co-operation with outside media organisations to provide accurate reporting of any oil spillage.

(6) The Ministry of Communications shall-

- (a) assist in the setting up of communications centres around the scene of any oil spillage;
- (b) assist with international contacts of foreign based resource centres for assistance; and
- (c) allocate special frequencies for use by the National Oil Spill Response Committee and the Command Centre.

(7) The Ministry responsible for Water and environment shall-

- (a) provide safe water supply to the oil spill incident center;

- (b) monitor the impact of the oil spillage on the environment; and
- (c) participate in the cleaning operations to ensure that the environment is restored to as near as possible to its original state before the incident.

(8) The Ministry responsible for agriculture and fisheries shall-

- (a) provide food and relief materials;
- (b) provide agricultural implements and other inputs to resettle fishermen who may have been put out of business by the pollution of fishing areas by oil; and
- (c) monitor the impact of the oil spill on crops.

(9) The national disaster preparedness committee shall-

- (a) in the event of a major Tier 2 or Tier 3 oil spill, perform its obligatory function of supply of relief materials to needy persons and liaise with relevant government agencies to evacuate and re-settle persons shall the need arise;
- (b) work alongside the Committee in co-ordinating oil spill emergencies;
- (c) designate assign an office or Committee to represent the local government on the Regional response team;
- (d) co-operate fully in all the activities during a response exercise;
- (e) assist in raising and training an ad hoc intervention team from within its area jurisdiction;
- (f) include contingency planning for responses, consistent with its plan and regional plans, in all related emergency and disaster plan;
- (h) initiate public safety and community relations actions necessary to protect public health and welfare during an emergency; and
- (i) assist in directing evacuation in accordance with existing Local Government Contingency Procedures.

(10) The Uganda Chamber of Commerce shall-

- (a) provide the operational and ESI maps of the area or areas affected or likely to be affected by an oil spill;
- (b) provide all necessary logistic support services including equipment and specialist personnel for response efforts; and
- (c) assist in securing the services of international organisations in response efforts.

(11) In conjunction with the Committee, non-governmental organisations, industrial groups, academic organisations and others may offer services in-

- (a) assisting in their respective ways to ensure effective response actions;

- (b) conducting scientific researches alongside Government to evolve and devise sustainable clean-up strategies and rehabilitation techniques; and
- (c) organising, co-ordinating and ensuring safe use of volunteers in a response action and actually identifying where these can best render service effectively.

(12) The Institute of Science and Technology shall-

- (a) initiate and sustain research and development, into the development of local methods, materials and equipment for oil spill detection and response;
- (b) disseminate the results of such R&D for adoption at the levels of the oil communities, companies and relevant government agencies; and
- (c) enter into collaborative R&D with international organisations that are involved in oil spill detection and response.

(13) The Ministry of Defence shall assist-

- (a) to evacuate victims of the spill to designated areas for settlement;
- (b) to provide additional security back-up;
- (c) to patrol the affected area;
- (d) in providing vessels for oil recovery;
- (e) to render assistance to vessels in distress;
- (f) with communication support, in the recovery operation in the environment;
- (g) to make surveillance flights over the scene of the spill;
- (h) to monitor oil slick movement; and
- (i) to provide transportation to and from the scene.

(14) The Ugandan Police Force shall assist on full alert-

- (a) to keep law and order in the vicinity of the incident;
- (b) to protect property and equipment at the scene;
- (c) to protect workers from angry mobs; and
- (d) to assist with communication support.

## PART IV- NATIONAL OIL SPILL CONTINGENCY PLAN

**51. National Oil Spill Contingency Plan**

(1) The **Minister responsible for NEMA/Ministry of Energy/National Oil Spill Response Committee** shall develop and distribute to the public a National Oil Spill Contingency Plan for the planning, management and response for actual or threatened oil spill and clean-up of pollution from the oil spill.

(2) The National Environment Management Authority and the Ministry responsible for petroleum, in cooperation with the coordinator, shall recommend provisions of the National Oil Spill Contingency Plan.

(3) The Department of Wildlife and Fisheries, in cooperation with the coordinator, shall recommend provisions of the plan providing for protection, rescue, and rehabilitation of aquatic life and wildlife and appropriate habitats on which they depend under its jurisdiction.

(4) The Department of occupational health and safety, in cooperation with the coordinator, shall recommend provisions of the plan providing for emergency response coordination to protect life and property, excluding prevention, abatement, containment, and removal of pollution from an unauthorized discharge.

(5) In promulgating the plan, the coordinator shall provide for clear designation of responsibilities and jurisdiction and avoid unnecessary duplication and expense and for participation by local leaders.

(6) The plan shall be fully operational and implemented not later than one year after the date of publication.

**52. Scope of the National Contingency Plan**

(1) The National Environment Management Authority shall cause to be prepared a National Contingency Plan for the prevention and management of oil spills in Uganda

(2) The National Oil Spill Contingency Plan shall cover the whole petroleum value chain and the whole of Uganda.

(3) The National Contingency Plan does not replace other plans, establishing the guidelines for the reconciliation and mutual integration among others, so these can be supplementary.

(4) The dispositions of the National Plan shall ensure the compatibility among the mentioned Plans and the agreement with the National Policy defined in the Plan.

**53. Contents of the National Oil Spill Contingency Plan**

The plan shall include-

- (a) detailed emergency operating procedures for initiating actions in response to unauthorized discharges;
- (b) a response command structure and state response team;
- (c) an inventory of public and private equipment and its location and a list of available sources of supplies necessary for response;
- (d) a table of organizations with the names, addresses, and telephone numbers of all persons and agencies responsible for implementing each phase of the plan and provisions for notification to such persons and agencies in the event of an unauthorized discharge;
- (e) plans for practice drills for the response command structure and the state response team;

- (f) establishment of a single state hotline for reporting incidents that shall satisfy all state notification requirements under this Part;
- (g) provisions for notifying the National Environment Management Authority and other lead agencies in case of a spill;
- (h) plans for volunteer coordination and training;
- (i) use of both proven and innovative prevention and response methods and technologies;
- (j) the circumstances under which an unauthorized discharge may be declared to be a state of emergency under applicable law;
- (k) the circumstances under which the unauthorized discharge may be declared to be abated and pollution may be declared to be satisfactorily removed;
- (l) designation of environmental and other priority zones to determine the sequence and methods of response and clean-up;
- (m) procedures for disposal of removed oil or hazardous substances;
- (n) procedures established in cooperation with the NEMA, UWA and Department of Fisheries, National Forest Authority in managing resources damages and plans for mitigation of damage to and restoration, protection, rehabilitation, or replacement of damaged natural resources;
- (o) any plan developed by the coordinator pursuant to this Part shall include appropriate local governmental authorities and shall provide for the participation and involvement of the appropriate local governmental authorities that may be affected by or involved in the prevention, response, and removal of an oil spill; and
- (p) any other matter necessary or appropriate to carry out response activities, including but not limited to preapproval of the use of dispersants.

#### **54. Consultation with stakeholders**

(1) The National Environment Management Authority shall consult lead agencies and relevant stakeholders of the National Oil Spill Contingency Plan.

(2) Where the stakeholders consulted are oil spill response organisations matters for discussion may include-

- (a) preparedness requirements for the provision of response capability including the competencies of personnel in certain roles ;
- (b) notification, mobilisation procedures and arrangements;
- (c) communication types, channels and times;
- (d) interface or integration with plans and procedures of the response organisations;
- (e) responsibilities of the supporting organisation including key deliverables;
- (f) viability of response strategies to meet the defined objectives of the submission;
- (g) availability of resources and response times, including shared resource implications;

- (h) arrangements for exercises, audits and maintenance of physical resources and documentation;
- (i) commitment from oil spill response organisations to act in compliance with the accepted EP; and
- (j) liability and cost recovery arrangements for resources deployed during an incident.

### **55. Approach to the oil spill contingency planning process**

(1) The oil spill contingency planning shall include accuracy in the assessment, analysis and management of risks is the foundation of robust oil spill arrangements.

(2) In the planning process, considerations that may be relevant to development of preparedness and response capability, and an appropriate OSCP include.....

(3) The Regulations do not prescribe a particular approach to contingency planning and but only demonstrates one possible approach based on observations of best practice within industry.

### **56. The contingency plan by operators**

(1) Operators shall consider how the arrangements described in the OSCP shall contribute to the operator's evidence to demonstrate and NEMA's grounds for believing, that the submission meets the acceptability criteria of these Regulations.

(2) The oil spill contingency plan-

- (a) shall form a key component of the operator's strategy to protect the environment and reduce impacts of a spill to the environment, human health and the economic activities;
- (b) can be considered the output of the contingency planning process ;
- (c) shall address the range of credible spill scenarios and clearly outline the operational and emergency requirements of adequately preparing for and responding to such occurrences in a timely, efficient and effective manner ; and
- (d) shall support implementation of response strategies and achieve the response objectives.

### **57. Spill contingency plan**

(1) A person shall not store oil spill in a facility where the storage capacity of the facility equals or exceeds the storage capacity shown **in Schedule A** unless a spill contingency plan has been prepared and filed in accordance with these Regulations.

(2) Where the storage capacity of a facility is less than the storage capacity shown in Schedule A and where, in the opinion of the NEMA a spill contingency plan is necessary for the protection of the environment, NEMA may require the owner or person in charge, management or control of a facility to prepare a spill contingency plan.

(3) Where NEMA is satisfied, on reasonable grounds, that a person is using a means of storing oil and a method of dealing with the spill of oil spill, that provide a level of environmental protection at least equivalent to that which would be provided by compliance with these Regulations, NEMA may, in writing, subject to such conditions as it considers necessary-

- (a) exempt a person from the requirement to file a spill contingency plan under subregulation (1); or
- (b) exempt a person from the requirement to include in a spill contingency plan information required in one or more of paragraphs 4(2) (a) to (j).



**58. Contents of individual emergency plan**

(1) The owner or person in charge, management or control of a facility shall ensure that a spill contingency plan is prepared.

(2) The plan referred to under subregulation (1) shall contain-

- (a) the name, address and job title of the owner or person in charge, management or control;
- (b) the name, job title and 24-hour telephone number for the persons responsible for activating the spill contingency plan;
- (c) facility information including a description of the location, size and storage capacity of the facility;
- (d) a description of the type and amount of oil spill normally stored at the location described in paragraph (c);
- (e) maps, nautical charts, plans, drawings and photographs including a site map of the location described in paragraph (c);
- (f) response information and procedures including the steps to be taken to report, contain, and clean up and dispose of oil spill in the case of a spill;
- (g) the means by which the spill contingency plan is activated;
- (h) a description of the training provided to employees to respond to a spill and procedures for protection of public health and safety;
- (i) an inventory of and the location of response and clean-up equipment available to implement the spill contingency plan;
- (j) the date the contingency plan was prepared;
- (k) accidental scenarios;
- (l) oil spill alert systems;
- (m) incident communication;
- (n) response organizational structure;
- (o) response equipment and materials;
- (p) response operational procedures;
- (q) procedures for interruption of oil discharge;
- (r) procedures for oil containment;
- (s) procedures for protection of vulnerable areas;
- (t) procedures for monitoring spilled oil;

- (u) procedures for oil recovery and closing of operations;
- (v) procedures for mechanical and chemical dispersal;
- (w) procedures for clean-up activities and registering response actions;
- (x) procedures for collecting and disposal of recovered oil and waste materials;
- (y) procedures for deployment of resources; and
- (z) procedures for obtaining and updating relevant information and annexes.

#### **59. Contents of the Facility Emergency Plan Annex**

A facility emergency plan shall contain an annex with the following information-

- (a) introduction;
- (b) risk identification and evaluation;
- (c) risk source identification;
- (d) accidental hypotheses;
- (e) worst case discharge;
- (f) vulnerability analysis; and
- (g) response training and exercise.

#### **60. Additional information to the Individual Emergency Plan**

In addition to the information in regulation.....an individual emergency plan shall contain-

- (a) introduction;
- (b) risk identification and evaluation;
- (c) risk source identification;
- (d) accidental hypotheses;
- (e) worst case discharge;
- (f) vulnerability analysis;
- (g) response training and exercises;
- (h) bibliographic references;
- (i) individual responsible for the elaboration;
- (j) individual responsible for the execution

(2) NEMA shall after receiving an oil spill notification, the corresponding sectorial Coordination, after checking the relevancy of the incident, shall designate or activate an Operational Coordinator for evaluation

of the response actions as stated in the Individual Emergency Plan or Area Plan, informing the **National Authority** on the incident situation.

### **61. Requirement for facility owners and operators**

The operator of a facility or activity regulated under these Regulations shall-

- (a) develop an OSCP consistent with the provision of the National Plan for all activities with the potential of causing an oil spill;
- (b) ensure that OSCPs are based on the Tiered Response concept;
- (c) set up capabilities to respond to Tier I incidents, in terms of equipment, response organization, and personnel trained to manage and respond to oil spills of this magnitude;
- (d) have arrangements in place, enabling operators to access sufficient resources within Uganda to respond to a Tier II oil spill incident, and sufficient external resources to respond to a Tier III oil spill incident;
- (e) establish an organization for response to Tier II and Tier III oil spills, manage such incidents, and support the response operations involving these resources; and
- (f) comply with the national policy concerning the use of dispersants in Ugandan waters.

(2) Facility owners including upstream and midstream licensees shall prepare emergency and response plans and promote awareness of the dangers of oil spills in a manner that demonstrates that the facility has planned for and is prepared to conduct an efficient, coordinated, and effective response to an oil spill.

(2) The plan referred to under subregulation (1) shall include-

- (a) the name, address and job title of the owner or person in charge, management or control ultimately responsible for the facility;
- (b) the name, job title and 24-hour telephone number for the persons responsible for activating the spill contingency plan or the on-site person responsible for managing the facility or the person in charge, management or control of the contaminant or e initially responsible for clean-up activities;
- (c) a description of the facility including the location, size and storage capacity to help responders be familiar with the facility and its contents especially if people unfamiliar with the facility are to assist in the planning or undertaking of the clean-up and the description shall include a map and diagrams;
- (d) a description of the type and amount of contaminants normally stored at the location described in paragraph (c) including the chemical names and the volumes or weights of the contaminants volumes or weights would be the maximum amount of contaminant that may be on-site at any time to ensure safety of on-scene response personnel;
- (e) a site map of the location described in paragraph (c) to illustrate the facilities relationship to other areas that may be affected by a spill which shall be to scale and be large enough to include the location of your facility, nearby buildings or facilities, roads, culverts, catch basins, drainage patterns and any nearby bodies of water which could be impacted by a spill or topographic features which would affect access and response;
- (f) the steps to be taken to report, contain, clean-up and dispose of contaminants in the case of a spill and the notification of all parties involved including internal as well as external reporting

procedures and a description of a public reporting procedure used to alert anyone who may be affected by the spill is required;

- (g) the means by which the spill contingency plan is activated outlining internal company procedures to activate appropriate response equipment and personnel;
- (h) a description of the training provided to employees to respond to a spill including a syllabus or brief outline of any training, whether it is on-the-job or formal courses and fundamentals which shall include-
  - (i) knowledge and use of any response equipment that may be used as well as knowledge of the hazards from the products that may be encountered; and
  - (ii) the rapid and competent response consistent with company policies and procedures;
- (i) an inventory of and the location of response and clean-up equipment available to implement the spill contingency plan including the equipment to be used by another person responding to the spill on behalf of the owner and it is imperative that written agreements are made with others who shall respond to the spills;
- (j) the date the contingency plan was prepared;
- (k) corrective remediation action in case of releases and spills;
- (l) notification requirements and procedures for releases and spills;
- (m) measures for oil spill prevention;
- (n) testing methods to determine contamination;
- (o) drainage control;
- (p) methods for secondary containment;
- (q) bulk storage tanks;
- (r) truck loading and unloading;
- (s) transfer operations;
- (t) inspections and records;
- (u) security measures; and
- (v) employee training.

## **62. General contents of Oil Spill Contingency Plans**

All oil spill contingency plans prepared in accordance with these Regulations shall as a minimum contain-

- (a) an analysis of the risk of oil spills which may occur as a result of the activity covered by the plan;
- (b) identification of possible scenarios of oil spill incidents classified according to the Tiered response concept;

- (c) identification of all the areas and activities which may be impacted by the identified oil spill scenarios;
- (d) the oil spill response strategy identified for the various scenarios, covering incidents since Level I through Level 3, as appropriate and the choice of the strategy shall be based on the Net Environmental Benefit Analysis;
- (e) the alert and notification procedures;
- (f) definition of the oil spill response organization established to facilitate immediate initial response and control of incidents and the description of the functions of the key positions in the organization of response ;
- (g) inventory of the resources available for oil spill response operations, equipment, supplies and services;
- (h) training program for the personnel involved in the response organization, including the type of training for each responsibility level;
- (i) a program of oil spill response exercise established in the plan, including the type of exercises and their frequency, covering all types of exercises, communications, planning, mobilization and every possible situation, from Level 1 to Level 3; and
- (j) storage procedures and final destination of the oil waste resulting from cleaning operations at the water body and on the coast.

### **63. Regional Oil Spill Contingency Plans for the oil producing districts:**

- (1) The oil producing regions that are exposed to the consequences of oil spill events which may occur as a result of upstream and midstream activities shall have contingency plans for the management of oil spills in their areas.
- (2) The Regions shall establish and keep updated contingency plans that protect the environment of their areas and are aligned with the requirements of the National Oil Spill Contingency Plan and other applicable laws.

### **64. Local Oil Spill Contingency Plans**

Each district in Uganda may prepare a local contingency plans for their specific areas and, naturally, this may vary according to the type of activity and localization of the respective district.

### **65. Oil spill emergency response plan**

- (1) A contingency plan, also called an emergency response plan or a spill response plan is a set of procedures to be followed to minimize the effects of an abnormal event, such as a spill.
- (2) The plan serves as a guide or reminder of the steps to take during your response and identifies personnel and their responsibilities.
- (3) To be effective, the information in the plan shall be material that you are already familiar with. You do not want to be reading your plan for the first time during an emergency.

### **66. Purpose of the emergency response plan**

- (1) An emergency, such as a spill, is often a stressful situation and under such conditions, important steps of the response can be overlooked or forgotten.

(2) Following a plan helps to ensure all necessary concerns are addressed, i.e. life is protected, injuries are minimized, resources are used effectively, environmental impact is kept to a minimum and essential reporting is completed.

#### **67. Plan to be file with NEMA**

(1) Subject to subregulation (2), the person responsible for preparing a spill contingency plan shall file the plan with NEMA before making use of a facility.

(2) Where a facility is already in use on the commencement of these Regulations, the person responsible for preparing a spill contingency plan shall file the plan with NEMA within one year after the day these Regulations come into force.

#### **68. Review of plan**

(1) The NEMA shall review each spill contingency plan after it is filed.

(2) The NEMA may require the person who filed the spill contingency plan to amend it.

(3) Where the NEMA requires amendments under subregulation (2), it may indicate a reasonable period of time within which the amendments shall be filed.

(4) The person who filed a spill contingency plan shall make and file any amendments required under subregulation (2).

#### **69. Annual Review of plans**

(1) The person responsible for preparing a spill contingency plan shall review the plan annually.

(2) The person responsible for preparing a spill contingency plan shall, in writing, notify NEMA when a review under subregulation (1) has been completed and shall immediately file with NEMA any changes made to the plan.

#### **70. Implementation of plan**

Once a spill contingency plan has been filed, the person responsible for preparing the plan shall implement the plan.

### *Clean-up*

#### **71. Clean up**

(1) Clean-up includes the removal of the contaminant from the environment.

(2) The operator of a facility or the responsible person shall consider the possible scenarios or spill incidents that could occur at the facility including a worst case scenario, and describe how he or she shall address the situations.

(3) A detailed description of actual containment and clean-up techniques or methods may be included in the plan for the facility.

#### **72. Disposal and treatment**

(1) Disposal includes treatment of the contaminant such that it is no longer a threat to the environment.

(2) Contingency plans shall contain appropriate disposal procedures for the materials stored at the facility and locations of disposal sites approved to accept wastes, means of storage prior to disposal and other approvals required.

(3) The disposal of any contaminants including contaminated soil or water shall be authorised by NEMA in accordance with the **National Environment (Waste Management) Regulations.**

### **73. Additional Information**

(1) The following types of information, shall enhance the effectiveness of any plan made under these Regulations-

- (a) a listing of local contractors or clean-up specialists who may be called upon to assist in responding to spills;
- (b) a listing of emergency numbers such as fire, ambulance and police including local health emergency numbers; and
- (c) Material Safety Data Sheets (MSDS) for each product or contaminant stored at the facility.

(2) Holders of contingency plans shall conduct simulation exercises to test the plan's effectiveness and this kind of assessment can be conducted in stages on various parts of the plan or on full-scale.

## **PART V- OIL SPILL COMPONENTS OF A RISK ASSESSMENT**

### **74. Risk Assessment**

(1) A systematic approach incorporating prevention and preparedness activities shall be used in the assessment of an oil spill risk.

(2) The assessment referred to under subregulation (1) shall focus on preparedness of the responsible person to reduce the consequence of the impacts of a significant oil spill.

(3) To complete the assessment, the responsible person shall have knowledge of what to prepare for where scenarios can be categorised to assist the planning process, usually into response tiers.

(4) The identification of consequences shall be location specific.

### **75. Hazard and scenario identification (Guidelines)**

(1) An operator shall employ realism and lateral thinking in hazard identification.

(2) The operator shall identify 'obvious' hazardous events and look for potentially complex hazardous events including considering the fact that a sequence of failures or a set of concurrent problems might show how a combination of active and latent failures in risk control barriers can allow a hazardous event to progress to an oil spill incident.

(3) During hazard identification, the operator shall-

- (a) challenge assumptions and existing norms of design and operation to test whether they may contain weaknesses;
- (b) think beyond their immediate experiences;
- (c) explore the effect of failure of management systems, controls and procedures;
- (d) consider how relatively minor problems may increase in magnitude because of other problems that arise to compound the seriousness;

- (e) consider a range of events that include those associated with the failure of all preventative and immediate containment recovery controls including a large number of variables such as operational extremes, the failure of engineering controls, prevailing conditions, operational limitations of resources and other variables;
- (f) consider hazards relating to all phases of the activity including construction, installation and commissioning; and
- (g) any changes to assumptions made about the activity such as hydrocarbon and/or reservoir properties.

(4) An operator shall not eliminate hazards from further consideration simply because they have a very low likelihood; for example, when identifying hazards that could lead to a blowout scenario, the fact that a range of control measures may be put in place to minimise the risk of a blowout does not mean that this scenario no longer requires further preparedness and response controls that may contribute to minimising the consequence of the event.

(5) To have an appropriate OSCP, an operator shall demonstrate that they have a sufficient level of preparedness to mitigate the consequence of identified hazards and subsequent spill scenarios.

(6) The NEMA shall not accept an environment plan where a high consequence scenario has been ignored, especially where related incidents have been experienced elsewhere in the industry.

(7) The assessment of low likelihood may result from an assumption that the existing controls are highly effective.

(8) The type of exclusion under subregulation (7) is undesirable for the following reasons-

- (a) the control that was thought to eliminate the risk may not be as robust as first thought, for example controls can deteriorate over time and the effectiveness of 'new' controls is often unproven;
- (b) controls may not be adequately managed if their importance is not recognised;
- (c) the initial assessment may not be based on adequate grounds, and further detailed assessment may indicate that the risk is higher due to site-specific considerations; and
- (d) knowledge of all potential events is essential for emergency planning.

(9) The scenarios presented in the OSCP, for which preparedness is demonstrated, shall be directly relevant to the risk assessment for the activity and the scope of the OSCP and the scenarios may function to define the zone of potential impact (ZPI) and develop plans appropriate to the nature of the activity and its associated spill risk.

## **76. Tiered response concept (Guidelines)**

(1) The tiered response approach shall be consistent with the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC).

(2) When grouping scenarios, operators are responsible for demonstrating why the scenario groups are representative of the range of credible spill scenarios that have potential to occur during the activity and this includes consideration of factors such as release volumes and duration, oil types, location, environmental factors and any other factors which could affect the selection and development of response strategies.



(3) The description of the tiered response arrangement in the OSCP shall provide some guidance to users on how to categorise spill scenarios as Tier 1, 2 or 3, as relevant to the activities and capabilities of the operator or responsible person.

(4) The tier structure shall provide a graduated scale of response based on factors relevant to the spill scenarios including spill sources and volumes, resources at risk, the necessity for higher level management support and the response resources required to combat the spill.

(5) The description of the tiered response shall demonstrate the capability of the operator or responsible person to respond and maintain control for the range of spill scenarios relevant to the activity.

(6) The OSCP shall clearly demonstrate when and how the operator or responsible person shall seek assistance from other stakeholders to ensure it has the capacity to respond.

#### **77. Oil types and volumes (Guidelines)**

(1) Based on the nature of the activities described within the scope of the submission, the operator or responsible person shall identify the oil types and volumes that may be discharged.

(2) The OSCP shall provide up-to-date data on key characteristics and properties of chemical and physical that are relevant to oil spill response and this may include characteristics including persistence, volatility, emulsification, spreading and dispersability.

(3) The operator or responsible person shall describe the effect on oil characteristics resulting from weathering and the application of dispersant where the factors may be relevant to the oil spill risk and impact assessment.

(4) Where uncertainty exists, the operator or responsible person shall implement measures to reduce the risk associated with the uncertainty, both during the preparedness and response phases of the OSCP.

(5) The operator or responsible person shall use analogues to demonstrate an understanding of potential reservoir content in the case of exploration wells.

(6) The operator or responsible person may use further measures to eliminate uncertainty including commitments for laboratory testing or planned sampling or field testing processes.

#### **78. Activity description**

(1) The submission of an OSCP shall specify the activities and facilities that are within the scope of the submission and a clear statement regarding any specific exclusion.

(2) The operator or responsible person shall consider response strategies when describing the controls in the submission and the strategies shall be assessed for the associated impacts and risks, as required by these Regulations; for example, a dispersant strategy proposed to mitigate the consequences of a spill shall be described in sufficient detail to enable an assessment of the environmental impacts and risks of the activity.

(3) Where provided as a separate document, the OSCP shall provide a high level activity description that is tailored to matters relevant for a spill response and include a summary of potential spill causes.

(4) The detailed activity descriptions may cross-reference to the EP where appropriate, to avoid duplicating the same level of detail into the OSCP.

#### **79. Consequence identification**

(1) The operator or responsible person shall have detailed knowledge of existing environment so as to identify the environmental risk and impact consequences of an activity in normal and potential emergency conditions.

(2) A submission of OSCP shall describe the existing environment that may be affected by the activity and any relevant cultural, social and economic aspects of the environment in sufficient detail to enable adequate evaluation of the environmental impacts and risks from the activity.

### **80. Oil spill (preparedness) trajectory modelling and the zone of potential impact (Guidelines)**

(1) Trajectory modelling and environmental mapping shall assist decision-making and enable the development of appropriate response strategies, incident action plans and environmental monitoring strategies.

(2) The plan shall demonstrate that the operator or responsible person has based the oil spill components of the risk assessment and any associated oil spill trajectory modelling (OSTM) on current and accurate information on oil characteristics and toxicity.

(3) The plan shall demonstrate the understanding by the operator of the behaviour of both fresh and weathered oil on the environment, in the water column and on shorelines if relevant.

(4) The operator or responsible person shall model the duration of the spill, and the zone of potential impact, determined by the range of credible spill scenarios and response strategies.

(5) The operator or responsible person shall estimate and consider the response times for controlling the source of a spill and for containing the extent and spread of a spill.

(6) Definition of the zone of potential impact shall account for dynamic environmental conditions and consider potential impact of a spill during less favourable seasonal conditions.

### **81. Environmental description within the Zone of Potential Impact (Guidelines)**

(1) The operator or responsible person shall, in describing the geographical scope of the plan, consider the Zone of Potential Impact defined for the activity as part of the risk assessment.

(2) The OSCP shall provide both spatial and temporal environmental information that is consistent with the EP and presented to clearly communicate environmental values within the Zone of Potential Impact that require consideration during response and monitoring activities.

(3) The operator or responsible person may use maps of important physical, biological, heritage and socioeconomic factors to help in describing the environment.

### **82. Resources at risk (Guidelines)**

(1) The operator or responsible person shall base consequence identification on an evaluation of the resources at risk and result in a list of environmental, cultural and commercial resources that are prioritised based on their sensitivity to oil impact and their ability to recover following impact by oil.

(2) Sensitivities including bird rookeries, turtle nesting beaches, fisheries and tourism may require a higher level of protection at certain times of the year and a lower level throughout the intervening periods.

(3) Where a high potential for impact has been identified, an approach to preparing appropriately and the operator shall categorise and prioritise the sensitivity types within the Zone of Potential Impact based on their inherent value, their ability to naturally recover, and their resilience to response actions.

(4) An awareness of the most sensitive and least sensitive resources at risk within the Zone of Potential Impact may be useful information when forming response strategies.

### **83. Baseline studies (Guidelines)**

- (1) The EP shall describe the existing environment, detail the impacts and risks for the activity, and evaluate the impacts and risks, including those arising from potential emergency conditions.
- (2) Where there are gaps in knowledge regarding the condition of the existing environment so that impacts and risks cannot be fully evaluated, then existing environmental data sought or baseline studies shall be completed during the planning phase.
- (3) Environmental performance objectives, standards and measurement criteria shall be defined against which the performance by the operator or responsible person in protecting the known environment that may be affected by the activity is to be measured.
- (4) The EP shall also include arrangements for recording, monitoring and reporting information about the activity sufficient for the Petroleum Authority of Uganda/NEMA to be able to determine whether the environmental performance objectives and standards are met.
- (5) Desk top studies or baseline environmental studies shall provide sufficient and accurate environmental data to allow the operator to measure environmental impacts attributed to an oil spill and these shall be separated from naturally occurring temporal and spatial environmental variability; for example, if it is predicted that an oil spill shall reach a particular habitat or environmental resource, the relevant and recent baseline data shall be identified or collected prior to the impact occurring.
- (6) Baseline studies shall be designed with post-impact monitoring in mind to provide data that are directly relevant and comparable to the data gathered during post-impact monitoring.
- (7) Baseline studies shall be planned and conducted prior to the spill occurring to ensure there are relevant data available to make post-impact comparisons and measure any impacts.

#### *Reporting Oil Spills*

#### **84. Reporting oil spills**

- (1) The owner or person in charge, management or control of a facility, vessel, and platform at the time a spill occurs shall immediately report the spill to NEMA/PEPD for petroleum activities.
- (2) Where there is a reasonable likelihood of a spill, the owner or person in charge, management or control of the oil spill shall immediately report the potential spill.

#### **85. Methods of reporting**

- (1) A person reporting a spill shall call the 24 Hour spill report line designated by the National Oil Spill Response Committee.
- (2) A person reporting a spill shall give as much information as possible including-
  - (a) the date and time of spill;
  - (b) the location of spill;
  - (c) the direction oil spilled is moving;
  - (d) the name and phone number of a contact person close to the location of spill;
  - (e) the type of contaminant spilled and quantity spilled;
  - (f) the cause of spill;
  - (g) whether spill is continuing or has stopped;

- (h) the description of existing contaminant;
- (i) the action taken to contain, recover, clean-up and dispose of spilled oils;
- (j) the name, address and phone number of person reporting spill; and
- (k) the name of owner or person in charge/responsible person, management or control of oil spill at time of spill.

(2) A person shall not delay reporting a spill because of lack of knowledge of any of the factors listed in subregulation (1).

(3) A person shall not knowingly make a false or misleading report of a spill or a potential spill.

### **86. Written report**

(1) For the purposes of evaluating the effectiveness of the spill contingency plan, NEMA may require, the owner or person in charge/ responsible person, management or control of a facility at the time a spill occurred to prepare and file a written report concerning the spill.

(2) The person required to prepare the report described in subregulation (1) shall provide all information required by NEMA.

### **87. Corporate plan (Guidelines)**

(1) A company licensed under the Upstream, Midstream or Downstream law, may prepare a corporate plan in line with the company's adopted environmental management plan, the applicable national oil spill contingency plan and international guidelines as approved by NEMA. (the International Maritime Organization (MO) (1995), World Bank, and International Petroleum Industry Environmental Conservation Association (IPECA, 1991).

(2) The purpose of the corporate or umbrella contingency plan is to-

- (a) state company policy for spill response;
- (b) define the relationship between industry and government emergency response plans;
- (c) define the tiered response organization and escalation process;
- (d) provide coordinated response actions for a corporate spill management team;
- (e) supplement site-specific spill contingency plans with the company-wide information;
- (f) provide guidance for response to spills of significance;
- (g) define functions and roles of the company spill management team.

(3) An umbrella plan prepared under this regulation shall serves as a general framework and reference document for detailed area-specific or asset-specific oil spill response plans and in particular, the umbrella plan provides corporate and project-wide information, guidelines, and recommended practices for spill response.

(4) The information in the corporate plan may be used to guide the development for each defined project area and response sub-organization developed at a local or Tier 1, level.

(5) The area-specific plan shall contain response procedures, strategies, tactics, and spill scenarios specific to a defined geographic setting or limited operation.

(6) The success of the area-specific plans may depend on the introspective analysis undertaken with respect to-

- (a) hazards analysis;
- (b) risk estimation;
- (c) prevention;
- (d) planning;
- (e) training;
- (f) spill exercises;
- (g) response; and
- (h) evaluation plus follow-up.

(7) The spill risk quantification shall include evaluation criteria for spill sources including vessels, production platforms, pipelines, terminals, storage tanks, pathways or trajectory models, surface and subsurface, receptors and sensitive areas whether public and private and timing.

(8) As spill prevention and preparedness capabilities increase, the relative risk posed by source, pathways and receptors may be expected to decrease.

(9) The aspects referred to under this regulation shall become key elements of appropriate spill contingency planning and environmental management programs.

### **88. Use of tiered response. (Guidelines)**

(1) The operator, owner of a facility or responsible person may use a tiered response system that has the flexibility to expand in an organized and consistent fashion to address individual, district, regional, country, or project-wide emergencies.

(2) A tiered approach shall facilitate the rapid and orderly expansion of emergency response from on-site, local responders and resources to area-wide and even national to multi-national response.

(3) Three tiers are standard industry terms used to describe the extent of a spill event and subsequent response.

(4) The environmental implications associated with an accidental hydrocarbon release shall vary depending on spill size, type, setting and environmental conditions.

(5) No single spill size is assigned to the tiered response system but the tiers are based on potential severity of the incident once all factors are considered.

(6) A tiered approach shall enable spill response to be managed in the most efficient and effective manner.

(7) The operator, owner of a facility or responsible person shall identify and prioritize, according to environmental sensitivity, an area's ecological, socio-economic and cultural resources.

(8) The operator, owner of a facility or responsible person shall evaluate the various response options and compare them not only to each other but also to the option of natural recovery which shall determine the response methods that have the least impact on the environment or the net environmental benefit.

(9) The response option or combination of options selected shall prevent or reduce impacts to sensitive, valuable resources.

**89. Incident command system. (Guidelines)**

(1) The spill management team organized under these Regulations shall expand and contract the support needed and appropriate for a response.

(2) For a Tier 1 response, the spill team operating within the ICS framework may consist of only a few individuals.

(3) The response team shall assume all the responsibilities for incident command and control, regardless of spill size or Tier.

(4) The ICS shall provide for the delegation of responsibilities as needed and appropriate to supporting staff, maintaining a maximum of five to seven lines of communication within the ICS organization.

(5) The ICS in spill response shall also establish a field operations organization, taking advantage of geographic operational divisions or functional task groups.

**PART VI- RISK MANAGEMENT FOR CONSEQUENCE REDUCTION**

**90. Risk management**

(1) The operator, owner of a facility or responsible person shall evaluate all aspects of the response strategies to ensure that the resources required to implement the strategies are available and appropriate.

(2) Response strategies under subregulation (1) shall be consistent with the environmental performance objectives, standards and measurement criteria shall be specific, measurable, achievable, relevant, and time framed, so that they can be monitored to ensure the response objectives are achieved.

(3) The operator, owner of a facility or responsible person shall be responsible for evaluating the spill risks of their activities and developing response strategies that are appropriate to respond to all incidents resulting from their activities.

(4) Where an appropriate response strategy is identified, the operator shall undertake an assessment of the risks of the response itself.

(5) The response activity shall have inherent occupational health and safety and environmental risks identified during preparation of the OSCP and controlled prior to undertaking the response.

(6) The operator, owner of a facility and responsible person shall also develop a process for monitoring and managing the risks during the response and set objectives, standards and measurement criteria to enable the operator, owner of a facility or responsible person to measure the environmental performance of risk controls.

(7) For the avoidance of doubt, environmental performance standards and their measurement criteria shall allow for the measurement of preparedness and response controls.

(8) The operator, owner of a facility or responsible person shall measure environmental performance to ensure that preparedness is maintained to an appropriate standard and that a response is conducted in accordance with the planned response arrangements.

(9) Well-defined objectives, standards and measurement criteria shall enable measurement, auditing and reporting in accordance with the **National Environment (Audit) Regulations**.

### **91. Development of (ALARP and acceptable) response strategies**

(1) After the oil spill components of the risk assessment for the project, the operator, and owner of a facility or responsible person shall select response strategies that focus on suitability, acceptability, feasibility and practicability.

(2) The response strategies selected under subregulation (1) shall balance the ecological, social and commercial concerns within the Zone of Potential Impact and aim to minimise further impacts to the environment.

(3) For compliance with these Regulations, documentation of the response strategy selection process shall be used to demonstrate the independent ALARP and acceptable tests.

(4) Selection of response strategy under subregulation (1) shall be conducted with subject matter experts.

(5) The response strategy selection process shall aim to-

- (a) satisfy the need to mitigate the consequences of an oil spill;
- (b) confirm or amend the priorities identified in the resources at risk; and
- (c) support the choice of response strategies and subsequently described in the submission.

(6) The operator, owner of a facility or responsible person shall, in selecting response strategies, give consideration to occupational health and safety, environmental conditions, response times and other constraints that may limit the ability of the operator or response organisations to undertake specific tasks.

(7) The OSCP shall determine whether practicable solutions are available to avoid or manage the constraints appropriately to improve response capability and minimise the risk to an acceptable level.

(8) Based on the identified scenarios under subregulation (7) and prioritisation of resources at risk, the EP shall include an appropriate OSCP for selected response strategies that can be easily understood and communicated.

(9) The OSCP shall demonstrate capability and preparedness for appropriately responding to all incidents from the activity and NEMA shall consider response strategies scalable for the identified scenarios relevant to the activity and may group into responses on air, land and water.

(10) The response strategies under this regulation shall cover the duration of a response, the source control, monitoring, containment, recovery, protection, deflection and natural recovery.

(11) Response strategies shall be evaluated through the planning process and shall aim to achieve the environmental performance objectives of responding to the spill.

### **92. Source control (Guidelines)**

(1) The OSCP shall consider the options available to minimise, control or preferably stop the continual flow of oil into the environment regardless of the source of the spill.

(2) Where there is loss of well control, the option may involve an evaluation of the relative merits of well intervention, source capping or any other suitable new technologies as they are developed.

(3) The operator, owner of a facility or responsible person shall consider all the available options for reducing or containing the volume of spilt oil so as to identify the options that reduce the consequence of the spill to the extent practicable.

(4) The possible success of, and timeframes for, the various source control options shall be important inputs to the risk assessment process in considering the magnitude and duration of a release of oil to the environment.

(5) Specific details related to well integrity management hazards including well control and intervention that aim to minimise the duration and extent of the release, are the subject to the Petroleum (Exploration, Development and Production) Act, 2013 and regulations made under that Act.

### **93. Monitoring and evaluation (information gathering) (guidelines)**

(1) Monitoring and evaluation as a response strategy shall be the first, last and an underpinning response strategy and while commonly completed through aerial surveillance other information gathering tools may be utilised to support the decision making process in a response.

(2) The OSCP shall describe arrangements for ensuring timely access to real-time monitoring of a spill situation, appropriate to the scenarios, activity and impacts.

(3) The arrangements referred to under subregulation (2) may include-

- (a) oil spill trajectory or fate modelling;
- (b) oil sampling;
- (c) dispersant efficacy testing;
- (d) charts, maps or geographic information systems or oil spill response atlas;
- (e) real-time weather conditions;
- (f) satellite tracking buoy deployment;
- (g) satellite observation;
- (h) aerial surveillance; and
- (i) environmental monitoring.

(4) The information gathering tools referred to under this regulations apply to both preparedness and response and where possible, details and evaluation of outputs from the tools shall be undertaken prior to a spill and validated during any response.

(5) Whilst pre-incident OSTMs can provide an indication of the Zone of potential impact for planning purposes this does not preclude the need to access real-time monitoring (aerial surveillance, satellite imagery, scenario modelling) in the event of an incident.

## *Offshore Facilities for Oil and Gas*

### **94. Exploration and Production**

(1) The National Oil Spill Response Committee shall work closely with the oil and gas sector to ensure that all the operators of offshore facilities in the waters under Uganda's jurisdiction prepare and keep update contingency plans against oil spills for their installations.



(2) The plans of the exploration and production offshore facilities shall include dispositions that demonstrate their capability to-

- (a) respond to Level 1 oil spills, using the existing resources in the very installations;
- (b) mobilize the resources existing in Ugandan territory, in sufficient quantity to respond to Level 2 oil spill incidents;
- (c) sign agreements of mutual assistance with other licensee and operators involved in petroleum activities in Uganda, to ensure access to the respective resources; and
- (d) mobilize external resources in order to respond to Level 3 incidents.

#### **95. Oil handling facilities (Guidelines)**

(1) Onshore oil handling facilities may be classified in several categories including upstream and midstream pipeline operators, oil terminal, central processing units and refineries.

(2) Each facility shall establish and keep updated a contingency plan demonstrating capacity to react to Level 1 incidents.

(3) The National Oil Spill Response Committee may determine until what extent certain facilities shall be prepared for Level 2 oil spill incidents depending on the characteristics of the facility and the nature of the risk to the environment.

#### **96. Aggregate Oil Storage Capacity: Aboveground Storage and Completely Buried Storage**

(1) A small business facility shall prepare an OSCP if it has an aggregate aboveground storage capacity of greater than 1,320 gallons where spilled oil may reasonably be expected to reach water bodies.

(2) Only containers of oil with a capacity of 55-gallons or greater qualify under subregulation (1).

(3) An OSCP is also required if a small business facility has a completely buried storage capacity of greater than 42,000 gallons of oil that may reasonably be expected to reach a water body if discharged and this shall not apply to underground storage tanks.

### *Oil Spill Contingency Plan*

#### **98. Plan Certification**

(1) The OSCP shall be reviewed and certified by a licensed professional engineer.

(2) The information for the plan may be collected and the plan written by someone other than a professional engineer.

(3) The plan written under subregulation (2) shall be re-certified by a professional engineer whenever material changes to the plan are made including technical changes.

(4) Non-technical amendments including changes to telephone numbers and contact names, do not require professional engineer certification.

(5) The plan shall be reviewed, revised, and recertified by a professional engineer at least every five years.

(6) A qualified facility may self-certify their own plans instead of having a professional engineer certify the plan.

(7) A qualified facility referred to under subregulation (6) is one that has a capacity of 10,000 gallons or less of oil, and has not had a single discharge of over 1,000 gallons or two discharges of 42 gallons in any twelve month period or in the past three years and when a spill occurs, the facility shall still have a professional engineer certify portions of the plan including environmentally equivalent measures or impracticability determinations.

### **100. The contingency plan**

(1) The OSCP shall be the document for the purpose of responding to the consequences of an unplanned event which has occurred during normal operations.

(2) An operator, owner of a facility or responsible person shall consider how the arrangements described in the OSCP shall contribute to the evidence of the operator, facility owner or responsible person to demonstrate and the grounds of NEMA for believing, that the submission meets the acceptability criteria under these Regulations.

(3) The oil spill contingency plan-

(a) shall form a key component of the strategy of operator, facility owner or responsible person to protect the environment and reduce impacts of a spill to the environment, human health and the economic activities;

(b) can be considered the output of the contingency planning process;

(c) shall address the range of credible spill scenarios and clearly outline the operational and emergency requirements of adequately preparing for and responding to such occurrences in a timely, efficient and effective manner; and

(d) shall support implementation of response strategies and achieve the response objectives.

### **101. Purpose of an OSCP (Guidelines)**

(1) The OSCP shall describe oil spill response strategies and actions, as well as being a command and control tool in an oil spill response.

(2) The OSCP is part of the EP implementation strategy which supports the environmental objectives for the activity provided in the EP.

(3) The purpose and objectives of the OSCP are therefore guided by the environmental policy, objectives and risk controls provided within the submission.

### **102. Scope of the OSCP**

(1) An operator, facility owner or responsible person shall ensure that the scope of their OSCP is directly relevant to the activity described in the EP.

(2) The operator, facility or responsible person shall ensure that the OSCP submitted is appropriate for the nature and scale of the activity described, the location considered in the consequence identification, and oil types/volumes considered in oil spill components of the risk assessment for the activity.

### **103. OSCP Structure (guidelines)**

(1) The structure and content of an OSCP shall be set out in a manner that supports effective implementation by the operator, facility owner or responsible person during an incident.

(2) The OSCP document shall be clear and concise while providing sufficient information outlining roles and responsibilities and priority actions to guide an effective response.

(3) There OSCP shall provide a degree of flexibility in the approach an operator, facility owner or responsible person may structure the components of a submission to NEMA, for example, an OSCP may be specific to a single activity under a single EP or alternatively, a single OSCP may have a broader scope and be relevant to multiple activities with multiple EPs.

(4) The operator shall ensure that information available to responders is adequate and relevant for the particular activity and that the submission as a whole, which may be comprised of multiple documents, addresses the requirements of the Regulations.

#### **104. Contents of OSCP**

(1) The OSCP shall clearly address the following-

- (a) the operating procedures to prevent oil spills;
- (b) the control measures to prevent a spill from reaching navigable waters; and
- (c) the counter measures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

(2) Every oil spill contingency plans shall include, at least, the following information-

- (a) an analysis of the risk of oil spills which may occur as a result of the activity covered by the plan;
- (b) identification of possible scenarios of oil spill incidents classified according to the Tiered response concept;
- (c) identification of all the areas and activities which may be impacted by the identified oil spill scenarios;
- (d) the oil spill response strategy identified for the various scenarios, covering incidents since Level I through Level 3, as appropriate and the choice of the strategy shall be based on the Net Environmental Benefit Analysis;
- (e) the alert and notification procedures;
- (f) the definition of the oil spill response organization established to facilitate immediate initial response and control of incidents;
- (g) the description of the functions of the key positions in the organization of response;
- (h) inventory of the resources available for oil spill response operations including equipment, supplies and services;
- (i) training program for the personnel involved in the response organization, including the type of training for each responsibility level;
- (j) a program of oil spill response exercise established in the plan, including the type of exercises and their frequency, covering all types of exercises such as communications, planning, mobilization and every possible situation from Level 1 to Level 3; and

(k) the storage procedures and final destination of the oil waste resulting from cleaning operations at sea and on the coast.

(3) Each OSCP shall be unique to the specific facility, operations and location.

(4) The operator, owner of a facility or responsible person shall have detailed knowledge of the facility, including the location and capacity of oil-based storage, and the potential effects an oil spill could have on the area environment and natural resources before developing an OSCP.

(5) Each OSCP, while customized to the facility it covers, shall include standard elements to ensure compliance with National OSCP and these Regulations.

(6) OSCP standard elements referred to under subregulation (4) include-

- (a) the discussion of the facility's conformance with applicable OSCP requirements;
- (b) the description of the facility's physical layout and a facility diagram that indicates the locations of oil storage and handling;
- (c) the general facility description including name, function, and drainage patterns;
- (d) the description of oil storage and handling areas;
- (e) the discharge prevention measures including procedures for routine handling of products;
- (f) the designation of OSCP responsibilities, including a spill coordinator;
- (g) the description of spill events in the previous 12 months;
- (h) the analysis of potential spill scenarios, including predictions of direction, rate of flow, and total quantities of oil that could be released;
- (i) the description of spill containment and drainage control structures and equipment for oil storage and handling facilities;
- (j) the description of spill emergency response equipment;
- (k) the description of spill notification procedures;
- (l) Oil Spill Contingency Plan describing spill response and clean-up procedures, including coordination with local authorities and spill response contractors;
- (m) the spill prevention plan, including inspection and monitoring program, tank integrity testing procedures, fail-safe engineering controls to prevent overfills, preventive maintenance and housekeeping procedures, formal spill response training and exercises and security measures;
- (n) the documented review and update of procedures every five years;
- (o) the certification that a Substantial Harm Analysis has been conducted and that the facility is either not subject to Facility Response Plan (FRP) requirements or that an FRP has been completed;
- (p) the Professional Engineer (PE) certification or self-certification for qualified facilities; and
- (q) management approval.

### **105. Interface with other documents (Guidelines)**

(1) The OSCP shall identify which plans it interfaces with, use language and terminology that is compatible with those plans and demonstrate how the response of the operator, facility owner or responsible person shall integrate with those other plans.

(2) The Plans and other relevant documents to be considered may include-

- (a) environment plan and scientific monitoring plans;
- (b) company crisis management plan, management systems and company procedures;
- (c) the National Plans; and
- (d) regional or local plans.

### **106. Supporting information**

(1) The submission of OSCP shall include sufficient information to support assertions in-

- (a) the hazard and scenario identification;
- (b) the oil spill components of the risk assessment; and
- (c) the demonstration that risks have been reduced to as low as reasonably practicable and support the conclusions and strategies defined within the OSCP.

(2) The conduct of scientific surveys, risk assessments, oil spill trajectory modelling, toxicity tests, and technology reviews and literature reviews, may support these assumptions under subregulation (1).

(3) The operator, the owner of a facility or responsible person may not provide some information in detail within the OSCP document itself but shall demonstrate that relevant information is available in appropriate formats.

(4) Information that may be stored separately to the OSCP may include-

- (a) the environmental GIS Data including physical and biological;
- (b) the operator management systems, procedures and forms;
- (c) the existing contractual arrangements including waste management, catering, logistics, supply or transport;
- (d) human resources ,competency registers and contact lists; and
- (e) a detailed scientific reports that support the oil spill components of the risk assessment.

### **107. District/Regional Oil Spill Contingency Plans**

All the districts of Uganda that may be exposed to the consequences of oil spill events as a result of activities in its territory shall establish and keep updated contingency plans that protect the environment of the district and are aligned with the requirements of the National Contingency Plan and other applicable laws.

**108. Approval Procedures of Oil Spill Contingency Plans**

(1) The approval of the National Oil Spill Contingency Plan and the local government/Regional Oil Spill Contingency Plans shall comply with NEA and the Petroleum (Exploration, Development and Production) Act, 2013 and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013 and these Regulations.

(2) The Oil Spill Contingency Plans of the oil exploration and production facilities, midstream operations and the plans of the oil handling facilities shall be approved by the Ministry of Energy and Mineral Development in accordance with these Regulations.

**109. Training Programs**

(1) All the personnel of the government agencies that may be involved in the oil spill response operation shall be properly trained.

(2) The preparation of the training program is the responsibility of the National Oil Spill Response Committee, and shall comply with the principle of “training of instructors” developed by NEMA/PEPD.

(3) The training program shall start with the formation of members of the National Oil Spill Response Committee who participate in the preparation for oil spill response operation and the members of the National Incident Command team who have operational responsibilities in a spill incident.

(4) A team of instructors shall be selected among the personnel of the National Oil Spill Response Committee and it shall be responsible for the long term training program, of other bodies of the Ugandan government.

(5) The team of trainers shall receive initial training and shall prepare the training courses for Ugandan citizens.

(6) In order to ensure the establishment and maintenance of the international training standard, all the development actions shall be based on programs of the International Maritime Organization (IMO) and carried out by qualified training organizations.

**110. Program of exercises**

(1) The oil spill response exercises shall be used to raise awareness of all the participants about the oil spill and ensure the maintenance of an adequate level of preparedness for all the parties involved.

(2) The preparation and monitoring of the program of exercise shall be undertaken by the National Oil Spill Response Committee.

(3) The National Contingency Plan shall identify four categories of exercises.

**111. Minimum Response Requirements**

(1) Response arrangements shall be based on an expectation that they shall be relevant to the characteristics of the oil pollution, the prevailing conditions, geographic location and environmental sensitivities.

(2) Where the nature of the produced hydrocarbons is already known it may be acceptable to provide targeted response provisions based upon knowledge of the hydrocarbon type as detailed in the installation hydrocarbon inventory.

(3) Where the reservoir area is unexplored, a different level of response provision shall be required to deal with the potential for an oil pollution incident involving unknown hydrocarbons until such time as the characteristics of the hydrocarbons being produced may be assessed.

(4) Minimum response requirements for oil pollution incidents from exploration and production activities to determine the minimum response times and levels required for both dispersant capability and aerial surveillance.

(5) Response time may be counted from the time the incident occurred or was discovered.

(6) Where the dispersibility of hydrocarbons cannot be demonstrated, other strategies shall be identified to ensure an effective response and may include measures for containment and recovery.

## **PART VII- RESPONSE STRATEGY AND IMPLEMENTATION**

### **112. Response Strategy (guidelines)**

(1) The response to an oil pollution incident may depend on-

- (a) the quantity of oil discharged to environment, the type of oil;
- (b) the location of the pollution incident;
- (c) the water depth, the distance to shore;
- (d) the prevailing weather and tides;
- (e) the time of day or year, the environmental sensitivity of the area;
- (f) the organisational structure of the operator;
- (g) the availability and adequacy of equipment; and
- (h) the level of training of personnel.

(2) Response strategies shall be developed and included within the OPEP according to the Tiered level of response under regulation..... taking into account the installation hydrocarbon inventory, worst case oil pollution incident scenarios and the potential impacts on environmental sensitivities and this may include a response strategy flow diagram.

(3) The operator shall provide details of the response strategy to conduct an effective and early intervention to protect the environment in the event of any liquid hydrocarbon release, including robust and location-specific arrangements based on the outcome of the modelling and the predicted environmental and socio-economic impacts.

(4) The information provided under subregulation (2) shall include details of the pollution prevention and response equipment that the operator maintains or intends to access for deployment in the event of a release, or a potential release, and the time that it would take to deploy that equipment.

(5) The response strategy shall include source control measures to prevent further release or escalation of release and this may include measures that would be taken to stop the worst-case release of liquid hydrocarbons from the reservoir, and an estimate of the maximum duration of the release.

(6) The duration of the release may be a function of natural cessation related to the nature of the hydrocarbons and well flow characteristics, but shall normally be the time taken to implement appropriate

measures to stop or control the release including use of a capping or containment device, and the time taken to drill a relief well.

(7) Where appropriate, details of plans to implement the capping of a well and the drilling of a relief well to totally isolate the original well shall be included, to demonstrate that there is adequate planning or provision in place for these eventualities.

(8) The preferred response option may be described as follows-

- (a) source control shall be prioritised where possible to stop any release, prevent further release or escalation, or to contain released oil;
- (b) for incidents including well blow out where there is a continuous release in to the marine environment capping and containment devices and relief wells may be the preferred response option;
- (c) where oil enters the water environment and there is the option not to intervene in an oil pollution incident either because it is small or a great distance offshore and likely to dissipate naturally before causing any significant impact on the environment, then the preferred course of action is to monitor and review the situation; and
- (d) where the oil persists or weather into a persistent residue and may impact on the water body or on an environmentally sensitive resource, then intervention shall be considered.

(9) The operator may use chemical dispersants to disperse the oil and containment and recovery of oil may be necessary if the oil shall not disperse.

(10) Any release of oil shall only be based on the available response resources offshore.

(11) Any response strategy that are not immediately available to the operator including additional dispersant spraying capacity, spill containment and recovery equipment, well capping and containment devices or equipment that may be required to drill a relief well, but can be accessed if required, shall be clearly identified and a timescale provided for provision of the relevant resources.

(12) The oil pollution incident response strategy selected shall depend on the knowledge of the oil pollution incident, the quantity and type of the oil released, the transport, trajectory and fate of the released oil and the presence of sensitive receptors and each response is, therefore, unique and varies with the nature and circumstances of the incident.

(13) The aim of a response strategy shall minimise the severity of any impact on environmental sensitivities and to hasten the recovery process and return to normality.

### **113. Response Tiers (merge with earlier)**

(1) Oil pollution incidents shall be classified according to the response levels they are most likely to require and **not** the volume of oil pollution, unless this is supported by a location specific risk assessment for example, if a pollution incident requires the use of resources from a regional centre, this would be used to classify the necessary response level, irrespective of its size.

(2) Where in doubt of which classification to use, a default principle of over-classification is more desirable than under-classification and escalation.

(2) For consistency with the NCP, the following Tier definitions apply-

- (a) Tier 1 or local within the capability of the operator on site;



- (b) Tier 2 or regional, beyond the in-house capability of the operator; or
- (c) Tier 3 or National requiring national resources.

(3) The operator, owner of a facility or responsible person shall seek to develop their response capability in a way that allows any response to be escalated from Tier to Tier in response to an escalating or diminishing situation.

(4) The OPEP shall identify response arrangements according to Tier and the company's credible worst-case scenarios.

(5) A Tier 1 response shall be the lowest response level which requires resources to be available locally at or near the incident site which can be deployed as quickly as operational circumstance allow and depending on the characteristics of the oil this may or may not include the use of dispersants.

(6) A Tier 2 shall be for larger pollution incidents where local resources may be insufficient to deliver a proper response and may require resources from a regional centre shall be required and the requirement for Tier 2 response is that operators are expected to have the capability to mobilise and apply the resources within 2 to 6 hours of an oil pollution incident.

(7) A Tier 3 shall be for very large pollution incidents which may require resources to be supplied from national and international sources and operators are expected to have this capability mobilised and applied within 6 to 18 hours of an oil pollution incident.

#### **114. Oil Quantity Estimation**

(1) The operator shall, although oil pollution incidents are classified according to the response levels, estimate the quantity of oil discharged to environment.

(2) Where possible operational or production information shall be used to measure or calculate the quantity of oil discharged and where this is not possible the **BAOAC** shall be used in conjunction with the visual appearance of any oil on the environment to estimate the quantity of oil discharged to the environment.

#### **115. Survey and Monitor (guidelines)**

(1) Where oil pollution is not an immediate threat to environmental sensitivities and surveillance and modelling predicts that the oil shall disperse prior to reaching a water body or any environmental sensitivities, the most appropriate response method may be to allow it to disperse naturally.

(2) Where the oil is dispersing naturally then it shall continue to be surveyed and monitored to confirm the oil is diminishing, to track its course and ensure any changes to the nature of the oil do not alter its likely impact.

#### **116. Chemical Dispersion (guidelines)**

(1) Chemical dispersant use is generally inappropriate in shallow sheltered waters, in water depths of less than 20 metres and in waters extending up to 1.15 miles or on refined oil products such as diesel, gasoline or kerosene which shall disperse naturally prior to reaching the coast or any sensitive environments.

(2) The use of chemical dispersants shall, therefore, be dependent upon several factors including the quantity of oil, oil type, and temperature of the environment, time of year, prevailing weather and environmental sensitivities.

(3) The objective for any oil pollution incident response is to take the most appropriate action to minimise the impact on the environment.

(4) In determining whether the use of a chemical dispersant is an appropriate response strategy, the operators shall make a judgement between the environmental impact caused by the use of chemical dispersants and the likely consequences of allowing any oil to disperse naturally. **Error! Reference source not found.**

(4) The operator shall satisfy himself that the reservoir hydrocarbons are likely to be amenable to dispersant treatment, if identified as a component of the response strategy and where prior testing of dispersant efficacy is possible, it shall be undertaken in accordance with the **MMO guidelines**.

(5) Where dispersant treatment is identified as a potential component of the initial response, the OPEP shall confirm the type and quantity of dispersant held by the operator.

(6) Where the type of dispersant is critical, because of the nature of the reservoir hydrocarbons, this shall be clearly stated and available sources identified in case the stocks need to be replenished or the standby vessel/vehicle has to be relocated for any reason.

(7) Where the stand-by vessel is replaced, provision shall be made to maintain the dispersant response capability detailed in the OPEP.

(8) Just because dispersant is available does not mean that it shall be used

### **117. Dispersant Product Approval**

The operator, facility owner or responsible person shall only products that have been approved for use in the Uganda for the treatment of oil.

### **118. Dispersant efficiency**

(1) The operator shall assure himself or herself that the dispersants they use remain effective against the potential products which might be discharged from their installation, taking into account possible alterations in oil properties as a result of ageing or additional fields.

(2) Where installations handle a number of different oils, combined in changing percentages, justification that the selected strategies shall be effective, shall be provided within the OPEP.

(3) When OPEP's are submitted for re-approval every five years, the operator shall confirm the efficacy of the dispersant in use and if the oil properties remain the same as that during previous tests, further testing is not required, provided it can be demonstrated the oil properties remain the same.

(4) Existing stocks of dispersants shall be tested for efficacy every 10 years if they remain within an unopened container.

(5) Where the container is opened then testing is required every five years and full details on this procedure can be found in the MMO Approval and use of Oil Dispersants in Uganda.

### **118. Dispersant Use**

Approval from the licensing authority is required for any use of dispersant at sea in the following areas-

(a) in water depths of less than 20 metres; and

(b) in waters extending up to 1.15 miles beyond the 20 metre from the shoreline.

### **119. Force Majeure**

Where there is a risk to human life or to the safety of an installation or vessel, for example a danger from fire or explosion approved oil dispersants may be used without prior consultation.

**120. Dispersant Application (guidelines)**

(1) Chemical dispersants may be applied/sprayed from either vessels/ vehicles or helicopters or fixed wing aircraft.

(2) When using both vessel and airborne systems the operator shall guide the spraying equipment into the thickest patches of oil using aerial surveillance aircraft.

(3) All personnel with responsibilities for dispersant application shall be suitably trained and if standby vessels form an element of the proposed response plan, regular auditing shall be carried out to ensure its response commitments can be met.

**121. Containment and recovery (guidelines)**

(1) An offshore containment and recovery response is generally regarded as a less effective means of responding to an oil pollution incident in open water environments.

(2) However, when the oil is not amenable to dispersant or when the oil threatens environmental sensitivities, the OPEP shall contain a credible containment and recovery strategy unless it is clear that the oil is likely to be removed by natural processes.

(3) When developing a containment and recovery strategy, environmental sensitivities and response times, shall be taken into account.

(4) The OPEP shall contain-

(a) the procedures for response initiation, implementation and close out;

(b) the estimated resource mobilisation and deployment times; and

(c) the contact details for contracted containment and response resources.

(5) Where containment and recovery is to be provided by a contractor, evidence of contracts, with companies providing oil pollution incident resources shall be included within the OPEP application in a separate Justification Document for approval by NEMA/PEPD?

**122. Capping Devices**

(1) Where the use of a capping device is identified as a potential control option, the operator shall have suitable arrangements in place to implement such a response.

(2) The capping device shall be suitable for the subject well so that the capping device can be deployed to attach to the well structure and can be used under the expected well pressure, and the source shall be confirmed, including details of the nature of any contractual arrangements in place and relevant contractor contact details.

(3) The OPEP shall also include relevant operator contact details, confirming who is responsible for securing the device and implementing the necessary arrangements for deployment in the event of an incident.

(4) Where operators and their contractors have specific source control plans relating to the use of capping devices, the plans shall be referenced in the OPEP.

(5) The OPEP shall provide a clear breakdown of the anticipated timetable to take delivery of the equipment, to transport it to the well site, and to assemble, test and deploy the equipment to stop the flow from the well.

(6) The breakdown timetable referred to under subregulation (5) shall inform the interim response and allow assessment of potential impacts during that period pending cessation of the release.

### 123. Relief Wells

(1) Where drilling a relief well is identified as a potential control option, the operators shall provide details of their plans to initiate the management of such an operation, including details of the operator contacts responsible for initiating the relief well plan, and contact details of any contractor involved in the operation.

(2) Where relevant, confirmation shall be provided of any communication or contracts with third party providers, so that the response personnel are aware of the equipment and personnel that may be available and how to proceed to access those resources.

(3) NEMA may not expect operators to have a contract in place for the provision of an alternative drilling unit, but there shall be a plan in place to source an alternative drilling unit if one is required.

(4) The OPEP shall include details of any alternative drilling units or potential sources that have been identified, and confirm whether a specific type of the alternative drilling unit would be required to drill the relief well.

(5) Where relevant, confirmation shall be provided of any communication or contacts with third party providers, so that the response personnel know how to proceed to access an appropriate alternative drilling unit.

(6) Where an incident requires a relief well, the operator shall demonstrate that a relief well can be drilled in a timely manner.

(7) The operator shall confirm that-

- (a) sufficient finance, insurance or indemnity provision is available to cover the eventuality;
- (b) consideration has been given to relief well design;
- (c) procedures are in place to implement a relief well management plan, supported by relevant specialist personnel; and
- (d) consideration has been given to sourcing a rig in the event that the facility drilling the primary well is not available.

(8) The OPEP shall also provide a clear breakdown of the timetable-

- (a) to source an alternative drilling unit including provision for suspension of any current operations;
- (b) to relocate the alternative drilling unit to the relief well site; and
- (c) to drill the relief well and kill the original well.

### 124. Response Initiation

(1) Responsibility for any oil pollution incident response lies with the operator in liaison with regulators and government.

(2) The OPEP shall include formal procedures and details of the resources in place for initiating oil pollution incident response arrangements at all Tier levels.

### 125. Response Roles and Responsibilities (Guidelines)

(1) Roles and responsibilities for key personnel involved in a response operation, from initial oil pollution identification to response initiation, implementation and close out, whether offshore or in the onshore emergency response centre, shall be clearly detailed in the OPEP.

(2) Procedures for initiating pollution response contractors and clear reporting and notification procedures shall also be included in the OPEP.

(3) Checklists and flowcharts may be compiled by Tier for the different emergency levels or per role for key personnel and detailing roles or positions, rather than the names of individuals, reduces the need for regular updates to OPEP's.

(4) Where 3<sup>rd</sup> party tie-backs exist operators shall agree who takes the lead for oil pollution incident response and the agreed roles shall be clearly defined within the relevant OPEP.

(5) The OPEP shall include, but is not limited to, the following response actions-

- (a) an operations plan on how to initiate response actions, on a “who does what, when” basis;
- (b) a system of notification to regulators and other statutory bodies;
- (c) a system of notification for operations staff and contractors. Only emergency contact and procedural response details for the pollution response contractor are required within the OPEP; and
- (d) proceed
- (e) procedures for estimating oil quantity; and sampling of oil.

(6) The primary responsibility for initiating an oil pollution incident response lies with the operator and the OPEP shall contain emergency contact and procedural response details for any pollution response contractor.

### **126. Oil Pollution Incident Reporting**

(1) Every oil and chemical pollution incidents shall be reported in accordance with the guidelines issued by NEMA/PEPD.

(2) An operator shall, assess any potential transboundary impact and notify regulatory NEMA/PEPD in accordance with the existing notification requirements.

### **127. Other requirements**

(1) An operators shall have facilities and personnel available to work alongside their existing Emergency Response Centre (ERC) to accommodate the SOSREP and his associated team in an Operations Control Unit (OCU) which may be set up as a result of a pollution incident involving an offshore installation.

(2) The OPEP's shall include arrangements to reflect the potential involvement of the SOSREP and his team.

### **128. Personnel (guidelines)**

(1) OPEPs shall identify the Emergency Operations Manager (EOM) and the Operator's Representative or representatives who would attend the OCU and it shall be noted that the same person cannot fulfil both roles in an active OCU.

(2) Details of the personnel positions and, if considered necessary, the personnel names shall be included, as it is insufficient to state “a senior member of the company or similar shall undertake the role” and the personnel shall nevertheless be sufficiently senior to make decisions on behalf of the company.

(3) For certain operations, such as drilling undertaken using an alternative drilling unit, the response arrangements may necessitate that the EOM and Operator's Representative or representatives) are employees of the alternative drilling contractor, and this shall be clearly stated in the OPEP.

(4) The EOM and the Operator's Representative or Representatives, and other relevant response personnel, shall be suitably trained, as detailed in the OPEP guidelines, and be aware of the expectations and requirements when participating in or supporting the OCU.

### **129. Roles and Responsibilities**

The roles and responsibilities of the Emergency Operations Manager and the Operator Representative shall be included within the OPEP.

## **PART VIII- EMERGENCY RESPONSE PROCEDURE**

### **130. Response procedures and Oil Spill Countermeasures**

(1) Any person responsible for an unauthorised spill of oil or the facility owner from or at which an unauthorised spill of oil has occurred shall be liable for that spill and shall as soon as that person has knowledge of the discharge-

- (a) inform the Authority or the lead agency in the District of the location of the spill and as much as is known of the extent of the situation; and
- (b) undertake all necessary and reasonable actions to abate, contain, and remove pollution occurring or likely to occur as a result of the spill.

(2) Where the persons responsible or in charge are unknown or appear to the Authority or any other lead agency to be unable to abate, contain or remove pollution occurring or likely to occur as a result of the discharge, in an adequate manner, the Authority or any other lead agency may abate, contain or remove pollution occurring or likely to occur as a result of the discharge and may contract with and appoint agents who shall operate under the direction of the Authority or any other lead agency to abate, contain or remove pollution occurring or likely to occur as a result of the discharge.

(3) Any person or discharge cleanup organisation that renders assistance in abating, containing or removing pollution from any unauthorised discharge of oil may receive compensation from the Fund provided for the National Environment Management Act, provided that the Executive Director of the Authority or any other designated lead agency approves that compensation prior to the assistance being rendered.

### **131. Emergency Response Procedures**

(1) Operators shall demonstrate where the OCU fits into the company's Emergency Response Management structure.

(2) Roles and responsibilities of key personnel within the oil pollution incident emergency management team shall be identified.

(3) For each of the roles under subregulation (2), the communication routes between the OCU and ERC shall be described, to ensure effective communications with the SOSREP.

(4) The Representative of the operator shall be required to liaise between the ERC and the OCU and shall have sufficient knowledge to respond to questions posed by the SOSREP.

(5) Briefings shall be required at regular intervals to update the OCU of the current situation or developments.

(6) Communications, roles and responsibilities shall be tested and reviewed through exercises as provided in regulation....

### **132. Location of OCU**

(1) The proposed location and the facilities of the SOSREP OCU shall be identified in the OPEP which shall be inspected by NEMA personnel before approval is given under the EPC Regulations.

(2) Only one OCU location shall be identified, as the SOSREP and his team require clear instructions about where to convene in the event of an incident.

(3) If an operator considers that it necessary to include alternative locations, prior approval shall be sought from NEMA.

(4) If an operator wishes to relocate the OCU, or amend the facilities provided, the Offshore Environmental Inspectorate shall be contacted at the earliest opportunity.

(5) If the alternative proposals are acceptable, the operator shall subsequently be required to submit an update of the OPEP prior to EPC approval.

### **133. EPC Exercise Requirements**

(1) Production operators shall conduct one exercise involving the SOSREP, to include the establishment of an OCU, every five years or within 12 month of becoming a production operator.

(2) The timing for these shall be agreed at the SOSREP's or delegated person's visit to each operator.

### **134. Training and competency Requirements**

(1) Personnel with responsibility for oil pollution incident response shall be competent, both in oil pollution incident response and in the use of their OPEP.

(2) PEPD Oil Pollution Incident Response Training Guidelines for the for the oil and gas industry shall be followed as a minimum standard.

### **135. Exercise Requirements**

(1) Oil pollution incident exercises shall be conducted to test that the OPEP contains sufficient arrangements to respond to an oil pollution incident and that staff are familiar with OPEP procedures, in particular individual roles and responsibilities and reporting requirements.

(2) Lessons learned from those exercises shall be used to improve the response strategy, response arrangements, the OPEP and future exercise programmes.

(3) A programme of oil pollution incident exercises shall focus on different aspects of the response strategy thus encouraging understanding of and familiarity with the OPEP.

(4) In addition to the requirements within the table it shall be noted that for new operations, for example new or newly acquired installations or new drilling contracts or locations, an offshore oil pollution incident exercise shall be conducted at the earliest opportunity for all shifts.

(6) Details of the operator's training and exercise commitments shall be included in the OPEP, Exercises conducted shall be specific to the subject OPEP, and previous exercises in relation to other OPEPs shall not be taken into consideration.

(7) This shall be particularly relevant in the case of MoDU operations, where the exercise requirement shall be related to a specific OPEP and a specific well.

(8) In all cases, operators shall have systems and procedures in place to ensure that appropriate training is provided and maintained, and that the required exercises are completed.

### **136. Offshore OPEP Exercise**

(1) The aim of this exercise is to ensure that offshore personnel are familiar with their OPEP and associated responsibilities.

(2) The scenario chosen shall activate and test response in accordance with the OPEP.

### **137. Offshore Deployment of Tier 1 Dispersant Spraying Equipment**

(1) Where included in the OPEP as part of potential response strategy Tier 1 dispersant spraying equipment shall be tested at monthly intervals or in accordance with manufacturer's guidance if available.

(2) The operator shall test the spraying equipment not the dispersant.

### **138. Offshore Deployment of Tier 1 Oil Recovery Equipment**

Where included in the OPEP as part of a response strategy, Tier 1 recovery equipment shall be tested and deployed annually.

### **139. Onshore ERC Installations and Procedures**

(1) The aim of this exercise is to ensure that all personnel involved with pollution response are familiar with their OPEP and associated responsibilities.

(2) The scenario chosen shall be realistic leading to activation and therefore testing of the OPEP to at least a Tier 2 level.

(3) This shall involve exercising the communication interfaces between onshore ERC and offshore ERC and include any contracted response provider.

(4) Where exercises are combined with a safety exercise the scenario chosen shall meet the above requirements.

### **140. Installations producing oil**

(1) For every new production operation, OPEP's shall be tested within 12 months of the approval.

(2) The timing for the review shall be agreed with NEMA/PEPD.

(2) Existing production operators shall conduct one exercise involving the SOSREP, to include the establishment of an OCU, every five years.

### **141. Installations producing gas or gas condensate**

(1) An operator of gas installations is required to attend a workshop ran jointly by the PEPD and NEMA in order to satisfy the exercise requirements under these Regulations.

(2) The workshop under subregulation (1) shall be held every five years and the gas operators attending the workshop shall be deemed to have satisfied the exercise requirements under these Regulations.

(3) The operator shall be notified by PEPD/NEMA when the workshops shall be held.



(5) NEMA/PEPD shall determine on a case by case basis and operators who wish to attend the workshop shall contact NEMA/PEPD confirm their eligibility.

(6) An operator who does not attend a workshop shall be required to hold an exercise.

#### **142. Industry Deployment of Tier 2/3 Oil Response Equipment (guidelines)**

(1) Operators shall ensure that their Tier 2/3 oil response equipment and resources are tested and deployed every five years.

(2) It is recognised that many operators utilise the same response company and therefore each response company need only be tested once in every five years on behalf of each operator holding a contract with them.

(3) Results of the test shall be collated by the operator undertaking the exercise and feedback and learning shall be shared with other operators contracted to the same response company.

(4) NEMA/PEPD shall be made aware of exercises taking place and be provided with a copy of the final exercise report.

#### **143. Recording of Exercises**

(1) A record of all exercises undertaken by the operator shall be maintained at the location where the exercise was conducted either on or offshore.

(2) The records referred to under subregulation (1) shall include exercise scenario, aims of the exercise, lessons learnt and actions put in place in response to the lessons learnt.

(3) The records kept under this regulation shall be retained for five years and be made available to NEMA/PEPD during inspections or exercises.

#### **144. OPEP content and layout (Guidelines)**

(1) When the operator has gathered all the information required to produce its OPEP, the operator may format the plan in any manner to suit its own operational requirements.

(2) An operator shall write the OPEP which is an operational response document in a manner to aid the end user to quickly gather and assess information and determine and implement a suitable response strategy.

(3) As users of an OPEP shall be trained and familiar with its content and application it is unnecessary to include 'text book' type background information and descriptions on subject areas which may have little value during an actual response event.

(4) An operator may decide to have an OPEP combining both offshore and onshore response arrangements or alternatively have a separate document for each installation plus one onshore response plan.

#### **145. Combined Offshore and Onshore Plan**

(1) One OPEP document may cover the oil pollution incident response associated with an operators combined offshore and onshore response activities.

(2) Where an operator decides that one OPEP is best to manage the response arrangements, the operator shall ensure that procedures differentiating between offshore and onshore response arrangements are clearly defined, easily located and understood.

### **146. Separate Offshore and Onshore Plans**

- (1) An operator may decide to have a separate OPEP covering onshore response arrangements together with an installation specific offshore plan, or plans, which concentrate and focus on the response actions which can be implemented offshore.
- (2) The separation method under subregulation (1) allows the offshore installation OPEP to contain information which is only relevant to offshore roles, responsibilities and resources allowing a slimline offshore OPEP to be produced.
- (3) The roles, responsibilities and response procedures during an oil pollution incident shall differ according to location.
- (4) The actions taken offshore are limited to identifying and minimising the discharge, reporting of the incident, and responding to the incident using local resources.
- (5) The onshore response shall involve managing and responding to the incident and may involve management and mobilisation of regional and national resources.
- (6) Where an operator decides to have a separate offshore OPEP, it shall have a consistent approach to the onshore plan and both documents shall be cross-referenced and work in tandem.

### **147. OPEP Content**

- (1) This regulation provide guidance on what shall be contained within an OPEP and a suggested order in which information can be presented.
- (2) An operator may wish to alter the order referred to under subregulation (1) to take account of their own specific response arrangements and requirements.

### **148. Outside Front Cover**

- (1) The outside front cover of the OPEP shall clearly state the name of the operator and the installations covered within the scope of the OPEP.
- (2) Where the OPEP is provided in a ring binder the spine of the binder shall also state this information where possible.

### **149. Installation Diagram**

- (1) Diagrams showing the locality of the installation including but not limited to installations, tie-backs, structures, pipelines and the boundaries of the OPEP shall be included on the front page of the plan in a clear and legible manner.
- (2) Where there are separate or associated OPEP's covering linked infrastructure such as installation plan, pipeline plan and onshore terminal, each plan shall clearly identify the boundaries for that plan and ensure that procedures differentiating between each plan are clearly defined, easily located and understood.

### **150. Installation Details**

- (1) As a minimum, the installation detail shall include the operator, latitude and longitude of the installation, the block number; distances to nearest to other International borders, water depth; hydrocarbons produced; hydrocarbon inventory; if the field/well is HPHT and oil pollution incident response resources available offshore.
- (2) The operator shall include other information it believe shall aid an end user to quickly establish and identify relevant installation information.

(3) The information under subregulation (2) may be best represented in a table to allow easy reference for any OPEP user.

### **151. Offshore Pollution Incident Reporting**

(1) Details of how to report offshore pollution incidents from initial identification, through to installation staff with pollution response responsibilities and thereafter to response and regulatory authorities shall be included.

(2) The information under subregulation (1) shall include internal and external communication requirements in addition to any legal reporting requirements.

### **152. Oil Pollution Modelling**

(1) Details of how oil pollution modelling shall be implemented during a pollution incident shall be contained within the response section.

(2) Information shall include if the modelling would be carried out in-house or by a contractor.

(3) Where the modelling is to be carried out by a contracted organisation the information shall indicate how the operator shall initiate the modelling.

(4) The OPEP shall contain a pictorial summary of the results of oil pollution modelling undertaken when developing the plan.

(5) The summary under subregulation (4) shall show the estimated direction of movement of oil in relation to immediate locality and potential landfall.

(6) Information detailing the model program and parameters used may be submitted as part of the OPEP application for approval, in a separate Justification Document.

### **153. Aerial Surveillance**

The following information shall be included-

(a) contact details for contracted aerial surveillance provider;

(b) procedures for aerial response initiation;

(c) estimated resource mobilisation time; and

(d) if the service is provided by a contractor evidence of contracts, with companies providing oil pollution incident resources shall be included within the OPEP application in the Justification Document for approval.

### **154. Environmental Sensitivities at Risk**

(1) Assessment of environmental sensitivities at risk shall be undertaken following an oil pollution incident including the use of environmental sensitivity maps, visual assessment of the site or communication with **relevant regulators/agencies/authorities.**

(2) Results of the assessment under subregulation (1) shall be taken into account when developing a response strategy.

### **155. Chemical Dispersant**

(1) If chemical dispersants have been identified as part of the potential response strategy, details shall be included within the OPEP of how these shall be sourced and deployed.

(2) Only the name or type, quantity and location of chemical dispersants that may be used during oil pollution incident response shall be included within the OPEP.

(3) The background details of dispersant efficacy and testing shall be required during the OPEP approval and shall be contained within the Justification Document.

### **156. Containment and Recovery**

(1) Where containment and recovery are part of the response strategy the following shall be included-

- (a) procedures for response initiation, implementation and close out;
- (b) estimated resource mobilisation and deployment times; and
- (c) contact details for contracted containment and response resources.

(2) Where the containment and recovery is to be provided by a contractor, evidence of contracts, with companies providing oil pollution incident resources, shall be included within the OPEP application in the Justification Document for approval.

### **157. Emergency contact details (guidelines)**

(1) A list of emergency contact details shall be contained within the OPEP and shall include contact details for regulatory authorities and external response organisations in addition to operators own internal and offshore emergency contact details.

(2) The list shall include contact details for installations or pipelines within the vicinity to allow early notification of a discharge event which may affect the installations or pipelines or be as a result of the installations or pipelines.

(3) Where possible, emergency contact details shall be listed on a single sheet within the OPEP to enable quick access and aid updating of contact numbers.

(4) Listing the name of the emergency role rather than individual names shall reduce the need for regular updates to OPEP's when staff changes occur.

(5) The contact details under this regulation shall be regularly checked and updated to ensure their accuracy.

### **158. Oil Pollution Incident Scenario and Hazard Identification**

(1) A **concise summary** of the worst case oil pollution incident scenarios and hazard identification shall be included in the OPEP.

(2) As a minimum summary shall-

- (a) contain a hydrocarbon inventory;
- (b) summarise the credible worst-case oil pollution incident scenario's on which the plan is based;
- (c) state the characteristics of the oils being handled;
- (d) summarise the environmental sensitivities at risk; and
- (e) include the sensitivity data for the surrounding areas with the seasonal alterations.

**159. Data Directory**

(1) The data directory section of the plan shall include information referenced within any response flow chart to aid the user.

(2) This may include but is not limited to PON1 reporting forms and guidance, response resources and information sources such as sensitivity data for the surrounding areas, with the seasonal alterations (summary only); conversion tables to allow conversion of units to aid reporting requirements for example barrels to tonnes;

(3) The Bonn Agreement Oil Appearance Code guidance to assist in the quantification of oil; and oil coverage estimation charts.

**160. Training and Exercise Requirements**

(1) Details of training and exercise commitments, (see Sections 10, 11 and 12), shall be included in the OPEP.

(2) They shall highlight the levels of training required for response personnel along with refresher timescales and the frequency and scope of OPEP exercise commitments.

(3) This shall be placed towards the rear of the plan.

**161. Supplementary Information to OPEP**

(1) Operators are reminded that the OPEP is a response document.

(2) If operators see a need for background or supplementary information that is not directly associated with response this shall be include in a separate supplementary information section at the end of the OPEP.

(3) This may include background information for training purposes, for example regulatory information.

**162. Justification Information**

(1) Only information required during an oil pollution incident response shall be included in the final OPEP.

(2) Supporting information shall be submitted separately in a Justification Document which may aid the regulatory review and assessment process.

(3) If applicable other regulatory applications e.g. submitted environmental statements may be referred to in order to prevent duplication of information.

(4) The justification document shall be reviewed as part of the OPEP approval process but shall not be included within the final OPEP.

(5) The content of the OPEP justification document shall be aligned with the scope of the OPEP, and details of the assumptions, calculations, models and impact assessments that have been used to develop the OPEP can be included in the justification document, so that only summary information directly pertinent to the response strategy is included in the OPEP.

(6) The following list of examples is not exhaustive but illustrates the type of information that could be submitted as part of this Justification Document-

- (a) justification/discussion on the acceptability of the chosen response strategies in the OPEP;
- (b) background details on chemical dispersant efficacy and testing;
- (c) oil pollution modelling background information;

(d) wider information on environmental sensitivities; and

(e) evidence of contracts if aerial surveillance, containment and recovery services and contracted caps are provided by a contractor.

(6) In all cases, operators shall ensure that the information provided in the OPEP and associated justification document is consistent with related documentation, including well design or engineering plans, safety risk assessments and relevant environmental applications.

### **163. OPEP Submission**

(1) A paper copy of the OPEP, in its entirety, shall be submitted to NEMA for approval.

(2) OPEPs shall be submitted within a ring binder to facilitate inclusion of revisions and appendices.

(3) An electronic version of the initial submission and the controlled copy is also required to be submitted along with the NEMA submission sheet.

(4) Operators shall ensure that all amendments are pre-punched to fit the original binder.

(5) Although paper copies of the OPEP are required an electronic/CD/DVD copy may be submitted at the same time and an electronic version of the OPEP may be placed on a company intranet site.

(6) NEMA shall acknowledge receipt of OPEP submissions electronically within one working day.

(7) The acknowledgement shall include a reference number for each plan, which SHALL be used in all future correspondence to help expedite queries.

(8) Prior to the approval, an operator shall notify NEMA as soon as they become aware of any changes to the proposed operations or dates to allow NEMA to manage any implications on the approval process for instance when spud dates are changed, operators shall resubmit the page containing this information to NEMA as soon as possible by email: quoting the name of the installation, pipeline and the individual OPEP reference number in the subject box.

### **164. Changes affecting existing OPEP**

(1) Where major changes occur that affect or could affect the validity or effectiveness of an OPEP, operators shall either submit a new OPEP or amend the existing OPEP as soon as possible.

(2) The submission shall include the NEMA OPEP submission cover sheet filled in appropriately.

(3) Failure to do so may result in a delay in recording the OPEP.

(4) Operators shall submit all changes to NEMA who shall advise whether the changes are considered significant.

(5) Where changes are significant, NEMA, in conjunction with consultees, shall decide whether resubmission, consultation or re-approval is required.

(6) The decision under subregulation (1) shall be on a case by case basis taking into consideration-

(a) changes to infrastructure, response arrangements, oil pollution incident reporting structure, significant change in hydrocarbon inventory, environmental sensitivities, location and timing; and

(b) change of ownership of facility where substantial change, re-approval required.

(7) The new or amended OPEP shall be approved prior to implementation of changes.

(8) Operators shall have systems and procedures in place to ensure that any updates to the OPEP are communicated to all copyholders.

### **165. Review**

(1) All approved OPEPs shall be reviewed and resubmitted to all consultees no later than five years after the initial submission.

(2) Operators shall submit plans at least 2 months prior to the end of this period to ensure an approved OPEP remains in place. These OPEPs shall be submitted as per section 15.1.

(3) OPEP's are active documents that shall be reviewed regularly and amended following any lessons learnt from oil pollution incidents or exercises and updated regularly to reflect organisational changes.

(4) OPEPs prepared and accepted using OPEP Guidance issued in April 2009 of this guidance shall remain valid until their original expiry dates.

(5) The operator shall take account of worst case scenario updates and new response provisions which reflect this version of the guidance and submit updates to their plans before their expiry dates and new MODU or platform drilling operations shall take account of the provisions of these Regulations.

### **166. Quality Control (Guidelines)**

(1) The final draft of the OPEP shall be reviewed by senior operator personnel involved in the proposed activity, before it is submitted to NEMA for review.

(2) Operators can informally approach NEMA to seek regulatory guidance on the development of an OPEP, but once the review draft is submitted to NEMA it shall be listed on the NEMA Oil & Gas website and copies shall be released to enquirers upon request.

(3) Quality control checks are therefore essential to ensure that the content is accurate and that the OPEP is relevant to the nature of the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements.

(4) Information within different sections of the OPEP shall be consistent with other environmental submissions relating to the same activity for instance with respect to well names and numbers, infrastructure details or worst-case well blow-out flow rates.

(5) The operator shall not make submissions that have not been subject to a quality control check, and poor quality submissions shall inevitably lead to a delay in the determination, and may lead to approval being withheld.

(6) Where a submission is rejected due to poor quality, any re-submission shall also be subject to a further two month review period.

(7) An operator shall not "cut and paste" information between OPEPs where the information is not relevant or specific to the nature of the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements.

(8) Cutting and pasting may lead to errors when responding to incidents or to operators taking responsibility for actions and procedures that do not reflect their operations.

(9) Where abbreviations are used, there shall be a glossary of abbreviations appended to the submission, and if figures or tables are included, they shall be legible, intelligible and clearly titled.

(10) Figures shall normally be included to display the modelling results and, where appropriate, figures and accompanying tables may also be recommended to clearly identify the infrastructure covered by the scope of the OPEP.

### **167. Pre submission process**

(1) Prior to submission to NEMA, the operator shall consult UWA,..... if the OPEP is for installations or installations in an environmentally sensitive area such as special area of conservation or special protection area.

(2) Failure to consult appropriately prior to OPEP's submission to NEMA may delay the granting of approval and result in the plan being returned to the submitting operator.

### **168. Consultation and Approval**

(1) The final review drafts of the OPEP shall be submitted to NEMA as a ring-bound hard copy, to facilitate the inclusion of revisions; and in an electronic format by e-mail to .... or on a CD, so that redacted copies can be provided in response to requests from interested parties.

(2) The OPEP shall be accompanied by a completed submission cover sheet, which provides basic information on the scope of the submission and is used by NEMA to assess any additional requirements prior to sign-off, including any inspection requirements.

(3) NEMA's OPEP submission cover sheet shall be submitted with any OPEP application for amendment or review and provides a brief summary of the reason for the plans' submission, for example amendments made within the plan; five year review; new plan for full approval; amendment of plan, appendix to plan and controlled copy.

(4) Where the OPEP guidelines indicate that additional consultees are appropriate, copies of the OPEP shall also be forwarded to the appropriate bodies, and details of the additional consultation shall be included in the OPEP.

(6) All the consultees provided with a copy of the OPEP shall be advised to forward their comments to NEMA, so that they can be taken into consideration during the review. Comments relating to OPEP's submitted for approval shall be passed directly and solely to NEMA.

(7) The Department shall collate comments, incorporate any of its own and then pass a combined response to the applicant (operator or appointed agent).

(8) When an OPEP is approved, NEMA shall issue an approval letter to confirm compliance with the other applicable regulations (Waste management) Regulations and.....

(9) All copy holders shall receive a paper copy of the final approved plan or a controlled copy updated with any changes which have been required as part of the approval process.

(10) An electronic copy shall also be provided either by email or on a CD.

(11) The controlled copies issued to NEMA shall be in a ring bound format to facilitate the inclusion of appendices or addenda and shall be accompanied by a submission sheet identifying it as a controlled copy.



(12) Approval of an OPEP shall not constitute approval of the operations covered by the plan and operators are responsible for ensuring compliance with all other regulatory requirements.

#### **169. Comments on Review Drafts (guidelines)**

(1) OPEPs shall be reviewed and assessed on case-by-case basis, taking account of the nature of the installation, the proposed operations, the environmental sensitivities the potential environmental impacts and the proposed response arrangements and the comments received from consultees.

(2) The NEMA response to the submission shall be specific to the subject OPEP, although some advice, comments, and clarification of the guidance or policy, may be relevant to other OPEPs already submitted for review or the preparation of future submissions.

(3) Operators shall have systems and procedures in place to ensure that there is effective dissemination of relevant comments.

(4) NEMA comments on submissions shall be addressed by the operator, and the operator shall not ignore the comments or to re-submit applications where specific comments have not been addressed. Both shall inevitably delay completion of the review process.

(6) Where there are valid reasons for not addressing a particular comment by NEMA, the operator shall be explained in correspondence covering the re-submission, or discussed with NEMA as soon as possible.

(7) Operators shall also ensure that they fully understand the comments received, rather than basing a re-submission on assumptions or only partially addressing the comments.

(8) All communications relating to the comments on an OPEP submission shall be submitted by e-mail to.....

#### **170. Cessation of operations**

(1) An operators shall inform all plan holders, NEMA, other control copy holders and consultees when the OPEP is no longer required due to the development not progressing, exploration or drilling operation ceasing or the completion of decommissioning of an installation.

(3) Subregulation (1) is particularly relevant to drilling operations since OPEP's addressing drilling shall state the time period for which they are applicable to further identify when a plan is obsolete.

#### **172. OPEP approval**

(1) Once any comments issued as part of the regulatory assessment and review has been satisfactorily addressed, operators shall be notified of approval under the OPRC and EPC Regulations.

(2) Following approval, a hard-copy (paper) and electronic copy (pdf format) of the OPEP, the "Controlled Copies", shall be submitted to NEMA for retention by the Offshore Environmental Inspectorate.

#### **173. Post OPEP approval**

After approval of the OPEP, the following actions shall be completed-

- (a) at least one complete copy of the OPEP shall be available on each installation and onshore response centres shall have copies of all OPEP's issued to them;
- (b) emergency contact details shall be regularly checked and updated to ensure their accuracy;
- (c) operators shall ensure that all personnel with pollution response duties are adequately trained and this training is refreshed at the required intervals;

- (d) oil pollution incident exercises shall be completed in compliance with requirements and where applicable, any learning shall be cascaded throughout responsible personnel and the OPEP strengthened;
- (e) where oil pollution occurs, a post incident investigation shall be conducted to identify actions which could be taken to prevent similar pollution incidents and strengthen the response strategy and OPEP;
- (f) whilst conducting offshore inspections NEMA Environmental Inspectors may gather evidence to prove compliance with exercise requirements and may check training records for offshore personnel to ensure compliance with training requirements; and
- (g) during onshore EPC exercises, NEMA may request a list of personnel responsible for responding to oil pollution incidents and evidence of training which may include details of when personnel were last trained and by whom.

#### **174. OPEP Maintenance**

- (1) OPEPs are “living documents” and shall be reviewed on a regular basis to ensure they remain current and applicable to the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements.
- (2) Where appropriate, OPEPs shall be updated to take account of any changes relating to the operator.
- (3) Where the changes are significant, such as a new operator or the addition of a new activity, the revised OPEP shall normally be subject to a two-month consultation period prior to any acceptance of the changes.
- (4) Where the changes under subregulation (3) relate to the strengthening of the response arrangements, it may necessary to have formal consultation, although NEMA may still comment on the changes and enter into a dialogue with the operator or specific consultees.
- (5) When reviewing an OPEP, the operator shall take full account of these Regulations, the OPEP guidelines and best practice.
- (6) When reviewing an OPEP to include new exploration, appraisal, development and production, drilling operations or new work overs, intervention, abandonment or decommissioning operations relating to hydrocarbon producing wells, the requirements detailed in this regulation shall also be taken into consideration.
- (7) In addition to ad hoc operator reviews, all OPEPs shall be subject to a formal review that shall be undertaken at least every five years after the date of initial submission.
- (8) Where the operator is still carrying out operations covered by the OPEP, it shall be revised to take account of any new or amended guidelines and re-submitted to NEMA and the relevant consultees at least two-months prior to the date of “expiry” of the five-year validity period.
- (9) Although the OPEP shall be reviewed every five years, operators may submit a revised document for formal review at any time during that period.
- (10) Following approval, the amended submission shall be forwarded to all controlled copy holders in a timely manner.

#### ***Reporting and Notification***

**175. Reporting unauthorized releases of oil**

An oil spill report shall be made where-

- (a) any amount into or threatening state waters inland or groundwater;
- (b) any amount into a storm drain;
- (c) any amount onto city and district streets if there is a significant present or potential hazard to human health and safety, property, or the environment;
- (d) any amount onto highways and freeways if there is a significant present or potential hazard to human health and safety, property, or the environment.
- (e) any amount onto land, if there is a significant present or potential hazard to human health and safety, property, or the environment;
- (f) crude oil release of more than five barrels from a pipeline or flow line in a rural area, if no threat to waters bodies.

**176. When to Call**

The operator/person-in-charge/responsible person shall call-

- (a) immediately upon learning of the release when it can be done safely; and
- (b) spills to water bodies shall be reported immediately but not later than 30 minutes after the discovery of the spill or threatened spill and also a Qualified Individual or a contracted oil spill response organization shall also be contacted within this time.

**177. Spill Notification Updates (Guidelines)**

(1) Where the initial reported incident information was inaccurate or incomplete or if the estimate of the volume spilled or at risk of spilling has significantly changed, this shall be reported to the National Response Center.

(2) For oil spills on any water body, an updated estimate of the volume spilled and the volume at immediate risk of spilling shall be reported to the National Response Centre/NEMA/PAU/PEPD when there is a significant change in the reported amount, but not less than every 12 hours within the first 48 hours of response.

(3) The State On-Scene Coordinator or Committee through the National Response Centre may increase or decrease this timeframe, as appropriate and updated spill volume information included in the Incident Action Plan developed through the National Response Centre shall meet this requirement.

**178. Notification exercise**

(1) Notification exercise shall be designed to rehearse alert and mobilization procedures of the response teams and executed by phone and other communication means, according to the response plan.

(2) The notification exercise may also be used to test-

- (a) the communication systems;
- (b) the existence of personnel;
- (c) the displacement options and the celerity of the respective arrangements; and

(d) to evaluate the aptitude for a quick and accurate transmission of information.

(3) The notification exercise may have the duration of one to two hours and may be carried out at any time of the day or night, with or without warning.

### **179. Table top exercise**

(1) The table top exercise shall consist of interactive discussions among the members of a response team about a scenario without involving mobilization of personnel or equipment.

(2) The table top exercise shall be carried out in a conference room or in a series of rooms connected by telephone lines and are concentrated on the functions and actions of the individuals, on the interactions among the various parties and on the development of information and response strategies.

(3) A table top exercise shall last for two to eight hours and it shall be previously announced in order to ensure personnel's presence.

### **180. Equipment mobilization exercise**

(1) The equipment mobilisation exercise drills shall involve the mobilization of oil spill response equipment from specific sites, in response to a spill case scenario and according to strategies established in the plan for that scenario.

(2) The equipment mobilisation exercise shall be used to test the response capacity of a local team to a Level 1 and Level 2 spill, as defined in the contingency plan and to promote experience pertaining to the local conditions and different spill case scenarios and enhance the individual capacities and team work.

(3) The parties who normally take part in the response referred to under subregulation (2) are involved so that their availability and capacity may be evaluated.

(4) The parties undertaking the exercise may invite other organizations to act as observers.

(5) The equipment mobilisation drill shall typically have duration of four to eight hours and shall be frequently repeated until the teams are familiarized with the equipment.

(6) In certain cases, an equipment mobilization drill may be carried out together with a planning or incident control drill.

### **181. Incident control exercise**

(1) The incident control exercises shall be designed to simulate different aspects of an oil spill incident.

(2) Although some internal exercise is beneficial in the initial phase of a team's development, they shall be conducted only with the people who are involved in an emergency to ensure that the team is properly tested and trained.

(3) The incident control drills shall last a whole day, being followed by review sessions the following day.

### **182. Requirements for oil spill response exercises**

(1) All the public and private bodies, compelled to have contingency plans in Uganda, shall establish a program of oil spill exercise with the following minimal requirements-

(a) quarterly notification exercise;

(b) planning, equipment mobilization and incident control drills, which may be conducted separately;  
and

(c) a full scale oil spill response exercise, including mobilization of resources, with the minimum periodicity of three years.

(2) The oil and gas industry and government authorities shall annually conduct a Level 2 exercise to verify the status of preparedness of the level 2 plans in the country.

(3) Spill response exercise shall be followed by a briefing session in order to enhance the lessons learned and the recommendations for improvement of the contingency planning oil spill response procedures.

(4) Spill response exercise announcements and complete reports of the exercises, including recommendations, shall be forwarded to the National Oil Spill Response Committee at least three weeks before the training commences.

### **183. Exposure and risk assessment**

Spill responders shall perform exposure assessments and risk assessments in the context of a spill response.

### **184. Types of Exposure and Risk Assessments**

(1) Each spill response shall require a continual evaluation and re-evaluation of the health and safety risks posed by a spill.

(2) The assessment of possible exposures to a spill and the human and environmental risks that the spill shall start with the evaluation of the spill report.

(3) When the spill response team arrives on the scene of a spill, the operator shall perform another type of "risk assessment."

(4) Each spill responder shall plan for and take the necessary steps to protect their personal health and safety when responding to a spill and the responder shall-

(a) try to determine what material was spilled before arriving on the scene;

(b) find out what contaminants may be involved, whether they are toxic, and what symptoms indicate exposure; know what measures shall be taken to protect the health and safety of the responder as well as that of the public; and

(c) where the spilled contaminant is not, prepare for and approach the scene as if a toxic hazardous material is involved until you are able to determine otherwise.

(5) In accordance with these Regulations and guidelines issued by NEMA and assessing the spill and spill scene to ensure the personal health and safety of the spill responder, protection shall entail an assessment of possible exposure to contamination and assessment of risk.

(6) The site investigation phase of a spill response may be taken as an exposure assessment.

(7) Risk assessment shall not be performed by spill responders.

### **184. Exposure Assessments**

(1) The responder shall perform site investigation to establish where the contamination is and to determine if anyone is being exposed to this contamination by virtue of breathing it, drinking it, or otherwise coming into contact with it.

(2) An "exposure assessment" is the process of measuring or estimating the intensity, frequency, and duration of human exposures to a contaminant currently in the environment or of estimating hypothetical exposures that might arise from the release of a contaminant into the environment.

(3) An exposure assessment, in its most complete form, describes the magnitude, duration, schedule, and route of exposure; the size, nature, and classes of the human populations exposed; and the uncertainties in all estimates.

(4) Where no one is or may be exposed to the contamination, it is possible to judge that there is no risk and, therefore, no need to clean up the spill.

(5) The spill responder may be confronted with evaluating such assessments as performed by spill response contractors hired by NEMA/PAU/PEPD or by responsible parties; for example, a responsible party may use such an assessment to support the argument that no clean-up is required or that a clean-up can be terminated given that current and future exposures are estimated to be below levels that would indicate a health or an environmental concern.

(6) In situations referred to under subregulation (8), the operator or responsible party may request the assistance of a standby contractor or of the **National Command Centre staff** to help evaluate this kind of an "exposure assessment.

### *Investigation Procedures.*

#### **185. Risk Assessments**

(1) The operator or responsible person shall conduct an exposure assessment every time he or she investigates a spill site.

(2) A risk assessment shall involve characterizing the potential adverse health effects of human exposure to environmental hazards and includes the following steps-

- (a) description of the potential adverse health effects based on an evaluation of epidemiologic, clinical, toxicological, and environmental research;
- (b) extrapolating from the results under paragraph (a) to predict the type and estimate the extent of health effects in humans under given conditions of exposure;
- (c) making judgments as to the number and characteristics of persons exposed at various intensities and durations; and
- (d) ultimately judging whether there is a risk to public health and what the overall magnitude of the risk is.

(3) Spill responders are not required to conduct quantitative risk assessment.

(4) The operator shall not use the products of risk assessments including the health-based standards and water quality criteria promulgated by the **ministry of health**.

(5) Where the investigation reveals the presence of a particular contaminant for which a standard does not exist, the operator shall contact the local health department (who may consult with the Ministry of health to request their assistance in evaluating what concentration of that contaminant constitutes a health risk.

#### **186. Applications of Exposure and Risk Assessments in Spill Response**

(1) The operator or responsible person shall apply various types of exposure and risk assessments to some degree in each spill response.

(2) Spill responders shall conduct exposure assessments, site investigations or risk assessments.

(3) Quantitative risk assessments shall be conducted for spill responders by the ministry of health and the operator or responsible parties may submit a quantitative risk assessment for review as part of their spill clean-up documentation.

(4) The Ministry of health shall also review the assessments referred to under subregulation (3).

(5) The various applications of exposure and risk assessments in the spill response process may be illustrated in the context of four situations that are often faced when evaluating contamination from a spill including-

- (a) an obvious safety and health hazard exists and shall be remedied immediately; for example of this situation would be detecting explosive vapor levels in an enclosed structure;
- (b) clean-up standards available for all of the constituents of concern for comparison to site conditions;
- (c) clean-up standards not available for all of the constituents of concern for comparison to site conditions; and
- (d) the clean-up that cannot achieve the established clean-up levels and a decision shall be made as to whether the clean-up shall continue or be terminated.

(6) Where the spill responder moves from **Situation 1 through Situation 4**, the application of exposure and risk assessment techniques may become progressively more complex, more quantitative, more time consuming, and demand more specialized skills.

(7) The operator or responder shall ensure that spill responders have the time and resources to conduct these assessments if other spills are to be addressed.

(8) The operator or responsible person shall defer to other experts to conduct any predictive exposure assessment or quantitative risk assessment necessary to resolve situations 3 and 4.

### **187. Situation 1: An Obvious Safety and Health Hazard Exists (guidelines)**

- (1) Some spills create safety and health hazards that are very easy to detect and that demand quick action.
- (2) There may be no real need to conduct any formal quantitative exposure or risk assessment; the hazards and risks are clear.
- (3) The situations referred to under subregulation (2) include –
  - (a) the need to take emergency response actions to contain a surface spill before it enters a surface-water supply;
  - (b) eliminate explosive vapor levels in a basement or sewer; or
  - (c) evacuate people from the vicinity of a burning railcar that is carrying a hazardous material product and other examples include: almost any spill involving a fire, free product located near an ignition source or in a public building, and gross contamination of a drinking water well.
- (4) A spill responder shall use a few, readily available criteria for judging that a hazard exists (or no longer exists after emergency response measures are taken), including such safety thresholds as the lower explosive limits for different volatile substances.
- (5) Once the emergency has been alleviated, however, a spill can still require additional clean-up where exposure and/or risk assessments play a part.

**188. Situation 2: Clean-up Standards are Available**

(1) Each investigation shall be directed at defining the full extent of contamination and measuring the contaminant concentrations at each point of human exposure, e.g., each domestic water supply well and this is, in effect, an exposure assessment.

(2) To judge whether corrective action is warranted, it is necessary to compare these "exposure point" concentrations for each contaminant with some human health and/or environmental standard or criterion for that contaminant.

(3) Where the exposure point concentration for a contaminant exceeds its standard, a clean-up is clearly warranted and shall continue until the standard is met, or until a decision is reached that it is no longer technically feasible or cost effective to continue the clean-up.

(4) A practical example of the situation in subregulation (1) is comparing benzene concentrations detected in drinking water samples to the drinking water standard for this compound.

(5) The health-based standards are usually developed through the application of quantitative risk assessment methods.

(6) There are a variety of health-based standards and other criteria available for comparison to exposure point concentrations; most are applicable to contaminants in ground or surface waters.

*Remediation***189. Situation 3: Clean-up Standards are not available**

(1) Health-based standards or other quality criteria are not available for every possible contaminant of concern in a spill.

(2) Where there is standard, you do not have the means to judge whether the contaminant concentrations detected in the air, water, or soil warrant corrective action in order to protect human health and/or the environment, nor for deciding when a clean-up could be terminated for example, there is no standard for methyl-tertiary butyl ether (MTBE), which is becoming a more common constituent of gasoline products (to replace tetraethyl lead) and is very soluble in water.

(3) Risk assessment techniques can be used to develop a reference standard or to quantify the degree of risk represented by the exposure point concentrations measured.

(4) Spill responders do not participate in the application of risk assessment techniques in this situation short of supplying the exposure information and it is the responsibility of the local and/or state health departments and the BSPR Central Office to provide you with the appropriate standards to apply as clean-up target levels.

*Oil Spill Occurrence Risk Assessment***190. Dangerous activities**

(1) The statistics data available show that the major contributions for the total oil spill in the Uganda is originated by industrial discharges, transportation of petroleum products, discharge of used oils by garages among others.

(2) The greater spill causes include charge/discharge, routine operations, sinking, stranding and refuelling, collisions, fires and explosions.



(3) The National Oil Spill Contingency Plan shall identify the activities which represent a risk, their situation, the probable type of oil, and the likely dimension of the spill.

### **191. Oil activities**

(1) The risk of occurrence of hydrocarbon spills related with petroleum activities and midstream operations may occur in oil installations, platforms, storage facilities, vessels which transport crude or refined products, blow outs during operations (very low probability), accidental leaks from pipelines (medium to high probability), leaks from refineries and central processing units and intentional (and criminal) dump by tanks.

(2) Based on the results of the applied models which assumed zero response it is very likely that some of the spills which take place in oil operations areas in Uganda may spill outside Uganda's jurisdiction.

(3) The probable types of oil in a spill incident are-

- (a) crude oils from the Ugandan production fields;
- (b) heavy fuel oil in tankers, refinery, central processing units, storage facilities or in supply barges;
- (c) refined products, mainly diesel and lubricating oils.

### **192. Primary Authority for Oil Spill Response**

(1) This Section sets forth the roles and responsibilities of those government agencies with primary authority for oil spills in California.

(2) Oil spill incidents often involve a response from multiple agencies having different capabilities, responsibilities, and functions.

(2) In some circumstances, the jurisdictional mandates of several agencies may overlap. Use of the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) to organize spill response ensures that inter-agency responsibilities are collectively addressed (see Section IV)

### *Oil Spills In or Threatening State Waters*

#### **193. Surface Waters**

(1) The NEMA has the primary authority to direct prevention, removal, abatement, response, containment, and clean-up efforts with regard to all aspects of any oil spill in the waters of Uganda, including decisions regarding in situ burning, dispersants, and clean-up agents.

(2) The **NEMA shall serve as the State On-Scene Coordinator** (SOSC) which means it has the overall authority for managing and conducting incident operations during the response to the oil spill, and shall manage the incident consistent with NOSCP and also represents the government in any coordinated response efforts with foreign nations.

(3) Incident management shall generally include the development of objectives, strategies and tactics, ordering and release of resources, and coordination with other appropriate response agencies to ensure that all resources are properly utilized and that this coordinating function is performed in a manner designated to minimize risk to other persons and to the environment.

(4) Oil spills occurring in waters with wildlife shall be monitored by NEMA in collaboration with the Uganda Wildlife Authority.

#### **194. Groundwater**

- (1) The Directorate of Water Resources shall coordinate the clean-up of groundwater of groundwater pollution and spills to soil that threaten groundwater.
- (2) The Uganda Wildlife Authority and Department of Fisheries maybe involved if wildlife was impacted or at risk.
- (3) Oil spills threatening or impacting groundwater are likely to be long-term remediation projects.
- (4) The Directorate of Water Resources shall develop and enforce objectives and implementation plans that shall best protect the country's overall water quality both surface and ground, recognizing local differences in climate, topography, geology, and hydrology and develops a "Basin Plan" for their hydrologic areas, issues waste discharge requirements, can take enforcement action against violators, and monitors water quality.

### **195. Oil Spills on Land**

- (1) The PEPD/PAU which is the principal State agency responsible for regulating all oil, gas operations Uganda and in the event of an oil spill from a drilling rig or producing facility, PEPD/PAU is responsible for determining the appropriate actions to be taken to control and secure the source and also have the authority to determine that an emergency exists.
- (2) When a pollution incident occurs, PEPD/PAU may send a district representative to advise the incident commander on corrective or mitigation actions.
- (3) The Department of Occupational Health and Safety and NEMA shall-
  - (a) provide technical advice regarding the safe handling of suitable disposal of toxic materials;
  - (b) assist in the assessment, evaluation, and control phases of hazardous material incidents;
  - (c) bring equipment, technical, and field personnel, toxicologists, and chemists, and assists in data collection;
  - (d) maintain an Emergency Reserve Account for hazardous material incidents to assist local governments and other government agencies;
  - (e) designate locations for the disposal of hazardous waste in accordance with the National Environment (Waste Disposal) Regulations and issues emergency Environmental Protection Agency (EPA) identifications numbers for non-responsible party incidents.
- (3) The Department of Fisheries and the National Emergency Response Committee shall determine when Clean-up actions have mitigated impacts or potential impacts on wildlife and habitat.

### ***Oil Spills on Highways and Roads***

#### **196. Local Roads**

- (1) The incident command for an oil spill on a local roads is vested in the appropriate law enforcement agency having primary traffic investigative authority on the road where the incident occurs.
- (2) Responsibility for incident command at the scene shall continue until all emergency operations at the scene have been completed.

(3) The coordinating function under subregulation (2) shall not include directing how the specialized functions of other responding agencies are to be performed.

(4) The Incident Commander shall consult with other response agencies at the scene to ensure that all appropriate resources are properly utilized, and shall perform this coordinating function in a manner designed to minimize the risk of injury to persons.

### **197. Highways**

(1) The Uganda Police Force (Patrol) shall perform the On-Scene Coordinator role for oil spills on Highways and act as the nationwide information, assistance, and notification coordinator for all oil spill incidents occurring on highways in Uganda.

(2) The Uganda Police Force shall establish a single notification mechanism to serve as a central focus point for a spill response system for an oil spill on highways.

### **198. Oil Spills Involving Railroads**

(1) The Uganda Railways Board/Secretariat is responsible for providing immediate onsite response capability in the event of large-scale releases of toxic materials resulting from surface transportation accidents and for implementing the state hazardous materials incident prevention and immediate deployment plan.

(2) The Uganda Railways Board shall cooperate and in concert with existing local emergency response units.

(3) The Uganda Railways Board shall develop a state railroad accident prevention and immediate deployment plan in cooperation with the Uganda Fire Brigade, affected businesses, and all relevant agencies.

(4) The plan shall be a comprehensive set of policies and directions that every potentially affected government department or agency and business shall follow if there is a railroad accident to minimize the potential damage to the public health and safety, property, and environment that might result from accidents involving railroad activities in Uganda.

## ***National Oil Spill Response Strategy***

### **199. Response objectives**

(1) The main objective of the oil spill response strategy shall be to minimize the damage to the environment and economic activities and reduce the recovery time of the affected natural or economic resources achieving an acceptable level of cleanliness.

(2) Among the response options are-

(a) diversion of the spilled oil to less sensitive areas including diverting it to rocky zones or to zones environmentally or economically less sensitive.

(b) removal, as complete as possible, of the oil from certain areas of interest and its deposition in an environmentally acceptable manner, based on the Net Environmental Benefit Analysis

### **120. Levels of Response**

(1) The Oil Spill Preparedness and Response National System in Uganda shall be based on the Tier response concept.

(2) The “Tier response” concept is a concept universally accepted and it provides the categorization of the response levels based on practice.

(3) The tiered concept identifies incidents of three levels, according to the severity, requiring different levels of preparedness and operational response to oil spill incidents.

(4) The National Oil Spill Contingency Plan shall not define limits related with the spilled volume, for the various incident levels.

(5) The definition of the various levels varies according with the conditions of each facility or port and it depends on the spill risk analysis, executed as part of the local oil spill plans of prevention.

### *Levels of Response*

#### **121. Level 1 response**

Level 1 is the first level covers the preparedness and response level for small oil spills capable of being responded by an individual facility or port authority, mobilizing exclusively the resources existing in that site or facility.

#### **122. Level 2 response**

(1) Level 2 refers to the preparedness and response linked an oil spill which surpasses the possibility of response of an individual facility or authority.

(2) Level 2 incidents shall need coordination of more than one source of equipment and response personnel.

(3) Incidents that need a level 2 response may be associated with incidents in oil handling facilities, exploration and production facilities (pipeline leaks, damage to tanks, exploration and production operations), crude oil storage tanks, refineries among others.

(4) The geographic area affected by a Level 2 spill shall probably be larger than the one of Level 1 and in many cases, public recreational sites shall be endangered or even affected.

(5) In the event of a Level 2 spill caused by Oil activities of Uganda, the resources are mobilized by means of the mutual assistance agreement in force among the licensees involved in the oil and gas industry in Uganda.

#### **123. Level 3 response**

(1) Level 3 refers to major oil spills which require mobilization of all the available national resources and, usually, implying mobilization of external resources and experience.

(2) International assistance may be provided by means of cooperation agreements with neighbouring countries.

(3) In the event of a major oil spill resulting from oil operations in Uganda, the authorities shall first resort to the oil spill response equipment existent in bases of companies with proven capacity in the country or in the region.

#### **124. Net Environmental Benefit Analysis (guidelines)**

(1) When oil is spilled, the choice shall be among all the available response options, the one that is capable of minimizing the negative impacts both on the natural and economic resources.

(2) The Net Environmental Benefit Analysis (NEBA) shall be used as comparison measure between the environmental gains and drawbacks of the possible response options, the comparison between them and of each one with the natural cleaning process including NEBA shall allow deciding if the use of dispersants in a specific area, in a certain time of the year is an adequate solution.

(3) Usually, this is a difficult process due to conflicts of interest which inevitably rise and place organizations or classes with almost antagonistic opinions in opposite sides.

(3) The selection of the most adequate response strategy shall depend on the set of predominant conditions at the time of the spill.

(4) One shall consider correctly the predicted trajectories and the destination and effects of the oil without treatment, compared to the dispersed oil, in order to identify which response method shall have the minimum impact on the environment and resources.

(5) To carry out Net Environmental Benefit Analysis it is necessary to have a good knowledge of the environmental and economic resources of the region which may be affected by an oil spill, keeping in mind that any response shall take the maximum benefit from the natural forces.

(6) These resources shall be classified in terms of protection priority including, in case of conflicts of interest-

(a) the protection of the fish and shellfish has priority over protection of the beaches and other tourist facilities as oil contamination takes months to disappear from the fish while concrete and firm sand surfaces usually recuperate fast;

(b) crops, wildlife, homes, water sources etc.

(c) wildlife has priority over fisheries namely when it is necessary to opt between applying dispersants at the expense of contamination of the fish, as oil is more injurious to seabirds than the dispersants are for the fish.

(7) The know-how on spills previously occurred at that site or at similar sites shall be key in the selection of the method, as it makes it more difficult to foresee the results, namely how long it would take for the environment to naturally recover (assuming zero response), what is the real dimension of the ecologic and socio-economic effects of a spill at that site and which are the effects and efficiency of the different response methods.

(8) After the occurrence of a spill, the response method shall be continuously reviewed and adjusted during the entire time it lasts.

(9) This process under subregulation (8), despite of it being slow, is very useful when it is necessary to decide when to determine the response and cleaning operations.

(10) An inspection team shall be created which shall determine when each piece of area is already sufficiently clean.

(11) The decision under subregulation (10) is made based on internationally accepted criteria.

(12) Ultimately, some elements are specific for each incident and they can only be determined at the time of the spill.

(13) They elements under subregulation (12) shall cover-

(a) how effective the selected method shall be (requires knowledge of factors such as the type and the quantity of spilled oil);

(b) the short, mid and long term advantages and disadvantages;

- (c) Whether the dispersed oil shall be diluted at low levels of impact and, in affirmative case, how long it shall take to reach such levels;
- (d) the type and quantity of waste the selected method may generate;
- (e) how long the habitat shall take to recover (the selected method is going to reduce or augment this recovery time);

(14) It is however necessary to keep in mind that it shall never be possible to avoid all the disadvantages and the decisions shall then be based on the greater benefit, being certain that the first option to consider shall always be the natural cleaning.

(15) The intervention shall be considered when-

- (a) the oil on the surface of the water or on the land constitutes a threat to birds or mammals, considering the possible conflicts of interest;
- (b) there is liquid oil on the coast, which may spread to still clean areas increasing the contaminated area and the extension of the environmental and socio-economic impact;
- (c) the natural recovery time is too long for the main economic or environmental interests.

(16) In the cases listed under subregulation (15), the aggression and disturbance caused by the cleaning actions may be more acceptable as they aim at recovering the affected area for human usage or even at accelerating the recovery of conservation areas.

### **125. Identification of the spill source.**

- (1) This a relatively easy task when it is about spills of great proportions.
- (2) In case of a minor spill, the identification is not always easy as it is a result of operational discharges or non-witnessed accidents.

### **126. Blocking the oil spill at the origin and avoid new spills.**

- (1) This shall be the greatest priority in any case and it is the responsibility of the operator of the facility.
- (2) The method referred to under subregulation normally involves the transfer of the oil from a ship or facility to another or others, which requires great experience and know-how, besides special equipment such as special pumps.
- (3) There is need to monitor the oil slicks to assess the severity of the threat to human health and the environment.
- (4) The responsible party shall assess, among the possible ones, which is the best response to the spill and-
  - (a) try to contain and recover the oil at sea, using mechanical means;
  - (b) take most advantage from the natural forces;
  - (c) apply dispersants only according to the guidelines issued by NEMA; and
  - (d) protect sensitive areas according to national priorities.

**127. Select a combination of response options.**

- (1) In case of a spill of great proportions, normally the association of various response methods is necessary.
- (2) This way it is paramount to know the limitations, advantages and disadvantages of each one.

**128. Clean the affected coastline.**

- (1) Where the general sea conditions are not adverse, some oil may reach the coast, reason this shall be cleaned in order to minimize the effects of the spill.
- (2) Give a final destination to the oil waste, in an acceptable manner for the environment and according to the Waste Management, Removal and Deposit Plan waste.

**PART IX- OIL SPILL MONITORING AND RESPONSE****129. Oil spill (environmental) monitoring**

- (1) Environmental monitoring can be considered during three phases of an activity-
  - (a) pre-impact monitoring - to monitor for the purpose of establishing pre-impact conditions;
  - (b) operational (type 1) monitoring - to monitor the efficacy of response strategies;
  - (c) scientific (type 2) monitoring - to monitor the long-term impacts of any spill.
- (2) In situations where baseline data are out of date due to recent changes in sensitive receptors or not relevant to the event that has occurred, reactive pre-impact monitoring shall be conducted prior to the spill reaching sensitive receptors.
- (3) Pre-impact monitoring shall be designed with post-impact monitoring in mind to provide data that are directly relevant and comparable to the data gathered during post-impact monitoring.
- (4) During the spill response, operational monitoring shall function to evaluate the effectiveness of response strategies and provide a measurable demonstration of specific end-point criteria for the purposes of terminating the response.
- (5) Operational monitoring may include a suite of physical, chemical, and ecological tests shall incorporate appropriate quality assurance and quality control processes and shall be planned in advance of an incident to ensure an efficient and effective monitoring program.
- (6) Scientific monitoring shall provide a thorough assessment of the impacts of both the spill and the response activities, to resources at risk within the ZPI over the long-term.
- (7) The scientific monitoring program design shall allow the impacts from the spill and response activities to be measured and to be separated from natural variation occurring in the environment.
- (8) This may be done using a before, after, control, impact (BACI) design or an alternate design that enables impacts attributable to the oil spill to be measured and separated from natural variation in the environment. Appropriate termination criteria for scientific monitoring shall also be considered.

**130. Overview and Planning**

- (1) Although the responsible party may ultimately be responsible for the response and clean-up efforts, they may not always be first on scene including pipeline-related incidents.
- (2) For most oil spills, city or county government shall most likely be the first notified and the first to respond.

(3) The local government descriptions contained in this Plan are typical of many jurisdictions throughout the state.

(4) However, responsibilities, organization, and authorities may vary depending on the specific jurisdiction. Local government can provide valuable experience in pre-incident planning through the local Certified Unified Program Agency/Administering Agency/Participating Agency (CUPA/AA/PA) and other local planning activities.

(5) The County/City Emergency Services Coordinators, Local Disaster Councils, Local Emergency Planning Committees (LEPC) and similar organizations are encouraged to participate in multi-agency planning activities related to oil spills to develop and revise response plans prior to the occurrence of an oil spill.

(6) Through CUPA/AA/PAs and LEPCs, local area plans can be developed; local agencies can clearly delineate responsibilities with respect to each other and with participating agencies at the state and federal levels; and key liaisons between agencies can be established.

(7) And local governments with jurisdiction over or directly adjacent to marine waters, they may apply to the OSPR Administrator for a grant to complete, update, or revise an oil spill contingency plan element of their business and hazardous materials area plans.

(8) Local agencies with an operational role in spill response are encouraged to exercise, revise, and update their local plans on a regular basis.

### **131. Aerial responses**

(1) Aerial surveillance is essential to many spill response strategies.

(2) Feedback from aerial surveillance is often necessary to determine the scale of the spill and to determine the level of response resources to be deployed.

(3) Where aerial surveillance is proposed, operators shall ensure that arrangements are in place for access to surveillance aircraft and trained aerial observers in the initial stage of an incident and shall expect to maintain this capability throughout the incident to assist with monitoring the spill and the response effort.

(4) Access to appropriate aircraft may be necessary to support a dispersant strategy. Aircraft selection shall consider the range, manoeuvrability and storage capacity as well as the availability of fixed or compatible application equipment (spray booms, buckets).

(5) Additional aircraft may also be required to guide the application of dispersant.

(6) The use of dispersants as a response strategy would require-

(a) a description of the proposed activity;

(b) a description of the existing environment (ZPI), including (map overlays of) spray/no-spray zones, that may be affected by the activity;

(c) a description and evaluation of the impacts and risks for the activity including consideration of the toxicity and characteristics of the dispersant and resulting oil/dispersant mix;

(d) consideration of effectiveness in the selection of the dispersant on the specific oil type, including effectiveness on weathered oil and the 'window of opportunity' to achieve effective dispersion;



- (e) planned testing to confirm planning assumptions and eliminate uncertainty (field trials, lab testing, weathering tests, dispersant efficacy tests);
- (f) objectives, standards and measurement criteria for the activity;
- (g) OHS guidelines for use of dispersant;
- (h) access to adequate quantities of dispersant and access to additional resources required to support the strategy;
- (i) ongoing monitoring of the effectiveness and environmental impact of the strategy and re-evaluation of the risk assessment.

(7) Further information on the effectiveness of dispersants on particular oils shall be sought from suppliers and subject matter experts.

(8) Dispersant choice is not limited by NEMA, however a description and evaluation of the impacts and risks of all activities is required by the Regulations. Dispersant efficacy testing is advised where oil samples are available.

(9) An evaluation of the factors under subregulation... requires specific background information and needs to be undertaken very quickly so as to exploit the 'window of opportunity' available for this response strategy.

(10) Consequently the strategy under this regulation, if selected by an operator as being appropriate for specific circumstances, requires a significant amount of pre-work to demonstrate detailed consideration of this strategy and to enable informed, confident, and defensible decision-making during the incident.

### **132. Response on water bodies**

(1) Vessel operations may be necessary in a response to undertake dispersant application, containment and recovery of oil at the water body and may also be required to support the recovery operation with additional marine activities such as surveillance, environmental sampling and monitoring and transport of personnel, equipment and wastes.

(2) An operator proposing containment and recovery of oil at sea shall demonstrate within the OSCP that the response shall have access to adequate supplies of response equipment that is suitable for use at the location and access to competent personnel to operate the equipment.

(3) Vessels may need to be suitable for the function of deploying large volumes of equipment, accommodating personnel at the response location if necessary, and also have capacity for storing or transferring large volumes of oily waste.

(4) Where an oiled wildlife response may be a necessary component of a water body (or shoreline) response, the OSCP shall demonstrate that vessels, equipment, facilities and authorised professionals can be accessed as part of the response and rehabilitation arrangements.

(5) All wildlife response arrangements shall be undertaken in accordance with laws and other requirements (e.g. licensing) that are relevant for handling and rehabilitation of native fauna.

(6) Where local government agencies/ Wildlife Authority have a role in either approving or undertaking wildlife response, then it is important that the operator liaise with the relevant agency to confirm roles, responsibilities and reporting structures so as to easily integrate the wildlife response into the wider response structure.

(7) Quarantine considerations shall also be taken into account when moving machinery through the terrestrial environment and moving fauna for decontamination and rehabilitation purposes.

### **133. Shoreline responses**

(1) If an incident from an activity has potential to impact shorelines, the OSCP shall demonstrate capability to undertake an effective and appropriate shoreline assessment and shoreline response.

(2) Where shoreline response is considered an appropriate response strategy, operators shall prepare to the extent practicable, by segmenting the shoreline, undertaking shoreline assessments and identifying appropriate clean-up or treatment techniques for those segments.

(3) The shoreline response could be multi-staged if appropriate to enable initial removal of large volumes of oil followed by more specialised techniques for removal or treatment of residual oil.

(4) Further consideration could also be given to identifying potential staging areas, support services and access routes to service those sectors.

(5) Depending on the shoreline types and resources at risk within the ZPI, the operator may evaluate additional shoreline response strategies through the oil spill risk assessment, such as bioremediation, substrate washing or treatment with natural or low-toxicity treatment agents.

(6) The specific clean-up techniques discussed in the OSCP shall need to be refined during development of the incident action plans to suit the circumstances of the incident response, but the OSCP shall demonstrate planning towards these clean-up strategies, to the extent practicable.

(7) In preparing for shoreline clean-up, the operator shall ensure that they have identified, and have access to, the required equipment and machinery to undertake the clean-up activities, as well as access to competent equipment operators, team leaders and specialists.

(8) The level of equipment required on site shall satisfy the requirements of the response strategy in the short term and the OSCP shall demonstrate that further equipment can be sourced in a timely manner to support a continued or escalated response relevant to the nature and scale of spill scenarios from the activity.

(9) A number of factors associated with shoreline response may require specific approvals from the relevant local or state government as well as private landholders.

(10) The stakeholders under subregulation (9) shall be consulted during the preparation of an OSCP and the operator shall seek to identify and progress any relevant approvals or consents, to the extent practicable, prior to an incident.

(11) The OSCP and other response documentation shall clearly identify what outstanding approvals shall be required at the time of an incident and shall provide sufficient information to facilitate a timely and adequate submission to the relevant authority.

(12) Where appropriate, shoreline response shall demonstrate access to mobilise large numbers of personnel and capability to provide the logistics associated with supporting such a response.

(13) In addition to the response equipment and machinery required to remove oil from the shoreline, the operator shall need to ensure that support arrangements are available to ensure the health, safety and welfare of the shoreline crews.

(14) Consideration shall be given to matters such as personal protective equipment, sun shelter, first aid supplies, catering, drinking water, ablutions, decontamination facilities, accommodation, transport and communications to support the number of personnel expected to be required at the impact location.

(15) The nature of shoreline response means likelihood of large volumes of contaminated and domestic waste.

(16) Due to the volume of wastes generated during a shoreline response, waste management requires specific focus to ensure that wastes are being minimised, segregated and appropriately transported and disposed.

(17) The incident action plan shall consider waste minimisation as a component of the response strategies and action plans.

(18) The techniques for shoreline clean-up and immediate actions of response teams may also be guided by an intention to minimise waste; for example communication could be provided to the shoreline teams to move beach debris above the high-tide line or to increase the proportion of oil to sand and therefore reduce the amount of material being transported and disposed as contaminated waste.

(19) If not given appropriate attention in the planning phase, waste may be generated faster than it can be removed from the location and may become a bottle-neck to a response, or a secondary source of pollution.

(20) To avoid this, operators shall endeavour to identify potential waste streams, identify options for temporary storage, transport, disposal and/or beneficial re-use, trouble-shoot for potential challenges and identify appropriate solutions.

(21) Consideration shall be given to any company or government approvals and contractual arrangements that shall be required for disposal of wastes as part of the arrangements for preparedness rather than at the time of an incident.

#### **134. Natural recovery**

(1) In certain cases, natural recovery could be considered a viable option to avoid situations where responding has the potential to create further environmental impacts, or significantly increase safety risks and recovery periods resulting from oil spills.

(2) Alternatively, some additional short-term environmental damage may be necessary in undertaking the response, if the strategy shall lead to improved environmental outcomes in the long-term.

(3) Where natural recovery is considered an appropriate option this outcome shall be supported by an appropriate 'monitor and evaluate' strategy.

### ***Preparing to Respond***

#### **135. Role and responsibilities during an Incident - NEMA**

(1) In accordance with the National Environment Act/ the functions of NEMA/ PAU include regulation of environmental management, well integrity and occupational health and safety of petroleum industry activities in Uganda.

(2) The response and preparedness requirements for oil spill response associated with petroleum activities are provided for under the Act No. 1 of 2013 and Regulations made under that Act.

(3) NEMA shall aim to ensure consistent, independent and professional regulation of the petroleum industry, including the assessment of oil spill contingency plans.

(4) The PAU from petroleum operations is the relevant Designated Authority.

(5) The Government, through the Petroleum Exploration and Production Department, shall lead a whole-of-government approach to the government response to a significant incident.

(6) The operator shall have the capacity to maintain responsibility for the incident and this may involve private response companies and/or government response agencies where necessary.

### *Response and the Nature of Oil*

#### **136. Preliminary Assessment**

(1) Removal and clean-up actions shall begin as soon as possible to minimize the effect on natural and economic resources.

(2) The Responsible Party is expected to undertake clean-up and spill mitigation efforts as soon as can be done safely and shall not need to wait for a government agency to arrive.

(3) A representative of the Responsible Party shall serve as the initial Incident Commander and shall manage the spill as appropriate for the size and characteristics of the incident, until the proper governmental agencies arrive on-scene.

(4) A responding local, regional or national On-Scene Coordinator (OSC) shall make a preliminary assessment of the incident by contacting the person reporting the spill, the Responsible Party, and other governmental entities.

(5) The preliminary assessment shall aid the OSC in-

- (a) evaluating the magnitude and impact of the discharge or threatened discharge on the public health, welfare, and the environment;
- (b) determining which jurisdiction the incident occurred in;
- (c) determining or confirming the Responsible Party;
- (d) determining or confirming the source of the spill;
- (e) determining whether the release is still on-going, and if so, how quickly it can be controlled;
- (f) assessing the need for additional local, state, or federal assistance; and
- (g) assessing what clean-up and removal actions may be appropriate for the incident.

(6) The Responsible Party shall be given an opportunity to clean-up the spill, but the Government may take over direction of the clean-up actions if progress is not satisfactory.

(7) The Responsible Party shall be responsible for all costs and damages in either case.

(8) Where oil spill could be the result of a deliberate criminal or terrorist act, then normal clean-up activities and procedures may be significantly modified since there may be issues of national security, multi-site vulnerability, or immediate securement of similar sites in the region or on a national level.

(9) Where an oil spill could be a result of direct criminal or terrorist act, security and other law enforcement agencies shall serve as the Incident Commander and initiate actions to prevent additional incidents, collect evidence, ascertain witnesses, and try to identify suspects.

(10) Clean-up activities under subregulation (8) and (9) shall occur when they can be performed safely and without hindering the criminal or terrorist investigation activities.

**137. Wildlife Operations**

(1) There shall be a representative of the Uganda Wildlife Authority on the National Oil Spill Detection and Response Committee to minimize wildlife injuries during spill response, by implementing and achieving the goals and strategies create by the Planning Section and detailed in the NOSCP.

(2) The responsibility of the Uganda Wildlife Authority shall be responsible for hazing, reconnaissance, and recovery.

(3) The UWA shall, in collaboration with NEMA , Fisheries Department prepare a Wildlife Response Plan

(4) The Wildlife Response Plan shall provide nationwide consistency for the responsibilities and capabilities of the Uganda Wildlife Authority to deal with oil spills in their jurisdiction.

**138. Response Equipment**

(1) OSPR provides grants to local government entities to provide response equipment that can be pre-positioned (pre-staged) adjacent to marine waters of the state.

(2) The equipment is deployed by the grantee to contain a spill or to protect local resources.

**139. Fire Protection**

(1) If there is a fire related to an oil spill incident, fire prevention, fire suppression, and rescue are the responsibilities of the fire service agency that has jurisdiction or responsibility for the area involved.

(2) Agencies that may be involved include municipal fire departments, local special district fire departments (paid or volunteer), county fire departments, the California

(3) The fire Brigade/ Police may also have jurisdictional authority for containment of off-highway oil spills. Many local plans designate the fire department as the oil spill response Incident Commander.

(4) The Operational Area Fire and Rescue Coordinators are responsible for mobilization of fire and rescue mutual aid resources requested by the responsible fire service agency.

**140. Law Enforcement**

(1) For oil spills occurring on city or county roadways, generally either the Police Department or the County Sheriff shall serve as the Incident Commander.

(2) For other oil spills in cities or counties, in the absence of local codes, ordinances, or agreements to the contrary, the City Police Department or County Sheriff could provide law enforcement support during an oil spill, including traffic control and supervision.

**141. Public and Environmental Health**

(1) Local health agencies are responsible for protecting the public health and often coordinate emergency medical services.

(2) County and city health officers have authority within their jurisdictions to take any preventive measures which may be necessary to protect and preserve the public health.

(3) During an oil spill they can provide valuable support to the Incident Commanders, and they shall be actively involved in situations where public and environmental health is threatened by an oil spill, particularly with respect to ambient air monitoring.

**142. Public Works**

(1) Local streets and road departments are responsible for maintaining roadways in their jurisdiction and may

assist in necessary road closures, clean-up, or decontamination.

(2) Local water supply agencies (which may be a public works) are responsible for maintenance of community water systems and shall provide remedial actions in coordination with the Regional Water Quality Control Boards (RWQCBs) and the Department of Water Resources (DWR) when an oil spill incident may affect water sources such as treatment plants and pumping stations.

### **143. Emergency Medical Services**

Local emergency medical care providers (public and private sectors) provide care and transportation for the sick and injured, including victims of contamination. Patient contact shall be made with adequate decontamination, as determined by local medical protocols.

### **144. Poison Control Centers**

(1) Regional Poison Control Centers in California provide 24-hour access to an extensive toxicology library and can provide immediate access to consultants for evaluating health exposures associated with oil spills, including knowledge of hospitals' capabilities for handling oil spill victims.

(2) The Centers can provide human poison exposure and health-related information to responders, hospitals, and the public (in designated counties).

### **145. Site investigation procedures**

(1) While no two spills are alike and, therefore, the scope of each site investigation varies, it is possible to group the various activities into these categories-

- (a) Identifying the type and source of the spill;
- (b) Determining the site history and property ownership;
- (c) Determining the extent of surface, subsurface, and structural contamination;  
and
- (d) Documenting the site investigation.

(2) We don't expect each spill responder to be or become an expert in all the skill areas encompassed by a site investigation.

(3) Standby and other spill response contractors can supply much of the needed expertise.

(4) Determining the type and volume of material spilled very early in the spill investigation process is important to determining what levels of personal and respiratory protection may be required.

(5) Physical/chemical properties of the spilled material determine-

- (a) the identity of the spill's source (if not already known);
- (b) how the material may have spread in the environment;
- (c) how much of a health and/or environmental hazard the spill may represent, and
- (d) what initial and longer-term corrective action measures may be needed to clean up the spill.

(6) When the source of the spill is known, the responsible person shall get information on the characteristics of the spilled material from the owner/operator or through other technical assistance agencies.

(7) Notwithstanding subregulation (6), the responsible person shall sample the material for laboratory analysis to verify the information provided and all analyses shall be conducted by a laboratory approved by NEMA to perform the specific analysis required.

(9) The responsible person shall not allow any person to deliberately smell, handle or taste product or

material contaminated by product (e.g., soil) to establish its identity.

(10) For an unknown believed to be, or containing some kind of, petroleum product or for an older gasoline spill, the responsible person shall ask the laboratory to analyse the sample for total petroleum hydrocarbons using a gas chromatograph and where the tentative conclusion is that the product is relatively fresh gasoline, the sample shall be reanalysed for benzene, toluene, ethylbenzene, and toluene (BTEX).

#### **146. Coordinator, notification**

On notification of an actual or threatened unauthorized discharge of oil, the coordinator shall take immediate action to assess the discharge and prevent, abate, or contain any pollution from the discharge.

#### **147. Administration of oil spill response and clean-up**

The coordinator, in consultation with the Department of Environmental Quality, is authorized to administer this Chapter and direct all state discharge response and clean-up operations resulting from unauthorized discharges of oil or threatened unauthorized discharges of oil in the land, or any waters of Uganda.

(2) The Department of Environmental Quality, under the direction and control of the coordinator, is the lead technical agency of the state for response to actual or threatened unauthorized discharges of oil and for clean-up of pollution from unauthorized discharges of oil.

(3) All persons and all other officers, agencies, and ministries and departments of government shall carry out response and clean-up operations related to unauthorized discharges of oil subject to the authority granted to the coordinator under this Part.

(4) In the event of an unauthorized discharge of oil nothing in this Part shall preclude the Department of Environmental Quality from, at the earliest time practicable, assuming response and clean-up duties for the discharge of oil under the National Environment (Discharge) Regulations, provided, however, the coordinator is notified within twenty-four hours.

#### **148. Notification and response**

(1) Any person responsible for an unauthorized discharge of oil or the person in charge of any vessel or a terminal facility from or at which an unauthorized discharge of oil has occurred, as soon as that person has knowledge of the discharge, shall-

(a) immediately notify the hotline of the discharge; or

(b) undertake all reasonable actions to abate, contain, and remove pollution from the discharge.

(2) Any person responsible or in charge are unknown or appear to the coordinator to be unshalling or unable to abate, contain and remove pollution from an unauthorised discharge of oil in an adequate manner, the coordinator may abate, contain and remove pollution from the discharge and may contract with and appoint agents who shall operate under the direction of the coordinator to abate, contain or remove pollution from the discharge.

#### **149. Response coordination**

(1) In responding to actual or threatened unauthorized discharges of oil, the coordinator shall appoint a state-designated on-scene coordinator to act in the coordinator's absence in the event that the coordinator is unable to be physically present at the scene of the discharge.

(2) Where the unauthorized discharge of oil is subject to the national contingency plan, in responding to the discharge the coordinator or the state-designated on-scene coordinator shall act in accordance with the national contingency plan as is practicable under the circumstances and cooperate with the federal on-scene coordinator or other government agency or official exercising authority under the national contingency plan.

(3) The coordinator or the state-designated on-scene coordinator may act independently to the extent no federal on-scene coordinator or authorized agency or official of the federal government has assumed federal

authority to oversee, coordinate, and direct response and clean-up operations.

(4) The coordinator or the state-designated on-scene coordinator may act to protect any interests of the state that are not covered by the national contingency plan, and are consistent with the state or national contingency plans.

### **150. Assistance and compensation**

(1) Subject to the coordinator's authority as authorized by this Part to determine otherwise, any person or discharge clean-up organization may assist in abating, containing, or removing pollution from any unauthorized discharge of oil.

(2) Any person or discharge clean-up organization that renders assistance in abating, containing, or removing pollution from any unauthorized discharge of oil may receive compensation from the fund for removal costs, provided the coordinator approves compensation prior to the assistance being rendered.

(3) Prior approval for compensation may be provided for in the National oil spill contingency plan.

(4) The coordinator, on petition and for good cause shown, may waive the prior approval prerequisite.

### **151. Qualified immunity for response actions**

(1) No action or omission taken by any person, including any discharge clean-up organization, to abate, contain, remove, clean up, or otherwise respond to pollution from a threatened or actual unauthorized discharge of oil or refined petroleum product, or to otherwise render care, assistance, or advice, whether such action or omission is taken voluntarily, or pursuant to or consistent with the national contingency plan or pursuant to or consistent with a response plan required under this Part, or pursuant to or pursuant to or consistent with the request of the responsible person, shall be construed as an admission of responsibility or liability for the discharge.

(2) Notwithstanding any other provision of law, and except for the responsible person, no person, including any discharge clean-up organization, that voluntarily, pursuant to or consistent with-

- (a) the national contingency plan;
- (b) any response plan required under this Part;
- (c) the request of the potentially responsible person,

renders care, assistance, or advice in abating, containing, removing, cleaning up, or otherwise responding to pollution from an unauthorized discharge or threat of discharge of oil or refined petroleum products is liable for removal costs, damages, or civil penalties, whether under this Chapter or other laws of this state, resulting from acts or omissions committed in rendering such care, assistance, or advice.

(3) This regulation shall not apply to actions for personal injury or wrongful death or for acts or omissions of gross negligence or wilful misconduct.

(4) A party responsible for the initial discharge is liable for any removal costs or damages for which another person is relieved under this regulation.

### **152. Equipment and personnel**

(1) The coordinator may contract with any private person or entity for the use of equipment and personnel at places the coordinator determines may be necessary for response and prevention operations, in accordance with the National oil spill contingency plan.

(2) The coordinator may contract with any public agency, via interagency transfer of funds, to conduct baseline environmental, wetlands, water quality, habitat, wildlife, and natural resources assessments, or for any other matter deemed necessary to comply with the state and national oil spill contingency plans.



**153. Refusal to cooperate**

(1) Where a responsible person, or a person or discharge clean-up organization under the control of a responsible person, participating in operations to abate, contain, and remove pollution from any unauthorized discharge of oil, reasonably believes that any directions or orders given by the coordinator or the coordinator's designee under this Part shall unreasonably endanger public safety or natural resources or conflict with directions or orders of the federal on-scene coordinator, the party may refuse to comply with the direction or orders.

(2) The party shall state at the time of refusal the reasons for his or her failure to comply.

(3) The party shall give the coordinator written notice of the reason or the reasons for the refusal within forty-eight hours of the refusal.

**154. Derelict vessels and structures**

(1) A person may not leave, abandon, or maintain any structure or vessel involved in an actual or threatened unauthorized discharge of oil in coastal waters or on public or private lands or at a public or private port or dock, in a wrecked, derelict, or substantially dismantled condition, without the consent of the coordinator.

(2) The coordinator shall locate, identify, mark, and analyze the contents of any abandoned or derelict vessels or structures found within the state.

(3) Where the vessel or structure contains oil or oil based materials he shall establish a priority for removal of those vessels and structures on the basis of highest risk to human health and safety, the environment, and wildlife habitat.

(4) The coordinator shall compile a computerized list of all vessels or structures indicating the location, identity, and contents of each.

(5) The coordinator may remove any vessel or structure described in subregulation (1) and may recover the costs of removal from the owner or operator of the vessel or structure.

(6) Where the event that the owner or operator cannot be located, the coordinator may use the monies in the fund up to one million dollars in any fiscal year for the removal of any vessel or structure described in subregulation(1).

(7) The Department of Environmental Quality may petition the coordinator for the removal of any vessel or structure as described in subregulation (1) and the coordinator shall either comply or submit the matter to the interagency council for review.

(8) The NFA may petition the coordinator to abate an unauthorized discharge or the threat of a discharge from a facility or structure which the secretary certifies to be involved in an actual discharge or poses a threat of a discharge and for which the secretary certifies that the office of conservation cannot immediately locate a viable responsible party.

(9) Upon approval of the department's petition the coordinator shall reimburse the office of conservation for all expenses incurred, within the limits of provisions of this Part and he shall seek reimbursement for the fund as provided elsewhere in this Part.

(10) The coordinator shall use monies in the fund for this purpose, which shall not exceed two million dollars in any fiscal year.

**155. Registration of terminal facilities**

(1) A person may not operate or cause to be operated a terminal facility without a discharge prevention and response certificate issued under this Part.

(2) The facility referred to under subregulation (1) may be operated without a certificate for those purposes that do not involve the transfer or storage of oil.

(3) As a condition precedent to the issuance or renewal of a certificate, the coordinator shall require satisfactory evidence that-

(a) the applicant has implemented a discharge prevention and response plan consistent with the National oil spill contingency plan and regulations of unauthorised discharge of oil and abatement, containment, and removal of pollution when such discharge occurs; and

(b) the applicant can provide, directly or through membership or contract with a discharge clean-up organization, all required equipment and personnel to prevent, abate, contain, and remove pollution from an unauthorized discharge of oil as provided in the plan.

(4) A terminal facility response plan that complies with requirements under federal law and regulations for a terminal facility response plan satisfies the requirements of subregulation (1) (a).

(5) Notwithstanding other provisions of this Part, the owner of a facility shall qualify for a certificate if all persons leasing or operating the facility have received a certificate.

#### **156. General terms**

(1) Discharge prevention and response certificates are valid for a period of five years.

(2) The coordinator shall require each registrant to report annually on the status of its discharge prevention and response plan and response capability.

(3) The coordinator may review a certificate at any time there is a material change affecting the terminal facility's discharge prevention and response plan or response capability.

(4) Certificates shall be issued subject to such terms and conditions as the coordinator may determine are reasonably necessary to carry out the purposes of this Part.

(5) Certificates issued to any terminal facility shall take into account the vessels used to transport oil to or from the facility.

(6) The coordinator, by rule, shall establish and require payment of a reasonable fee for processing applications for certificates.

#### **157. Information**

(1) Each applicant for a discharge prevention and response certificate shall submit information, in a form satisfactory to the coordinator, describing all of the following-

(a) the barrel or other measurement capacity of the terminal facility;

(b) the dimensions and barrel capacity of the largest vessel docking at or providing service from the terminal facility;

(c) the storage and transfer capacities and average daily throughput of the terminal facility;

(d) the types of oil stored, handled, or transferred at the terminal facility;

(e) information related to implementation of the applicant's discharge prevention and response plan, including-

(i) all response equipment including but not limited to vehicles, vessels, pumps, skimmers,

booms, bioremediation supplies and application devices, dispersants, chemicals, and communication devices to which the terminal facility has access, as well as the estimated time required to deploy the equipment after an unauthorized discharge;

(ii) personnel available to deploy and operate the response equipment, as well as the estimated time required to deploy the personnel after an unauthorized discharge;

(iv) the measures employed to prevent unauthorized discharges; and

(v) the terms of agreement and operation plan of any discharge clean-up organization to which the owner or operator of the terminal facility belongs.

(e) the source, nature of, and conditions of financial responsibility for removal costs and damages; and

(f) any other information necessary or appropriate to the review of a registrant's discharge prevention and response capabilities.

### **158. Issuance**

Upon compliance with the applicable provisions of this Part and upon payment of the certificate application fee, the coordinator shall issue the applicant a discharge prevention and response certificate covering the terminal facility.

### **159. Suspension**

Where the coordinator determines that a registrant does not have a suitable or adequate discharge prevention and response plan or that the registrant's preventive measures or containment and clean-up capabilities are inadequate, the coordinator may, after an adjudicatory hearing pursuant to the regulatory authority provided under this Act, suspend the registrant's certificate until such time as the registrant complies with the requirements of this Chapter.

### **160. Contingency plans for vessels and facilities**

Every owner or operator covered by this Part shall provide to the coordinator the tank vessel and facility response plans as provided under these Regulations.

## **PART X. LIABILITY OF PERSONS RESPONSIBLE**

### **161. Financial responsibility**

(1) Each owner or operator of a tank vessel with a capacity to carry ten thousand gallons or more of oil as fuel or cargo subject to the provisions of this Chapter operating within coastal waters or a terminal facility shall maintain and furnish evidence of their financial responsibility for costs and damages from unauthorized discharges of oil in accordance with these Regulations.

(2) Where a tank vessel with a capacity to carry ten thousand gallons or more of oil as fuel or cargo covered by this Part or terminal facility is not required under the law to establish and maintain evidence of financial responsibility, the owner or operator of that vessel or terminal facility shall establish and maintain evidence in a form prescribed under these Regulations that such registrant or vessel has the ability to meet liability that may be incurred under this Part.

(3) After an unauthorized discharge of oil, a vessel shall remain in the jurisdiction of the coordinator until the owner, operator, or person in charge has shown the coordinator evidence of financial responsibility.

(4) The coordinator may not detain the vessel longer than twelve hours after proving financial responsibility.

(5) In addition to any other remedy or enforcement provision, the coordinator may suspend a registrant's discharge prevention and response certificate or may deny a vessel entry into any port in waters of the state

for failure to comply with this regulation.

### **162. Limitation of liability**

(1) The total of the liability of a responsible party for all damages and removal costs shall not exceed the following-

(a) for a tank vessel, the greater of one thousand two hundred dollars per gross ton, in the case of a vessel greater than three thousand gross tons, ten million dollars and in the case of a vessel of three thousand gross tons or less, two million dollars;

(b) For any other vessel, six hundred dollars per gross ton or five hundred thousand dollars, whichever is greater;

(c) for an offshore facility, the total of all removal costs plus seventy-five million dollars;

(d) For any onshore facility, three hundred fifty million dollars; provided that, for onshore facilities;

(2) For the purposes of determining the responsible party and applying this Part and except as provided in subregulation (3), a mobile offshore drilling unit which is being used as an offshore facility is deemed to be a tank vessel with respect to the discharge, or substantial threat of discharge, of oil on or above the surface of the water.

(3) The limits of liability provided for in this regulation do not apply if the incident was primarily caused by gross negligence or shallful misconduct of, or the violation of an applicable government or local safety, construction, or operating regulation by the responsible party, an agent or employee of the responsible party, or a person acting pursuant to a contractual relationship with the responsible party, except where the sole contractual arrangement arises in connection with carriage by a common carrier by rail.

(4) The limits of liability provided for in this regulation do not apply if the responsible party fails or refuses-

(a) to report the incident as required by law and the responsible party knows or has reason to know of the incident; or

(b) to provide all reasonable cooperation and assistance requested by a responsible government official in connection with removal activities.

### **163. Natural resource damages**

(1) In any action to recover natural resources damages, the coordinator, in consultation with any other state trustees, shall make the determination whether to assess natural resource damages and the amount of damages according to the procedures and plans contained in the National oil spill contingency plan, and such determination shall create a rebuttable presumption of the amount of such damages.

(2) The coordinator may establish the rebuttable presumption by submitting to the court a written report of the damages computed or state funds expended according to the state plan.

(3) The written report shall be admissible in evidence, but the facts surrounding the cause of the unauthorized discharge of oil as set out in the report shall be subject to de novo review.

(4) The coordinator, in consultation with the state trustees, shall develop an inventory that identifies and catalogues the physical locations, the seasonal variations in location, and the current condition of natural resources; provides for data collection related to coastal processes, abandoned pits, facilities, sumps, reservoirs and oil spills; and identifies the recreational and commercial use areas that are most likely to suffer injury from an unauthorized discharge of oil.

(5) The physical locations surveyed for the inventory of natural resources shall consist of coastal waters as defined in this Part and depicted on the official state inland boundary map for coastal waters.

(6) The inventory shall initially concentrate on areas exhibiting a high probability for oil spills

(7) The current condition of selected natural resources inventoried and catalogued shall be determined by, at a minimum, a baseline sampling and analysis of current levels of constituent substances selected after considering the types of oil most frequently transported through and stored near coastal waters.

(8) The inventory shall consist of Phase I and Phase II.

(9) In Phase I of the inventory, the coordinator shall define and coordinate the formulation of the Oil Spill Technical Assistance Program which shall consist of a management and implementation plan for coastal waters as defined in this Part.

(10) The management and implementation plan shall provide for data gathering techniques, monitoring protocols, maintaining the state inland coastal waters boundary map and data management during the actual inventory and during any response and natural resources damages assessment phase of an unauthorized discharge of oil.

(11) The coordinator shall solicit input from the state trustees and other interested parties. Phase I shall be completed by June 30, 1999.

(12) Phase II of the inventory shall consist of the coordinator retaining a manager and program staff within the office of the coordinator for the Oil Spill Technical Assistance Program.

(13) In Phase II the coordinator, in consultation with the trustees, shall conduct and maintain an environmental baseline inventory.

(14) The environmental baseline inventory shall be developed and maintained in such a manner that it shall provide the coordinator with the technical data regarding the coastal waters before, during and after an unauthorized discharge of oil.

(15) The data referred to under subregulation (14) shall also be available to the trustees, other agencies of the state and to the potentially responsible party within twenty-four hours after being collected.

(16) The coordinator shall adopt administrative procedures and protocols for the assessment of natural resource damages from an unauthorized discharge of oil in accordance with NEA.

(17) As developed with the trustees and other interested parties, the procedures and protocols shall require the trustees to assess natural resource damages by considering the unique characteristics of the spill incident and the location of the natural resources affected.

(18) These procedures/guidelines shall be incorporated by reference in the National oil spill contingency plan by December 31, 1997 and shall include provisions which address the following-

- (a) notification by the coordinator to all trustees in the event of an unauthorized discharge of oil;
- (b) coordination with and among trustees, spill response agencies, potentially responsible parties, experts in science and economics, and the public; and
- (c) participation in all stages of the assessment process by the potentially responsible party, as is consistent with trustee responsibilities.

(19) The administrative procedures / guidelines shall also require the trustees to do the following-

(a) assist the on-scene coordinator, during spill response activities and prior to the time that the state on-scene coordinator determines that the clean-up is complete, in predicting the impact of the oil and in devising the most effective methods of protection for the natural resources at risk;

(b) Identify appropriate sampling and data collection techniques to efficiently determine the impact on natural resources of the unauthorized discharge of oil.

(c) Initiate, within twenty-four hours after approval for access to the site by the on-scene coordinator, an actual field investigation which may include sampling and data collection; the protocols shall require that the responsible party and the trustees be given, on request, split samples and copies of each other's photographs and videos utilized in assessing the impact of the unauthorized discharge of oil.

(d) Establish plans, including alternatives that are cost-effective and efficient, including natural recovery, to satisfy the goal of restoring, rehabilitating, replacing, and/or acquiring the equivalent of the injured natural resources.

(20) The administrative procedures and protocols shall also include the following types of assessments procedures and deadlines for their completion-

(a) An expedited assessment procedure which may be used in situations in which the spill has limited observable mortality and restoration activities can be speedily initiated and/or in which the quantity of oil discharge does not exceed one thousand gallons; the purpose of utilizing the expedited assessment procedure is to allow prompt initiation of restoration, rehabilitation, replacement, and/or acquisition of an equivalent natural resource without lengthy analysis of the impact on affected natural resources; this procedure shall, at a minimum, require that the trustees consider the following items-

(i) The quantity and quality of oil discharged;

(ii) the time period during which coastal waters are affected by the oil and the physical extent of the impact;

(iii) the condition of the natural resources prior to the unauthorised discharge of oil;

(iv) the actual costs of restoring, rehabilitating, and/or acquiring the equivalent of the injured natural resources;

(b) a comprehensive assessment procedure for use in situations in which expedited or negotiated assessment procedures are not appropriate; and

(c) any other assessment method agreed upon between the responsible person and the trustees, consistent with their public trust duties;

(d) the coordinator, in consultation with the trustees, shall determine, within sixty days of the determination by the on-scene coordinator that the clean-up is complete, whether-

(i) action to restore, rehabilitate, or acquire an equivalent natural resource is required;

(ii) an expedited assessment which may include early commencement of restoration, rehabilitation, replacement, and/or acquisition activities, may be required; and

(iii) a comprehensive assessment is necessary.

(21) At any time the coordinator, in consultation and with the agreement of the state trustees, deems appropriate, the coordinator may enter into a negotiated assessment.

(22) The trustees may petition the coordinator for a longer period of time to make the determinations subregulation (21) by showing that the full impact of the discharge on the affected natural resources cannot be determined in sixty days.

(23) The coordinator shall complete the comprehensive assessment procedure within twenty months of the date of the determination by the state on-scene coordinator that the clean-up is complete.

(24) The trustees may petition the coordinator for a longer period of time to complete the assessment by showing that the full impact of the discharge on the affected natural resources cannot be determined in twenty months.

(25) Any assessment generated by the coordinator shall use the protocols and the procedures implemented pursuant to this Part and shall be reasonable and have a rational connection to the costs of conducting the assessment and of restoring, rehabilitating, replacing and/or acquiring the equivalent of the injured natural resources.

(26) The coordinator shall ensure that the cost of any restoration, rehabilitation, replacement, or acquisition project shall not be disproportionate to the value of the natural resource before the injury.

(27) The coordinator shall utilize the most cost-effective method to achieve restoration, rehabilitation, replacement, or acquisition of an equivalent resource.

(28) The coordinator shall take into account the quality of the actions undertaken by the responsible party in response to the spill incident, including but not limited to containment and removal actions and protection and preservation of natural resources.

(29) The potentially responsible party shall make full payment or initiate restoration, rehabilitation, replacement, or mitigation of damages to natural resources within sixty days of the completion of the assessment by the coordinator or, if mediation pursuant to this Subregulation is conducted, within sixty days of the conclusion of the mediation.

(30) To facilitate an expedited recovery of funds for natural resource restoration and to assist the coordinator and the responsible party in the settlement of disputed natural resource damage assessments at their discretion and at any time, all disputed natural resource damage assessments shall be referred to mediation as a prerequisite to the jurisdiction of any court.

(31) Results of the mediation and any settlement offers tendered during the mediation shall be treated as settlement negotiations for the purposes of admissibility in a court of law. Either the coordinator or the potentially responsible person may initiate the mediation process, after an assessment has been issued, by giving written notice to the coordinator within forty-five days of the date all assessment documents are received, who shall in turn give written notice to all parties.

(32) One mediator shall be chosen by the coordinator and one mediator shall be chosen by the responsible parties.

(33) Within forty-five days of the receipt of the assessment from the trustees, the mediators shall be designated.

(34) The mediation shall end no later than one hundred thirty-five days after the receipt of the assessment from the coordinator.

(35) For the purposes of this Section, mediation shall consist of a minimum of three meetings whereby the

mediators seek to facilitate a consensus decision by trustees and the potentially responsible party concerning all aspects of the assessment.

(36) Any assessment issued by the coordinator shall be subject to a public hearing, if requested, and comment period of no less than thirty calendar days.

#### **164. Regional Restoration planning programme**

(1) To assist in making the natural resource damage assessment process more efficient, the Regional Restoration Planning Program, encompassing the entire geographic area of the state, is established in the office of the oil spill coordinator.

(2) The office of the oil spill coordinator shall develop and implement the program in coordination with the state natural resource trustees.

(3) The office of the oil spill coordinator is authorized to employ additional staff members to implement, administer, and manage the program.

#### **165. Defenses**

(1) A person shall not be liable under the provisions of this Part if the discharge resulted solely from any of the following-

(a) An act of God, war, or terrorism;

(c) an act of government, either central or local government;

(d) an unforeseeable occurrence exclusively occasioned by the violence of nature without the interference of any human act or omission.

(2) The shallful misconduct or a negligent act or omission of a third party, other than an employee or agent of the person responsible or a third party whose conduct occurs in connection with a contractual relationship with the responsible person, unless the responsible person failed to exercise due care and take precautions against foreseeable conduct of the third party.

#### **166. Claims against third parties**

If a responsible person alleges a defense under .....481 the responsible person shall pay all removal costs and damages; however, the responsible person shall be subrogated to any rights or cause of action belonging to those to whom such payment is made.

### ***Site Investigation Procedures***

#### **167. Site investigation**

(1) The source(s) of a spill is sometimes readily apparent or is identified when a spill is reported.

(2) In other cases, you shall have to piece together information derived from interviews, from your inspection of the site and surrounding area, from records, and from testing and sampling data to isolate the most probable spill sources.

(3) The responsible person shall start the search by examining potential sources within a few hundred feet of the discovered spill or nuisance condition and then expand the search radius uphill, up gradient, or upstream.

(4) It is possible that the spill's source may never be conclusively identified especially a problem in urban settings.

(5) The process of identifying the spill source can also involve backtracking from a discovered nuisance condition to the probable source area including by moving up gradient (in the case of liquid and gaseous



product) or down gradient (in some cases with vapors) along sewer manholes from the location of the discovered nuisance condition.

(6) The responsible person/inspector shall examine the following records (see page 29):

- (a) equipment installation and maintenance data;
- (b) inventory records;
- (c) precision testing records;
- (d) repair records;
- (e) records of the water content in, or any water pump-outs from the tanks; and
- (f) records for any previous tank removal or abandonment projects.

(7) Documenting property ownership and responsibility for the spill is important to ensure that spillers clean up spills themselves or reimburse the state for funds spent in a state directed clean-up.

(8) Documentation concerns, shall not, however, outweigh the emphasis you place on your primary concern: protection of human health and the environment and mitigation of environmental damage.

(9) Site investigation methods for determining the extent of contamination vary to some degree for surface, subsurface, and structural contamination due to a spill.

### **168. Site Investigation Procedures**

(1) During the investigation of a spill and spill site a standby contractor or the spiller shall collect the information that may be used to judge the degree of human health and/or environmental hazard posed by the spill.

(2) This information under subregulation (1) establishes the need for and the extent of clean-up and, eventually whether the clean-up can be discontinued.

(3) For spill response, site investigation shall also involve making on-the-scene inquiries and inspections and doing a records search, when necessary, to establish responsibility for the spill.

(4) A site investigation shall be a continuous activity that starts with receipt of the spill report and the first visit to the site and ends with preparation of the Investigative Summary Report (ISR).

(5) In some cases, only a brief examination of the spill site, a limited records search, and a review of some sampling data may be all that is needed for you to reach a reasonable judgment on the degree of clean-up necessary and in other cases, you, a spill contractor, or a spiller shall spend several weeks or months collecting and analysing data until an informed decision can be made.

(6) While a set of investigation procedures may be useful for one spill and inappropriate for another, it is possible to group the various activities into these categories-

- (a) identifying the type and source of the spill;
- (b) determining the site history and property ownership;
- (c) determining the extent of surface, subsurface and (occasionally) structural contamination; and
- (d) documenting the site investigation.

(7) Otherwise, physical factors such as geological conditions; the presence and depth of sewers, basements, and wells; the amount of material spilled; the proximity of sensitive populations and surface water; the relative congestion of the area; and many other variables shall determine the course of an investigation for a particular spill and site.

(8) The Part provides general guidance for each of the basic site investigation activity areas outlined above, as well as guidelines for the design, conduct, and interpretation of sampling and analytical activities.

### **169. Site Investigation Objectives**

The purpose of site investigation is to-

- (a) determine Spill Type and Type of Release (Sudden or Long-Term)
- (b) underground storage tank
- (c) aboveground storage tank
- (d) tank truck
- (e) other

### **170. Determine Spill Location**

The determination of spill location shall state-

- (a) the facility name & address;
- (b) the type of the facility;
- (c) if it is transportation spill, name of road and corresponding mile markers and/or cross roads; and
- (d) primary and principal aquifer determination.

### **171. Determine Product Type**

The determination of the product type shall state whether the spilled oil is-

- (a) crude oil;
- (b) leaded gasoline;
- (c) unleaded gasoline;
- (d) diesel fuel;
- (e) fuel oil ;
- (f) kerosene;
- (g) jet fuel;
- (h) used oil;
- (i) other including vegetable oil; and
- (j) Unknown.

### **172. Other matters**

The responsible person/NEMA/PEPD/local authority shall also determine-

- (a) the date the spill was discovered;
- (b) the discovery Method (e.g., tank test failure, vapors in home);
- (c) if Fire/Explosion Hazard exists; and
- (d) determine threatened or impacted resources including-
  - (i) soil;
  - (ii) national park/ game reserve
  - (iii) forest;
  - (iv) ground water;
  - (v) surface water;
  - (vi) storm sewer;
  - (vii) wetland; or
  - (viii) other

### **172. Determine Need for Immediate Clean-Up Actions**

The responsible person shall state the immediate clean-up actions-

- (a) the selected and called out a standby contractor, if needed;
- (b) the immediate fire and safety hazards are being addressed;
- (c) the spill has been stopped, if the source is known; and
- (d) readily apparent free product has been confined and removed.

### **173. Additional**

- (1) Any on-site investigation cannot begin safely until all imminent health and safety hazards are under control and initial measures have been taken to minimize the impact of the spill.
- (2) To properly conduct a site investigation **you** shall possess or have access to a wide range of specialized skills.
- (3) The person directing the clean-up or overseeing an RP-directed clean-up, shall have expertise in or, at a minimum, access to good references on the chemistry, health effects, and environmental behaviour of different petroleum and chemical products.
- (4) The persons referred to under subregulation (3) shall know how to locate, work with, and/or interpret aerial photographs, tax records, and other legal documentation to establish property ownership and operational details (i.e., the possible identity of the spiller) and for subsurface spills, like those from underground storage tanks, the persons shall need to be familiar with geological and hydrogeological principles (as well as have access to the experts) in order to make decisions about locating monitoring pits and/or wells and to interpret the complex, and sometimes confusing, monitoring data that are generated over time.
- (5) Each spill responder may not to be or become an expert in all the skill areas encompassed by a site investigation but other standby and other spill response contractors can supply much of the needed expertise.

### **174. Identifying the Type of Spilled Material**

- (1) Determining the type and volume of material spilled very early in the spill investigation process is critical.
- (2) **The information obtained under subregulation (1) is important in determining what levels of personal and respiratory protection may be required so that you are prepared before you arrive on the spill scene and BSPR's authority to clean up spills using state monies is limited to spills of petroleum products.**
- (3) Although spill responders assist in the emergency response to a hazardous material spill, the clean-up of a hazardous material spill is the responsibility of the Hazardous Waste Remediation Division
- (2) Where the spilled material is a non-petroleum product, the responsible person shall contact the relevant government agency/ NEMA.
- (3) For sewage or non-hazardous material spills (e.g., vegetable oil or dairy products) contact the Regional Directorate of Water.
- (4) For gaseous releases and hazardous material spills, contact the NEMA.
- (5) Knowing the physical/chemical properties of the spilled material can help determine-
  - (a) the identity of the spill's source (if not already known);

- (b) how the material may have spread in the environment (e.g., it is very volatile or very soluble in water);
- (c) how much of a health and/or environmental hazard the spill may represent (e.g., it is flammable); and
- (d) what initial and longer-term corrective action measures may be needed to clean up the spill (e.g., the material binds tightly to soils).

(6) Where the source of the spill is known (e.g., an overturned tanker truck or a leaking aboveground tank), the responsible person shall get information on the characteristics of the spilled material from the owner/operator or through other technical assistance agencies.

(7) The responsible person shall order a laboratory analysis of samples of the material to verify the information provided by the owner/operator.

(8) Obtaining a sample of the material spilled is even more critical when the source of the spill is unknown or in dispute.

(9) The responsible person shall learn as much as possible from the physical characteristics of the material such as its color, odor, or viscosity for example, super unleaded gasoline is often pink in color and a fuel oil shall be very viscous, almost asphalt-like (see also Attachments 1.4-1 and 1.4-2). Many petroleum products shall leave a sheen on water.

(10) The characteristic obtained under subregulation (9) can be tested for by means of the so-called "jar test" where contaminated soil is placed in a jar of water, shaken, and allowed to settle to see if an oil sheen forms on the water surface.

(11) The responsible person may also use some direct-reading instruments to establish the presence qualitatively and, in some cases, the identity of a contaminant.

(12) If substance spilled is believed to be volatile, the following instruments can be used to obtain direct readings of vapors coming off the spill mass, contaminated water, or an area or sample of contaminated soil for example **Photoionization Detector** detects most organic and selected inorganic compounds.

### **175. Documenting the Site Investigation**

(1) The responsible person shall keep a chronological record of the site investigation activities for each spill whether it is a personal field logbook or completed Job Inspection Reports and comments on the information collected.

(2) In maintaining records under subregulation (1), the responsible person shall distinguish facts from guesses or estimations and shall not record personal comments that could be regarded as offensive or make allegations in your field notes.

(3) The notes under subregulation (2) become part of the official case file, and as such, may be subject to legal scrutiny and it is, therefore, best to restrict entries to observations of fact.

(4) The following information and illustrations shall be included in the spill case records-

- (a) a simple site and vicinity map;
- (b) dates and times of activities and findings;
- (c) names and titles of principal people involved in a specific event;
- (d) source(s) of information;
- (e) photographs of site conditions; and
- (f) other unusual or noteworthy events you feel are important.

(5) The worksheets provided as an attachment to this regulation may be useful for organizing the information collected in a site investigation.

(6) The information contained in the chronological record shall be used to prepare the Investigative Summary Report (ISR), which is the official document of the findings from the investigations. Documentation.

### **176. Site Restoration (Guidelines)**

(1) Almost every spill investigation or clean-up shall involve disturbing the site area in some way and the time, effort, and money to be invested in restoring a site shall depend on a number of factors which may vary by site and circumstance.

(2) The following are some general guidelines for making the decision under subregulation (1)-

(a) make sure the affected parties understand what you intend to do and the possible consequences of those actions before you start any spill investigation/clean-up;

(b) in cases of a suspected leaking tank, explain to the owner that you may-

(i) test the tank system, and if the system tests tight and there is no other evidence of a problem, the site shall be restored by the responsible person/operator;

(ii) test the tank system, and if the system is found to be leaking, remove the tanks and contaminated soil; possibly install monitoring wells and recovery system and restore the site to a safe condition only.

(c) explain that due care shall be exercised to minimize the impact of the investigation/clean-up work, but that this work has to be done to protect the environment/public health and in some cases this shall give the owner added incentive to clean up the spill himself or herself; and

(d) when dealing with other parties affected by the spill, but not the cause of the spill, explain that the site shall be restored to as close as possible to the original conditions, but that you are not authorized to do additional work for example, if you remove part of a gravel driveway, you shall replace it with a gravel driveway, not a black-top driveway.

### **177. Suggested recordkeeping practices checklist for spill investigations (Guidelines)**

(1) A spill investigator shall-

(a) fill out Spill Report Form with information received from caller;

(b) phone parties with information on spill and record contacts including the spiller, witnesses and other agency personnel;

(c) record information gained in initial visit to spill site, including date and time of visit, your observations, statements by witnesses, statements by alleged spiller, actions taken using Job Inspection Form or keep log book;

(d) add brief summary to Spill Report Form;

(e) attach additional notes/reports to Spill Report Form;

(f) attach media reports or reports from other agencies; and

(g) stick to factual events; no allegations or personal comments.

(2) The spill investigator shall in addition make a more detailed report on spill if subsequent visits to site are necessary covering the chronological events -

- (a) including the names and titles of principals involved in spill;
- (b) stating if and when samples, measurements, where taken;
- (c) including dates and times, if possible, of events such as contractor call-out or when alleged spiller was directed to start clean up;
- (d) including any other information you deem important; and
- (e) including maps and refer to them in reports.

(3) The spill investigator shall take all samples in accordance with approved procedures and follow quality assurance/quality control guidelines and record time, date, and location of samples taken.

(4) The spill investigator shall take pictures of site features, path of spill, if evident, source of spill, free product, if evident, sampling locations and number and date all pictures and indicate location and direction of picture taken on reverse side.

#### **178. Containment, recovery and applied response technology containment of oil**

(1) Booms may be used as the primary method to contain, deflect or exclude oil floating on water.

(2) Containment booms maybe classified according to form or location of use and shall have the following characteristics-

- (a) a flotation unit or freeboard designed to contain or divert the oil as well as to resist oil splashing over the top;
- (b) a skirt or curtain to prevent oil from being carried beneath the boom;
- (c) a longitudinal strength member (usually, cable, chain, or high tensile strength fabric) that serves to join boom sections and provide anchoring points; and
- (d) a ballast unit or weight designed to hold the skirt perpendicular to the current flow.

(3) Containment booming encircles and contains floating oil so that it can be collected and removed.

(4) A simple spill in calm weather and with minimal current movement can be contained by stretching a boom across a waterway perpendicular to the path of the spill.

(5) Deflection booming shall attempt to deflect a slick towards a more desirable recovery site and deflection booming shall be used when swift currents render containment booming ineffective.

(6) Exclusion booming is largely a protective measure.

(7) Instead of being deployed to contain or deflect the oil slick, exclusionary boom shall be used to protect sensitive areas such as marshlands, water intakes, and shorelines by keeping oil out of an area.

(8) Exclusionary booming may have to be coupled with deflection booming to provide the best protection and oil spilled on land shall be contained with earthen berms, underflow dams, trenches, hay bales, and similar methods.

**179. Mechanical Recovery of Oil (Guidelines)**

- (1) On surface waters, mechanical clean-up may be accomplished by containment booming, skimming, and use of vacuums to recover oil from the surface of the water.
- (2) The effectiveness of open water skimming operations shall be determined by oil encounter rates and sea state which collects from 20 to 30 percent of the oiled spilled.
- (3) Vacuum trucks may be used to suck up oil and water that has been contained within boom.
- (4) "Sorbent pads", "pom poms", rags, and similar materials may be deployed for the oil to adhere to, as a basic method of oil recovery; but this may add to the amount of waste debris generated by a spill.

**180. Applied response technologies, generally**

- (1) The National Contingency Plan (NCP) shall require that all ARTs be approved by the NEMA, Regional Response Team (RRT) /Local government prior to use in spill response.
- (2) The operator may authorize the use of chemical and biological countermeasures without the concurrence of the RRT in situations hazardous to human life.

**181. In Situ Burning**

- (1) "In situ burning" means burning the oil in place as a means of removal and can occur on fresh waters or on land to remove the surface oil by driving much of it into the atmosphere in the form of combustion gases and soot.
- (2) The operator /NEMA shall compare the effects of burning versus not burning and choose the option that provides the greatest net benefit to the environment, without causing undue public health impacts.
- (3) For on-water in situ burn operations, oil shall be contained in order to maintain a minimum burn thickness.

**182. Dispersants (Guidelines)**

- (1) Dispersants are chemicals that are applied directly to an oil slick.
- (2) The key components in chemical dispersants are surface active agents called surfactants and may assist with breaking up the slick into small droplets ranging in size from a few microns to a few millimetres.
- (3) Chemical dispersants do not cause the oil to sink, but moves the oil from the surface of the water into suspension in the water column.
- (4) By removing the oil from the water surface, birds, marine mammals, turtles, and sensitive coastline and marine resources are protected, but at the potential expense of water column resources.
- (5) When in the water column, the oil is diluted to less harmful levels, and eventually is used as a food source by bacteria.
- (6) Dispersed oil may pose toxicity to juvenile and sensitive-life-stage organisms within the water column for up to a few hours after a dispersant application, depending on concentrations and mixing.
- (7) The use of chemical dispersants is an environmental trade-off, and use of net environmental benefit analysis is a good method for evaluating the appropriateness of using dispersants.
- (8) Dispersants also require a threshold level of energy, such as a breaking wave, to allow for the chemical to properly mix with the oil, and partition into the water column and may be effective in areas where environmental or logistical considerations shall not allow the deployment of clean-up equipment and

personnel.

(9) Dispersants are generally most effective if used within 24 hours after the spill occurs, but many factors can extend or reduce the “window of opportunity” for the use of chemical dispersants.

(10) Chemical dispersants shall be licensed/ approved by NEMA before they can be considered for use in state waters.

(11) NEMA shall evaluate the need to use chemical dispersants during each spill.

### **183. Oil spill clean-up agents – other chemical countermeasures**

(1) An oil spill clean-up agent is any chemical, or any other substance, used for removing, dispersing, or otherwise cleaning up oil or any residual products of petroleum in or on, any of the waters of the state.

(2) The clean-up agents referred to under subregulation (1) include vaso-elastizers; beach/shoreline cleaners; herding agents; solidifiers; and emulsion treating agents and have some use in addressing specialized areas of oil spill clean-up, but considering use limitations; they are not a primary response option.

(3) The approval and use of these products within state waters is under the jurisdiction of the NEMA.

### **184. Biological countermeasures (Guidelines)**

(1) Use of biological countermeasures, or bioremediation, involves the use of specially developed organisms, or environmental, or chemical enhancement of indigenous bacteria.

(2) Biological countermeasures may be used to break down oil more quickly than would occur without their introduction into the area of a spill.

(3) Bioremediation is a treatment technology that enhances existing biological processes to accelerate the decomposition of petroleum hydrocarbons and some hazardous wastes.

(4) Bioremediation shall be viewed as a polishing agent for the final stages of clean-up rather than as a primary response tool - especially considering the slow rates of reaction to degrade the oil.

## *Communications*

### **185. General Summary**

(1) For small incidents, communication shall likely be by cell phone or standard radio frequencies.

(2) For larger incidents, the Unified Command shall establish a formal Communications Plan.

(3) Communications on-scene by VHF-FM radio shall likely be conducted on frequencies designated by the UCC.

## *Disposal*

### **186. General Summary**

(1) Early during a spill, a rough estimate of the total volume of the spill shall be made to determine equipment and personnel needs for disposal issues.

(2) Since, early estimates of spill size are often either unavailable or of questionable accuracy, on-site estimations are generally necessary and a rough estimate of spill volume may be attempted by considering slick size and thickness.

(3) As oil and oiled debris are collected they shall be segregated and placed in a designated area and recovery operations need shall be simultaneously coordinated with disposal operations.



- (4) The person performing Planning and Operations duties shall develop a disposal plan.
- (5) Where the spill is large then a Disposal Group Supervisor shall be designated and a formal Disposal Group shall be established in the Operations Section.
- (6) Oily debris may include sorbents and protective clothing, vegetation, carcasses, dirt, and other materials and oil and oiled materials shall have to be characterized as hazardous waste or non-hazardous waste and then handled accordingly in accordance with the National Environment (Waste Management) Regulations.
- (7) Issues such including interim storage, long-term storage, transportation, and ultimate disposal or re-use shall have to be addressed in the Disposal Plan.
- (8) The operator, responsible person shall quantify how much spilled oil is actually recovered and collected, if possible to establish that some amount of harmful oil has been removed from the environment.
- (9) The operator/responsible person shall determine the injury and damage caused by the spill.
- (10) Natural materials that are oiled including vegetation, soil or carcasses shall be separated and quantified prior to final disposition.
- (11) Carcasses may need to be retained as potential evidentiary material.
- (12) When oil is skimmed from surface waters, much of the recovered material is water, in addition to the oil; thus, storage containers fill-up with more water than actual product.
- (13) To help maintain available storage space for actual product, sometimes the recovered water may be decanted back into the surface water body.
- (14) Decontamination of people and equipment is a large disposal issue and may be an additional waste stream.
- (15) Under the Recovery and Protection Branch, the Decontamination Group Supervisor is responsible for decontamination of personnel and response equipment.
- (16) Containment, and transport of oily materials to temporary storage sites would not need manifesting or facility permits but transport away from temporary storage site may need permits in accordance with the National Environment (Waste Management) Regulations.
- (17) The material shall be characterized; if the material is deemed hazardous waste, then additional requirements shall apply.
- (19) Recovery, handling, and disposal actions need to be compliant with the National Environment (Waste Management) Regulations.

The oil spill contingency plans shall contain disposal sections further describing the specifics of characterization and handling.

## **SECTION XI – RESPONSE FUNDING AND COST RECOVERY**

### **187. General Summary**

- (1) The person or entity that caused the spill or who owns the oil is responsible for all costs incurred by spill responders related to the incident including, but not limited to, costs for containment, clean-up, disposal, remediation, and rehabilitation, in addition to any other liability which may be provided for by law.
- (2) If the Responsible Party is unable or unwilling to pay for adequate clean-up, there are several funding

sources available to government agencies to pay for response and clean-up of oil spills.

(3) Generally, expenditures related to an oil spill in the lake shall be paid from the Oil Spill Response Trust Fund.

(4) Agencies designated to implement this Plan shall document and account for all State expenditures made under the Plan with respect to each oil spill and shall pay attention to accurately documenting their costs incurred during the response in order to successfully recover those costs from the responsible party or an available fund.

(5) Regardless of the state funding source, expenditures that are recovered or reimbursed from the Responsible Party or another source shall be deposited into the fund from which they were expended.

### **188. Fish & Wildlife Pollution Account**

(1) The Fish & Wildlife Pollution Account (FWPA) is administered by the Department of Fisheries/ UWA.

(2) The FWPA money through successful cost recovery and penalties collected from the responsible party.

### **189. Oil Spill Response Trust Fund**

(1) The ministry of energy/NEMA/Authority shall set up a spill response Trust Fund

(2) The OSRTF is only available for oil spills of 42 gallons or more into e the state waters to-

- (a) provide funds to cover promptly the costs of response, containment, and clean-up of oil spills into marine waters, including damage assessment costs, and wildlife rehabilitation;
- (b) cover response and clean-up costs and other damages suffered by the state or other persons or entities from oil spills into marine waters, which cannot otherwise be compensated by responsible parties or the federal government;
- (c) pay claims for damages where there is a final judgment that has not been paid, or where the responsible party cannot be ascertained or is otherwise not liable, or where the responsible party refuses to pay; and
- (d) pay indemnity and related costs and expenses associated with claims against persons or companies providing authorized and appropriate response efforts.
- (e) pay for the costs of rescue, medical treatment, rehabilitation, and disposition of oiled wildlife; and
- (f) cover the costs of assessing the impact on human consumption of fish and shellfish species impacted by marine spills.

### *Corrective Action for Oil Spill*

#### **190. Corrective Action**

(1) Each spill incident is unique in terms of-

- (a) the type and volume of the substances released;
- (b) the complexity of the spill site; and
- (c) the resources including equipment, labor, and working space available to respond to the incident.

(2) A constant re-evaluation of the choice of corrective action measures is necessary throughout the entire course of a clean-up effort.

(3) This regulation provides guidance to help in choosing which corrective action measures could be employed at a spill site and addresses both the shorter-and longer-term remedial measures for spill clean-up, consists of a general strategy to guide in selecting an appropriate technology, including problem-specific discussions covering the technology options and their uses and limitations.

### **191. Corrective Action**

(1) The overriding priority for corrective action technology selection is ensuring that human health and the environment are adequately protected and that environmental damage is mitigated.

(2) This goal under subregulation (1) may be achieved, in part, by ensuring that the technologies selected and their operation comply with OSCP and other applicable laws , including those for the handling of spill residuals and debris.

(3) The corrective action technologies currently available for spill management and clean-ups are shall be classified in terms of their capabilities, relative cost, design and installation standards, and operation and maintenance requirements.

(4) The type and volume of the substances released, the complexity of the spill site, the impacts of the spill, and the resources including equipment, labor, and working space available to respond to the incident makes each spill incident unique and therefore, sometimes a best technology choice among the available corrective action options may not be clear.

(5) The Operator/responsible person shall re-evaluate the choice of corrective action measures taken throughout the course of a clean-up effort to ensure adequate protection of human health and the environment and mitigation of environmental damage.

(6) Operators shall ultimately rely their professional experience and judgment to make the final choices.

(7) The operator shall undertake an "exposure assessment," to establish the contaminant concentrations at the source of the spill, the routes by which individuals may be exposed to the contamination, and the contaminant concentrations to which individuals are being exposed.

(8) The assessment under subregulation (7) is basically what a site investigation is all about along with establishing responsibility for the spill, if possible and is one of the main responsibilities of a spill responder.

(9) Spill responders shall also evaluate the risks posed by a spill, to a degree, but they shall not conduct a "quantitative risk assessment".

(10) The purpose of a risk assessment shall be to establish quantitatively the health risk posed to an individual by exposure to a certain level of contamination over a specified and usually prolonged period of time.

(11) Quantitative risk assessments shall be made in the process of setting health-based quality standards by the health department or other agencies and not by spill responders.

(12) NEMA, PAU and PEPD shall compile a list corrective action technologies currently available for spill management and clean-up are summarized.

### **192. Selection of corrective action technologies**

(1) As a general rule, the operator shall select commercially proven technologies that are readily accessible through the contractors are hired for spill clean-up and pay attention to regulatory limitations such as air regulations limiting volatile emissions that can preclude the use of certain technologies.

(2) The operator may draw upon his or her expertise of spill clean-up contractors concerning the performance and efficiency of different corrective action technologies, but shall be the final judge of which technology to use.

(3) Achieving the goal under subregulation (2) extends to ensuring that the technology operates properly once it is implemented and that it complies with all relevant federal, state, and local requirements or standards.

(4) Where a significant immediate hazard exists, it might be appropriate to select technologies that provide quick results even though they may be more expensive.

(5) Alternatively, choosing a more cost-effective alternative, provided that the use of that alternative would not substantially increase long-term risk, may be appropriate for clean-up situations that do not pose significant imminent hazards that shall be remedied quickly; for example, venting of soils contaminated with gasoline may be too slow a process to adequately protect human health, or the secondary impact from the released vapors may be unacceptable, excavating this soil might, therefore, be the better alternative, even though excavation is potentially more costly.

(6) To illustrate how to structure a logical assessment of available alternative technology choices, the operator shall consider factors needed to evaluate are the implement ability, long-term effectiveness, and cost-effectiveness of each alternative technology option.

### **193. Implement ability (Guidelines)**

(1) One of the more obvious criteria that a corrective-action technology shall meet is that it be feasible to implement.

(2) Before selecting any remedial technology for a spill, the operator shall sift through the available options to determine which ones are physically, technically, and administratively feasible and applying these criteria can significantly narrow down the list of appropriate remedial options for a particular spill site.

(3) The physical limitations and features of a spill site can often restrict the kinds of technologies that can be implemented at that site and therefore there is need to evaluate the accessibility to and physical limitations of a site before selecting a remedial action technology.

(4) The site-specific terrain or the location of roads, buildings, and underground or overhead utility lines to preclude the use of certain technology options that would otherwise be appropriate; for example, contaminated soil next to or underneath buildings cannot be excavated easily, if at all, without threatening the structural integrity of the buildings and therefore in-situ soil treatments may be the only feasible alternative in this instance.

(5) Sites for which there are no sewers, streams, or other surface waters to discharge to may not offer any means for disposing of large volumes of treated ground water that cannot be re-injected into the ground.

(6) In cases referred to under subregulation (5), it may be necessary to pump the treated water to tanks for transport to another location where disposal of the water is possible and under these circumstances, it would not be advisable to use a technology that generates large volumes of treated water.

(7) Physical limitations may force the exercise less than your optimal choice for where to locate a technology; for example, when a site owner doesn't allow access to a piece of property on which you believe a free product recovery well shall be located for optimum recovery efficiency.

(8) In addition to being physically feasible, a technology shall be technically feasible.

(9) Using a technology like air stripping or soil venting, for example, is not very technically feasible in the case of an older gasoline spill, since most of the volatile contaminants shall have volatilized from the spill mass.

(10) Subregulation (9) apply to a spill of any substance that is not particularly volatile; for example of technical infeasibility would be attempting to use a free product recovery technology designed for floating product spills when the substance spilled has a density greater than water and has passed into the aquifer and does not float on the water table.

(11) Where a remedial alternative is both physically and technically feasible, it shall also be administratively feasible; for example, it may be technically feasible and cost effective to discharge the effluent from an air stripper to a municipal wastewater treatment plant, but the municipality in which the wastewater treatment plant is located shall grant permission to discharge and such approval may not always be granted.

(12) A similar problem in subregulation (11) may occur if a sanitary landfill refuses contaminated soil, citing technical or space constraints or public or political pressure not to accept the soil.

(13) Any corrective action technology whose implementation would pose the kind of physical, technical, or administrative problems discussed above could render the option infeasible.

### **195. Long-term effectiveness**

(1) A spill clean-up may take a long time to complete.

(2) Many technology options require maintenance and monitoring to ensure they remain efficient and effective over time.

(3) The operator shall choose remedial technologies that can realistically be kept effective for long-term corrective action given the often greater resource demand of technologies that shall be operative over the long term.

### **196. Cost-Effectiveness**

(1) The balancing of relative cost and effectiveness shall be the last factor considered in selecting a corrective action technology after other criteria have been applied to narrow down the choices.

(2) In evaluating cost-effectiveness, the operator shall consider the long-term demands for operating, monitoring, and maintaining the selected technology in addition to the initial capital costs; for example, carbon adsorption units can often involve a very low initial capital outlay and might be judged attractive on that basis alone.

(3) However, where you add in the costs of replacing the activated carbon beds over time and taking and analysing water quality samples at some frequency, the combined costs for start-up, operation, and maintenance may exceed the cost of another, initially more expensive, corrective action technology option.

(4) The operator shall not be restricted to choosing one technology option based on the cost-effectiveness criterion.

(5) The cost-effectiveness of a clean-up may be enhanced by combining two or more technology options; for example, air strippers and activated carbon adsorption units are common technologies used for ground-water treatment and each can be used alone to clean up a spill; however, using these technologies together to treat contaminated ground water can offer significant cost efficiencies.

(6) An air stripper may be used as a first-stage treatment process to reduce 90 to 95 percent of the contamination, and an activated carbon unit can be used as a second-stage treatment to remove the remaining contaminant concentration.

(7) The extra contaminant-removal capability that is realized when both techniques are used may reduce the contamination to such an extent that the final effluent can be disposed of in a sanitary sewer or discharged to surface water near the site, which otherwise would not be possible if the air stripper were used alone.

(8) Combining the technologies may prolong the service life and reduce the operation and maintenance cost of using an activated carbon unit including the carbon bed is not used up as rapidly, and thereby increase the cost-effectiveness of the treatment system.

(9) While these Regulations cannot provide the operator with step-by-step instructions that, in effect, tell the operator to choose technology X under site conditions A, B, and C, the examples illustrated above shall guide in making a reasonable choice of technology that is based on a careful evaluation of all related factors.

### *Exposure and Risk Assessment*

#### **197. Guidance summary-at-a-glance**

(1) In each spill response, the decisions the operator makes shall be based on the assessment of the degree of safety and health hazard associated with a spill of a petroleum commodity, product or hazardous substance.

(2) Each spill response shall involve the application of exposure assessment techniques and may involve an assessment of health risk.

(3) This regulation describes the application of exposure and risk assessment techniques in spill response.

(4) Generally, spill responders shall concern themselves only with exposure assessments.

(5) The exposure assessments shall identify the possible health and safety risk to the public and spill response personnel, the areal extent of the contamination, the populations affected by the spill, and the contaminant concentrations at all exposure points.

(6) Spill responders shall not perform quantitative risk assessments.

(7) Quantitative risk assessments shall pick up from where an exposure assessment leaves off and involves calculation of the carcinogenic and non-carcinogenic risks for all exposure points.

(8) The assessments shall be conducted by the health department in consultation with the NDA.

(9) The application of exposure and risk assessments to any type of spill may be described in the context of four different situations confronting the spill respond-

(a) situation 1; an obvious safety and health hazard exists;

(b) situation 2; clean-up standards are available for all of the constituents of concern for comparison to site conditions;

(c) situation 3; clean-up standards do not exist for all of the constituents of concern for comparison to site conditions; and

(d) situation 4; the clean-up is unable to achieve the established clean-up levels and there is a question as to whether the clean-up can and shall be terminated.

(10) The situations under subregulation (9) represent a range from the less complex to the more complex application of quantitative exposure and risk assessment techniques.

### *Communication Plan*

#### **198. Communication system**

The National Communication System shall incorporate interrelation among the bodies of Preparedness and response organization and at the same time the continuous follow-up of the progress of the crisis by the National Oil Spill Response Committee through the National Incident Command.

#### **199. Notification Cycle**

(1) The notification cycle is complete when the following bodies have been notified of the incident-

- (a) National Oil Spill Response Committee;
- (b) The NEMA;
- (c) PEPD;
- (d) Authority; and
- (e) the National Incident Commander and the provincial Commands.

(2) The first one of the entities referred to under subregulation (1) to be notified has the obligation of taking measures in order to complete this cycle.

#### **200. Spills which occur or are sighted in the oil installations or surroundings**

(1) The spill notification of spills which occur or are sighted in the oil and gas facilities shall be made to the Ministry responsible for petroleum and the Petroleum Authority of Uganda.

(2) The Ministry responsible for petroleum and the Petroleum Authority of Uganda shall, at once, notify the National Incident Commander who shall notify the National Notification centre and the National Oil Spill Response Committee.

(3) The National Commander, as part of his obligations, shall also mobilize the relevant modules of his command team and follow-up the progress of the situation, keeping the National Oil Spill Response Committee informed and exercising his counselling role.

#### **201. Procedures upon notification, during incident**

(1) Upon reception of the notification by the National Incident Command and once completed the notification cycle, the follow-up of the response operation developed at the incident site is its responsibility, together with the Crisis Management Team, and keeping the National Oil Spill Response Committee informed.

(2) Where the local government's officer requires or whenever the National Oil Spill Response Committee deems convenient, the National Incident Command may give the command of operations to the level immediately above, or undertake the responsibility, starting to act as in the case of a Level 3 spill.

(3) Any communications to the public, through the mass media or others, shall be made by the National Oil Spill Response Committee if, considering the severity of the incident and its consequences, it deems necessary.

(4) In every case, the level of involvement and the quantity of people present at the National Incident Command is determined by the dimension of the incident and by the potential impact it demonstrates.

#### **202. Post incident analysis**

(1) Where the incident is managed at local level, the officer in charge of the response operations at that level shall send a final report to the National Notification Centre in order to submit it to the appreciation of the National Oil Spill Response Committee.

(2) After serious oil spills incidents, an assessment shall be made in order to identify areas where the dispositions of the prevention plans employed may be improved.

(3) The initiative of assessment and issuance of the necessary improvement recommendation fall in the jurisdiction of the National Oil Spill Response Committee.

## **PART- SAFETY**

### **202. Safety plan**

(1) There shall be a safety plan which shall identify the main safety aspects derived from the occurrence of a spill, its severity and some practical measures to minimize the impact of the spills.

(2) Usually, cleaning activities occur outdoors, so the hazards inherent to the presence of gases are relatively low and the use of adequate protective garments is usually enough to avoid the contact of the human skin with the spilled oil and chemical products eventually utilized in the cleaning operations, minimizing potential damages.

(3) The Safety Plan shall help in recognizing risks associated to a specific operation, in order to be able, in due course, of taking correct mitigation measures.

(4) Safety of the public and the spill response personnel shall have the highest priority.

(6) The Crisis Management Team shall designate an individual or, if necessary, a team, for the management of the safety aspects.

(7) The Crisis Management Team shall keep an overall vision of the operations, monitoring and keeping awareness about all the situations, evaluating the hazards and little safe situations and elaborating and implementing measures that guarantee the personnel safety.

(8) This Safety Plan shall provide some guidelines, which necessarily shall be adapted to the specificity of the present situation and regularly revised and updated whenever necessary, taking into account the technology advancements and the experiences gained in similar situations.

### **203. Risk Assessment**

(1) The first activity of the Security Officer, as soon as possible, is to carry out an assessment of the overall obal risk of the situation, in order to guarantee that the population and the response team personnel do not take unnecessary risks.

(2) The Security Officer shall consider-

(a) whether there is potential for the occurrence of explosions;

(b) whether it is necessary to evacuate or displace people;

(c) whether the environment safe for people; and

(d) whether there is the possibility of the oil affecting drinking water systems which are used by the population.



(3) The initial evaluation may lead to the establishment of safe zones or exclusion zones and determines the need of mobilization of specific equipment for the detection and monitoring of adverse conditions.

(4) The risk assessment shall be realized on a case by case and it shall be supported by the usage of check lists, like the one shown at the end of this section, which allow identification of risks and eventual mitigation measures.

(5) The risk evaluation shall be totally documented.

(6) Incidents with greater probability of occurrence or whose negative potential is very high shall be treated in first place.

(7) The risk assessment shall be carried out in a consistent manner and by competent individuals.

(8) The practical risk minimization measures may be hierarchized as follows-

- (a) prevent contact with the hazard or eliminate the hazard;
- (b) organize the work in order to reduce exposure to the hazard;
- (c) impose the usage of Personal Protection Equipment (PPE).

(9) Physical risk factors placed by the environment are usually constant during the course of the response operations and the work conditions shall be periodically re-evaluated, as well as the risk control mechanisms installed.

(10) Risks may normally result from-

- (a) the spilled product or chemical product utilized in the response;
- (b) the work environment;
- (c) response operations;
- (d) operation of equipment or machines used in the cleaning operations; or
- (e) external factors.

#### **204. Safety of the chemical products used in the response and cleaning operations (Guidelines)**

(1) When a spill occurs, the exposure of the response teams to chemical products for the most varied purposes is practically inevitable.

(2) Each substance, when spilled in the environment and due to the ensemble of properties that characterize it, exhibits a specific behaviour which determines the safest response strategy to adopt.

(3) The properties of the spilled product change with time due to the aging process, as it has been addressed in the National Contingency Plan.

(4) In order to know the measures to adopt to guarantee safety of the response teams, it is necessary to know the components and characteristics of the chemical products with which they shall be in contact.

(5) The information under subregulation (4) shall appear on the **Materials Safety Data Sheets (MSDS)** which contain all the information necessary to carry out a complete risk assessment to the respective specific product.

(6) The main risks of a substance usually derive from the following characteristics-

- (a) property mitigation measures;
- (b) flammability avoid smoking, produce sparks, or set engines in motion or other ignition sources; and
- (c) explosive vapours

(7) Avoid setting engines into motion or protect them by application of devices that cut the entry of air, which is automatically set when an engine exceeds a certain limit of velocity.

(8) Toxicity observe or adjust the limits of occupational exposure of short (acute effects) and long duration (chronic effects).

(9) Promote decontamination before meals and abandonment of the work shift Dissipation of oxygen.

(10) Forbid entrance in places with less than 19, 5% of oxygen imposing a system of allowances and procedures of entrance in tanks slippery nature of the oils.

(11) Promote repeated decontamination of the individual protection equipment.

(12) **The Materials Safety Data Sheet (MSDS)** contain indications on the individual protection equipment to utilize and on First Aid in case of an accident.

(13) The personnel involved in the operations receives information and training adequate to the correct handling of those substances and about protection and mitigation measures.

## **205. Work environment and safety during **(Guidelines)****

(1) Spills may occur literally anywhere and under any weather conditions, which constitutes huge challenges to the response teams and determines which strategy to adopt.

(2) The spill responder shall pay particular attention to-

- (a) weather since situations of extreme temperatures, precipitations and humidity define the adoption of-
  - (i) proper clothing;
  - (ii) construction of shelters;
  - (iii) survival training;
  - (iv) adjustments of work shifts; and
  - (v) availability of communication equipment and good weather forecasts.

- (b) air quality monitoring and logging using electronic monitors and sounders of passive and personal diffusion and the type, level and frequency of monitoring shall depend on the specific conditions of the site and work characteristics;
- (c) oil-human skin contact since the oil and chemical components utilized during response operations, when in contact with the human skin, may destroy its lipidic layer and cause another type of problems including intoxication, if ingested; and the facilities which allow decontamination of individual protection equipment and the skin shall be provided before meals and at the end of the shifts;
- (d) night time operations shall be avoided as they constitute additional risk for the workers since –
  - (i) it is not possible to see the oil at night, except with very strong lighting;
  - (ii) there is increase in the risk of falls, trips , slides;
  - (iii) weariness increases during the night and this may cause significant decrease of productivity; and
  - (iv) in some circumstances the night operations involve the need to consider issues related with efficiency, safety and additional costs;
- (e) response and cleaning chemical agents to ensure that dispersants and absorbent materials are handled with care including training the personnel involved on how to handle the chemicals;
- (e) slides, trips and falls which are the most common risk for all the response teams and usually, access to the sites is usually due to slippery ground and-
  - (i) care shall be taken during placement of equipment, including transfer hoses and cleanliness and tidiness of the work site shall be maintained; and
  - (ii) teams shall be warned of any particular risk they may face and receive information about the safest approach tracks and other protection means;
- (f) cargo handling and lifting which require special care when handling the equipment and the bags or containers full of waste and whenever possible, the licensee shall opt for the usage of cargo lifting equipment; and
- (g) cargo shall be measured or turned proportionate to each individual, who shall also be instructed on the correct techniques of cargo lifting and only trained people shall operate lifting equipment and when these are utilized the usage of a helmet is mandatory.

## **206. Personal health and safety protection**

- (1) The licensee, owner of a facility or responsible person shall ensure that employees avoid placing themselves in situations at an incident scene that represent a health and safety hazard.
- (2) Direct personal investigation or clean-up work by spill responders shall be authorized only in locations where level of protection is appropriate.
- (3) Site safety hazards that the operator, responsible person becomes aware of shall be communicated to the personnel who are on the site.

(4) All spill response employees shall have the requisite health and safety training to perform their jobs safely.

(5) In addition, all spill response employees shall participate in a medical monitoring program including initial 40-hour health and safety training and the 8-hour refresher and supervisory courses, as well as instruction on hazardous materials handling, Basic First Aid, and baseline, yearly and termination physicals for employees provided through **NEMA/OSH**.

(6) The licensee, operator or responsible person shall follow basic health and safety guidelines including-

- (a) specific health and safety concerns prior to arriving on the scene;
- (b) carefulness;
- (c) staying upwind;
- (d) employing the buddy system whenever possible;
- (e) when in doubt, getting out of the site ; and
- (f) training the employees to know their limitations.

(8) In certain situations, no response may be the best response, provided that the personnel are positioned at a safe distance from the incident scene.

(9) The spill responder shall familiarize himself or herself with the **OSH/EPA** levels of personal protection and what types of health threats indicate the need for greater levels of personal protection.

(10) The personal protective equipment and monitoring devices shall be in good working order and calibrated properly.

(11) The spill responders shall familiarize themselves with such terms as OSHA-PEL, TLV-TWA, and IDLH, which refer to exposures to air-borne contaminants and are the health-based thresholds that, if exceeded, shall trigger action to upgrade personal protection or to exit the site.

(12) The personnel shall avoid working in potentially explosive or oxygen-deficient atmospheres.

(13) Other physical hazards including excessive heat or cold, noise, ionizing radiation, working near heavy equipment, electricity, holes or ditches, unstable surfaces, and working in or on water shall also be paid attention to for personal health and safety protection in accordance with the Occupational Safety and Health Act, 2006 and regulations made under that Act.

(14) Biological hazards shall be avoided especially for people with allergies.

### **207. Health & safety training**

The following training is recommended to be undertaken by the operator or responsible person-

- (a) 40 hours of initial health and safety training;
- (b) 8 hours of annual health and safety refresher training;
- (c) 8 hours of supervisory training for supervisors;
- (d) 24 hours of on-the-job training;
- (e) Red Cross First Aid or its equivalent; and

- (f) CPR training.

### **208. Medical monitoring**

- (1) A medical evaluation shall be done for employees before wearing respirators.
- (2) Baseline, periodical, and termination physicals shall be done for individuals who may be exposed to chemicals and for individuals who wear respirators more than 30 days per year.
- (3) Where response activities are conducted where atmospheric contamination is known or suspected to exist, personal protective equipment shall be worn to prevent or reduce skin and eye contact as well as inhalation or ingestion of a chemical substance.

### **209. Health and safety training and medical monitoring requirements**

- (1) Employees and their contractors who respond to petroleum and hazardous material (hazmat) incidents shall be provided with health and safety training as specified by NEMA/OSH.
- (2) The training shall consist of an initial 40- hour health and safety training course that includes a discussion of toxicology, personal protective equipment, field monitoring instrumentation, site control, and hazard recognition.
- (3) Employees shall be "fit-tested" for the proper use of respirators as part of your 40-hour training course and a mandatory written test may also be part of the 40-hour course.
- (4) Hands-on training experience in the use of Level B and Level C personal protective equipment and in the use of field monitoring instruments shall be done.
- (5) During the first 24 hours of on-the-job training for an employee and following completion of the employee's your training course, the immediate supervisor of the employee shall write a letter to the employee's health and safety file covering information including the location, dates, tasks performed, and level of personal protection worn for each incident the employee responded to during that period.
- (6) An eight-hour annual health and safety training refresher course is also required by NEMA/ Occupational health and safety department.
- (7) The refresher course under subregulation (6) shall emphasize hands-on training with field monitoring instruments, and the use of personal protective equipment (PPE), which includes putting on and removing PPE and a written test shall also likely be required.
- (8) Supervisors of spill response personnel shall receive an additional eight (8) hours of the "supervisory" health and safety training, as they shall be directing the work of others at incident sites.
- (9) The eight (8) hours of supervisory training may not be an annual requirement.
- (10) The employer shall provide medical surveillance to employees who have been or are expected to come in contact with hazardous substances or health hazards above established permissible exposure limits for 30 or more days in a 12 month period.
- (11) The purpose of medical monitoring is to have the capability to detect health impacts that may be the result of an exposure to a hazardous substance.
- (12) Any individual who has potentially been exposed to hazardous substances shall be enrolled in a medical monitoring program whether or not he or she has worked.

### *Levels of Personal Protection*

#### **210. Level A**

- (1) Level A shall be selected when the greatest level of skin, respiratory, and eye protection is required.
- (2) Level A equipment shall be used as appropriate including-
  - (a) pressure-demand, full-face-piece self-contained breathing apparatus (SCBA), or pressure demand supplied air respirator with escape SCBA, approved by the Occupational health and safety department;
  - (b) totally-encapsulating chemical-protective suit;
  - (c) coveralls;
  - (d) long underwear;
  - (e) gloves, outer, chemical-resistant;
  - (f) gloves, inner, chemical-resistant;
  - (g) boots, chemical-resistant, steel toe and shank;
  - (h) hard hat (under suit);
  - (i) disposable protective suit, gloves and boots (Depending on suit construction, may be worn over totally-encapsulating suit); and
  - (j) two-way radios worn inside encapsulating suit.
- (3) Level A protection shall be used when-
  - (a) the hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on-
    - (i) either the measured or potential for high concentration of atmospheric vapors, gases, or particulates;
    - (ii) the site operations and work functions involve a high potential for splash, immersion; or
    - (iii) exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the intact skin;
  - (b) substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or
  - (c) operations shall be conducted in confined, poorly ventilated areas and the absence of conditions requiring Level A have not yet been determined.

#### **211. Level B**

- (1) For level B, the highest level of respiratory protection is necessary but a lesser level of skin protection is needed.
- (2) Level B equipment shall be used as appropriate including-

- (a) pressure-demand, full-face-piece self-contained breathing apparatus (SCBA), or pressure demand supplied air respirator with escape SCBA (NIOSH approved);
- (b) hooded chemical-resistant clothing including overalls and long-sleeved jacket, coveralls, one or two piece chemical-splash suit and disposable chemical-resistant overalls;
- (c) coveralls;
- (d) gloves, outer, chemical-resistant;
- (e) gloves, inner, chemical resistant;
- (f) boots, outer, chemical-resistant steel toe and shank;
- (g) boot-covers, outer, chemical resistant (disposable);
- (h) hard hat;
- (i) two-way radios (worn inside encapsulating suit; and
- (j) face shield.

(2) Level B protection shall be used when-

- (a) the type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection which involves atmospheres with IDLH concentrations of specific substances that do not represent a severe skin hazard; or that do not meet the criteria for use of air purifying respirators;
- (b) the atmosphere contains less than 19.5 percent oxygen; or
- (c) the presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the intact skin.

### **212. Level C**

(1) For level C protection to apply, the concentrations and type of airborne substances must be known and the criteria for using air purifying respirators are met and level C equipment used as appropriate including-

- (a) full-face or half-mask, air purifying, canister equipped respirators (NIOSH approved);
- (b) hooded chemical-resistant clothing including overalls, two-piece chemical-splash suit and disposable chemical-resistant overalls;
- (c) coveralls;
- (d) gloves, outer, chemical-resistant;
- (e) gloves, inner, chemical resistant;
- (f) boots, (outer), chemical-resistant steel toe and shank;
- (g) boot-covers, outer, chemical resistant (disposable);

- (h) hard hat;
- (i) escape mask;
- (j) two-way radios (worn under outside protective clothing); and
- (k) face shield.

(2) Level C protection shall be used when-

- (a) the atmospheric contaminants, liquid splashes or other direct contact may not adversely affect or be absorbed through any exposed skin;
- (b) the types of air contaminants have been identified, concentrations measured, and a canister respirator is available that can remove the contaminants; and
- (c) all criteria for the use of air-purifying respirators are met.

### **213. Level D**

(1) Level D is applicable where a work uniform affording minimal protection is used for nuisance contamination only and Level D equipment used as appropriate including-

- (a) coveralls;
- (b) gloves;
- (c) boots or shoes, chemical-resistant steel toe and shank;
- (d) boots, outer, chemical-resistant (disposable);
- (e) safety glasses or chemical splash goggles;
- (f) hard hat;
- (g) escape mask; and
- (h) face shield.

(2) Level D protection shall be used when-

- (a) the atmosphere contains no hazard; and
- (b) work functions preclude splashes, immersion or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

(3) Combinations of personal protection equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

### **214. Medical surveillance programme**

(1) A medical surveillance program, as recommended by **NEMA/ OSHA**, shall comprise of three physicals including baseline, annual, and termination.

(2) The baseline physical shall establish the physical condition of the employee prior to beginning work where exposure to hazardous substances is a possibility.

(3) The physician shall also certify that the employee is physically capable of wearing respiratory equipment.

(4) The annual physical shall be used to check the employee's condition relative to his or her baseline for as long as he or she responds to petroleum and hazmat incidents, so that significant changes can be recognized and possibly remedied.



(5) The termination physical shall be administered when the employee leaves the **Spill Response Program** in order to document of the employee condition at the conclusion of his or her spill response duties.

(6) Medical examinations by physicians shall also be given whenever employees develop signs or symptoms of chemical exposure.

(7) All the medical surveillance records shall be kept for a period of 30 years.

(8) A recommended medical monitoring program is outlined in the **Occupational Safety and Health Act, 2006**.

### **215. Health and Safety Hazard Guidelines (Guidelines)**

The following health and safety hazard guidelines shall be followed by the responsible person in the conduct of an incident response-

- (a) if the responsible person knows what has been released, he or she shall look up the safe airborne chemical contaminant exposure levels, the signs and symptoms of exposure, physical and chemical data, and first aid information for all the chemicals of concern;
- (b) make note of the police, fire, ambulance, and hospital phone numbers for the local area surrounding the incident site and much of this information shall already be in the Regional Contingency Plan;
- (c) develop a checklist of the items to bring on-site and make sure this equipment is in good condition;
- (d) determine current and expected weather conditions at the incident scene since weather conditions often determine what personal protective equipment you wear and may be particularly important in making decisions about evacuating residents, positioning the command post, and several other incident response actions;
- (e) ensure that better equipped personnel, **such as local fire departments**, hazardous material teams, or contractors hired by the government or the spiller, are the preferred first responders;
- (f) consult with personnel about the appropriate response;
- (g) where the responsible person is the first to arrive and confront an emergency situation demanding prompt action, he or she may take or authorize actions to deal with the emergency;
- (h) always be careful and pay attention and remain alert to changes in site or weather conditions since the changes may require upgrading the level of protection or even exiting the area;
- (i) monitor the work area including monitoring the air, but watching out for heavy equipment and vehicular traffic as well;
- (j) advise the personnel to watch they step and what they step in or on to and wear a life jacket when positioned on or near waterways;**
- (k) stay upwind of the incident scene and remain cognizant of changes in wind direction that might suddenly place lives in danger;
- (l) avoid placing personnel in a situation where exposure to a hazardous substance is possible, especially where they are not equipped with proper personal protective gear;

- (m) employ the buddy system although it shall not always be possible to do so, make an effort to ensure that each personnel is accompanied by at least one other spill responder whether, local government, central government, or contractor personnel while engaged in response activities since unexpected events do occur at an incident site that may hamper the ability to react to the hazard and a second individual may have to come to the aid of the buddy or have information sources or a different viewpoint that can prove useful, especially in an emergency response situation;
- (n) when in doubt, ensure that the personnel get out and where uncertain about the nature of the possible safety and health hazards and whether the personnel are protected adequately, it's best to withdraw from the site into a safe area;
- (o) take the time to re-evaluate the situation before proceeding;
- (p) know the limitations and be aware of physical, mental, and emotional condition or the personnel and limitations and failure to pay attention to problems such as fatigue or illness may endanger life and possibly lead to poor decision-making that endangers the life and safety of others;
- (q) sometimes, no response may be the best response and the responsible person may feel that they need take some sort of action at an incident site but this is not always true, however, and, in some cases, taking no action may be the better approach to protect human health and the environment and letting a fire burn to consume the spilled product, for example, may be better than having the fire department extinguish the fire; and
- (r) the action taken by the responsible person may result in unanticipated effects of greater impact to the public health or the environment than the original situation and always consider the possibility that no response may be the best response at the incident scene, provided that personnel are positioned at a safe distance.

#### **216. When injured or exposed to chemicals (Guidelines)**

- (1) If a person ever suffer an injury or are exposed to a hazardous chemical while responding to an incident, they shall summon help or get to someone who can provide medical attention immediately.
- (2) The responsible person shall always put emphasis planning the protection of the personnel by using the incident scene safety system or the generic health and safety plan.
- (3) Where the responsible person knows where the nearest hospital is and how to get there, or the emergency services telephone numbers, the better their chances are of receiving prompt medical attention when it's needed.
- (4) The standard equipment inventory shall include a first-aid kit (keep it stocked) and, perhaps, an eye wash bottle.
- (5) Work-related injuries and chemical exposures need shall be reported to the supervisor and to the designated office or site safety officer which shall start a process to investigate the cause of the incident and to fulfil the reporting and other requirements of the state and federal occupational health and safety regulations.

#### **217. Health and safety planning (Guidelines)**

- (1) During an emergency incident involving petroleum or a hazardous material, the operator or responsible person may rarely, if ever, practical write up an incident-specific site safety plan as recommended in these Regulations and response time limitations dictated by the size, type, intensity, and severity of the emergency shall make impromptu writing of a site safety plan impractical.

(2) Site safety plans that are called for under NEA/ OSHA and the Regulations shall apply, for all practical purposes, to hazardous waste site or underground tank clean-up activities where there are no immediate health threats to the public and, therefore, sufficient time to prepare thorough written site safety plans prior to initiating site activities.

(3) Facility or building-specific site safety plans prepared prior to the emergency incident shall be used during an actual emergency and emergency responders shall implement the plan in a coordinated effort with the facility or organization that prepared the plan.

(4) A generic site safety and health plan has been included in Appendix O, shall BSPR personnel wish to develop any pre-incident site safety plans for specific facilities.

(5) For transportation accidents and for incidents involving facilities and buildings that do not possess pre-written site safety plans, emergency responders shall have a standard operating procedure (SOP) for establishing an incident scene safety system.

(6) The incident safety system shall be sufficiently generic and flexible to be applied to any incident while, at the same time, sufficiently comprehensive to cover all necessary safety precautions.

(7) An incident scene safety system may not be written for each specific incident as is the case with a site safety plan.

(8) The system, established through a SOP, can be easily and quickly implemented at any emergency incident, provided that the emergency responders are familiar with the system and have practiced using it.

(9) The SOP for establishing an incident scene safety system shall address the following operations and topics-

- (a) establishment of hazard or safety control zones;
- (b) positioning of personnel, apparatus, and equipment;
- (c) selection and use of personal protective gear;
- (d) safe operating practices;
- (e) medical monitoring and emergency medical care; and
- (f) decontamination of response personnel, protective gear, and equipment.

(10) The responsibility of establishing and managing the incident scene safety system shall be given to a fire department or emergency medical services (EMS) officer/health officer, as they normally have the knowledge and skills required for the task.

(11) The individual in charge of the safety system including safety officer may also have a team of appointed assistants.

## **218. Hazard control zones**

(1) The responsible person shall establish hazard or safety control zones at the incident scene to protect response personnel by limiting the number of people in the most hazardous areas.

(2) The exact size and configuration of the hazard control zones shall be determined at each particular incident, as they shall be based upon incident-specific factors and situations such as chemical and physical hazards, atmospheric conditions and topography.

(3) The Safety Officer shall establish the zones and visually designate their locations to help in determining the boundaries of the zones, which shall be designated by barrier tape, barricades, traffic cones, rope or any other method adopted by the responsible person or the police.

(4) The standard hazard control zones shall include the following-

- (a) "Hot Zone" which shall be the area of maximum hazard surrounding the damaged containers or fire area; only entry team allowed within;
- (b) "Warm Zone" which shall be the area of moderate hazard, beyond the Hot Zone, where backup crews stand by and decontamination takes place; and
- (c) "Cold Zone" which shall be the area beyond the Warm Zone that poses minimal or no hazards to emergency responders.

(5) The command post, most or all of the deployed apparatus, and the resource staging area shall be located in the Cold Zone.

(6) During the incident, safety control zones shall be adjusted as necessary to compensate for changing incident scene conditions.

### **219. Positioning of personnel and resources**

(1) Based upon the hazard control zones, the Safety Officer shall advise the Incident Commander of the safest locations in which to deploy personnel and resources.

(2) An absolute minimum number of personnel, apparatus, and equipment shall be deployed in the "Hot" and "Warm" zones in order to limit exposures to contaminants.

(3) Apparatus and major pieces of equipment shall be positioned in such a manner that allows for Emergency escape routes, as well.

### **220. Personal Protective Equipment**

(1) Selection and use of personal protective equipment (PPE) shall be a component of the incident scene safety system.

(2) The Safety Officer shall determine the types of PPE needed for each of the three hazard control zones, with particular emphasis on PPE required in the "Hot" and "Warm" Zones.

(3) **BSPR** personnel shall only be operating within the "Cold Zone."

(4) The responsible person shall select appropriate PPE and that personnel use it properly and also match the PPE to the chemicals involved, atmospheric conditions, physical hazards presented and the physical condition of the user.

(7) Safe operating procedures shall be covered in the incident scene safety system and enforced by the Safety Officer and the procedures shall address the following topics at a minimum-

- (a) establishing hazard or safety control zones;
- (b) the use of appropriate protective gear and equipment;
- (c) limiting the number of personnel in the "Hot" and "Warm" hazard control zones;
- (d) establishing a "buddy system" for all personnel operating within contaminated areas;
- (e) avoiding contact with all contaminants and contaminated surfaces whenever possible;

- (f) advising all response personnel of site control and safety policies;
- (g) staying upwind and updrift of released chemicals;
- (h) designating an entry team support crew to assist in dressing the entry team, keeping track of air supply time requirements of the entry team, and keeping track of the exposure time of the entry team;
- (i) utilizing the most experienced personnel for the most hazardous tasks;
- (j) establishing hand/arm signals as a backup communication system between responders working in encapsulated suits, and establishing an emergency signal including continuous air horn blast for emergency withdrawal;
- (k) positioning a backup team in the "Warm Zone" in case they need to rescue personnel from the "Hot Zone";
- (l) providing medical monitoring for personnel before and after "Hot" and "Warm" Zone operations;
- (m) monitoring visually and through communications contact, the welfare of personnel operating with the "Hot" and "Warm" zones;
- (n) ensuring that all personnel understand and know how to perform their assignments prior to initiating them;
- (o) ensuring that responders do not accidentally ingest contaminants through eating, drinking, or smoking;
- (p) enforcing a "No Smoking" policy at incidents involving flammable or combustible materials;
- (q) decontamination of protective gear and response equipment
- (r) replacing fatigued personnel with "fresh" personnel;
- (s) adjusting the hazard control zones to reflect changing conditions;
- (t) halting any unsafe operation; and
- (u) establishing a rest and rehabilitation area that offers protection from the elements and has toilet facilities.

## **221. Medical monitoring and emergency medical care**

- (1) Medical monitoring and care shall also be a component of an incident scene safety system.
- (2) The Safety Officer shall ensure that there are qualified medical personnel on hand to check and, if necessary treat the sick, injured or contaminated response personnel.
- (3) Medical personnel shall be present to check the vital signs including the blood pressure, pulse, respiration rate, weight, body temperature and general health of all personnel before and after they enter the "Hot" or "Warm" Zones.
- (4) The Safety Officer shall ensure that there are sufficient emergency medical units including advanced life support and basic life support ambulances and equipment including bandages, oxygen, IV fluids, drugs, on-scene to handle medical monitoring and care operations.
- (5) The Safety Officer shall coordinate medical monitoring and care with the medical officer in charge.

- (6) Medical monitoring shall be mandatory for all emergency responders at an incident.
- (7) The Safety Officer shall ensure that the entry and backup teams are monitored before and after entering hazardous areas and all responders who may have been exposed to contaminants are medically monitored afterwards.
- (8) Where the signs or symptoms of chemical exposure or other medical problems are noted, the victim shall be treated at the incident scene, when appropriate, and transported to a hospital for evaluation by a physician.
- (9) Persons who do not show immediate signs or symptoms of illness or distress shall be examined by a physician as a precaution.
- (10) The signs and symptoms of some chemicals including certain pesticides may not appear for several hours or days and prior to leaving an incident scene, personnel shall be briefed by the Safety Officer Medical Officer on the signs and symptoms of exposure to the involved chemicals so that they can seek immediate medical treatment when required.
- (11) Any comprehensive medical examination that is necessary shall be conducted by a physician who has access to the baseline medical profile or the responsible person/ operator as well as records regarding the annual physicals and any other medical examinations.
- (12) Emergency medical care that becomes necessary due to injury or illness contracted at the incident scene shall be administered as soon as possible.
- (13) When treating contaminated individuals, medical personnel shall consider the following precautions and procedures-
- (a) medical personnel shall need to wear specialized protective gear to protect themselves from contaminants on their patient;
  - (b) medical personnel shall need to take steps to protect their equipment and the ambulances from contamination;
  - (c) the patient shall have to be decontaminated as much as is practicable prior to treatment and transport to the hospital;
  - (d) special protocols may be required in order to treat chemically-exposed patients, including the administering of chemical antidotes and drugs;
  - (e) patients shall have to be transported to hospitals that have proper decontamination facilities, equipment, and procedures except in cases where life-threatening problems, such as cardiac arrest, breathing difficulties are involved;
  - (f) ambulances, equipment and medical personnel shall require decontamination prior to treating/ transporting other patients and whenever emergency responders are monitored or treated for chemical exposure, records shall be kept and made available to the patient and to treating physicians upon request; and
  - (g) medical records and exposure logs shall be complete and accurate in order to be useful during subsequent review.

## **222. Decontamination**

(1) The operator or responsible person shall ensure that response personnel, protective gears and response equipment are decontaminated after the response.

(2) Decontamination under subregulation (1) shall be performed for the purposes of protecting the health of emergency personnel, preventing the spread of contamination and salvaging personal protective equipment (PPE) and other response equipment to permit reuse, when feasible.

(3) Decontamination operations may be elaborate such as those recommended by NEMA, PEPD/PAU and OSHA for hazardous waste site activities, where circumstances allow for a more comprehensive approach such as sufficient time to plan decontamination operations and to obtain appropriate decontamination resources and sufficient personnel are available at the site.

(4) Where there lack of quantity of trained personnel and decontamination resources available at an emergency incident to allow an elaborate decontamination operation to take place on a timely basis, a more practical approach to emergency scene decontamination, which takes into account the need to set up the decontamination area quickly with limited on-scene resources shall be used.

(5) NEMA personnel shall have the following major responsibilities regarding decontamination-

- (a) to ensure that they themselves undergo decontamination when necessary;
- (b) to ensure that all exposed emergency responders are properly decontamination; and
- (c) to ensure that decontamination operations are conducted in a manner that minimizes environmental contamination.

(6) NEMA personnel shall assist the Decontamination officer (probably a medical officer, chemist or fire department officer appointed by the Incident Commander in establishing and overseeing decontamination operations and shall coordinate the decontamination of exposed spill responders with the Decontamination Officer.

(10) The decontamination operation shall be performed by a team of trained personnel known as the Decontamination Team composed of on-scene responders from the operator or responsible person , the Authority, NEMA, UWA and fire department, health department and any other person approved by NEMA under the supervision of the Decontamination Officer and Safety Officer.

(11) The Decontamination Officer shall first determine where decontamination shall take place based on the following factors-

- (a) weather conditions including temperature, precipitation and wind;
- (b) incident scene topography and physical characteristics;
- (c) presence of environmentally sensitive areas including waterways, ponds, lakes, rivers, game reserves and other water sources;
- (d) chemical and physical hazardous present; and
- (e) availability of decontamination resources.

(12) Ideally, the decontamination area shall be upwind and uphill of the involved containers and chemicals and remote from storm drains, manholes, waterways or bodies of water.

(13) The factors under subregulation (1) may require the establishment of a decontamination area in a less than ideal setting.

(14) Adverse weather or the unavailability of adequate resources may even necessitate the establishment of an off-scene decontamination site such as a fire station, school, or hospital which may be more complicated due to the following reasons-

- (a) the need to transport contaminated personnel and equipment to the off-site location;
- (b) the need to decontaminate the transport vehicles;
- (c) the need to confine or treat contaminated decontamination runoff if a holding tank is not in place at the facility.

(16) After choosing a safe and practical decontamination site, the Decontamination Officer shall obtain technical guidance from NEMA, Authority.... on the proper method of decontamination for the specific chemicals involved.

(17) The technical information referred to under subregulation (16) may include chemical manufacturers, computer databases, technical assistance hotlines, books, PPE manufacturers, toxicologists, chemists and information on contacting these sources shall be contained in emergency response plans of state and local agencies.

(18) Technical guidance obtained under subregulation (16) shall include methods of decontamination for humans and equipment, special detergents and neutralizers required, safety precautions, disposal information and any other information the Decontamination Officer deems necessary.

(19) Based upon the technical guidance obtained, the Decontamination Officer, in conjunction with the Safety Officer and NEMA, Authority, shall evaluate the health and safety aspects of the recommended decontamination methods and select the safest, most effective, and most practical method to use.

(20) After determining the manner in which decontamination shall be undertaken, the Decontamination officer shall obtain the equipment, materials, solutions, and supplies needed to conduct a safe and effective decontamination operation.

(21) Where time is limited, the Decontamination Officer and Team may perform a preliminary decontamination of personnel with available resources making sure that decontamination solutions are compatible with the chemical contaminants and follow up with a more thorough decontamination when more appropriate resources are obtained.

(21) The Decontamination Officer shall in addition, use common decontamination agents including water for dilution and rinsing, household detergents, isopropyl alcohol, sodium hypochlorite or household bleach, sodium hydroxide, sodium carbonate slurry or washing soda, and calcium oxide (lime) slurry.

(22) Emergency response units may carry products for decontamination purposes, and if not, these products can normally be obtained from nearby stores, industrial sites, or other sources.

(23) When decontamination resources have been assembled at the decontamination site, the Decontamination Team shall set up the decontamination area in accordance with the layout determined by the Decontamination Officer.

(24) Where the decontamination area is at the incident scene and established within the "Warm Zone," the Decontamination Team shall wear appropriate PPE during both set-up and operation of the decontamination area.



(25) The level of protection worn by the Decontamination Team shall be determined by-

- (a) expected or visible contamination on workers;
- (b) type of contaminant and associated respiratory and skin hazards;
- (c) total vapour or gas concentrations in the "Warm Zone";
- (d) particulates and specific inorganic or organic vapors in the "Warm Zone"; and
- (e) results of swipe tests.

(26) Where Decontamination personnel may be contaminated with unknowns, highly volatile liquids, or highly toxic materials, decontamination workers shall wear Level B protection.

(27) The decontamination area shall be set up in an "assembly line" manner whereby contaminated personnel and equipment enter at the "dirty" end (entry point), proceed through a series of "stations" where various decontamination procedures occur, and exit into a "clean" area.

(28) Along the decontamination "assembly line," there shall be a dirty or contaminated side and a clean side established.

(29) The dirty side shall have trash cans or drums for holding contaminated PPE or equipment that shall require decontamination disposal.

(30) The clean side shall be reserved for placing PPE and equipment that has been thoroughly decontamination.

(31) Down the middle of the decontamination area, the Decontamination Team shall set up the wash tubs, equipment, brushes, rags, decontamination solutions, shower facilities that shall be used to decontaminate the contaminated response personnel.

(32) Upon setting up the decontamination area, the Decontamination team shall refill their **SCBA**, (if applicable) and take their assigned positions at the various decontamination stations.

(33) "Nine Step Decontamination Procedure" is recommended for decontamination of emergency responders.

(34) The steps referred to under subregulation (33) are briefly described below-

- (a) Step 1 - Guide the contaminated personnel into the decontamination area through the designated entry point. Have them drop off any hand carried tools, monitors, or other equipment on the "dirty" side of the decontamination area;
- (b) Step 2 - Remove as much solid or liquid contaminants as possible from the PPE of the contaminated person by means of low-pressure water from a shower or hoseline and dike the runoff or divert it to a retention basin or holding tank for later treatment and disposal;
- (c) Step 3 - Remove SCBA and place it in the "dirty" area for later decontamination;
- (d) Step 4 - Remove protective clothing and place it in the "dirty" area for later decontamination or disposal and put clothing in a drum, trash can, or plastic bag in order to limit the spread of contaminants;

- (e) Step 5 - Remove street clothes, underclothing, and any personal items including jewellery, wallets and bags and place them in the "dirty" area and put the clothing and items into plastic bags, label them with the owner's name, and provide security for them;
- (f) Step 6 - Have the person thoroughly wash themselves under a shower, with liberal quantities of soap applied with a sponge and ensure that the individual takes special care to wash his or her head, ears, groin area, and finger and toe nails, where contaminants can become lodged. Dike the runoff or divert it to a retention basin or holding tank;
- (g) Step 7 - Have the now-clean person dry off and dress in supplied coveralls or hospital gown and put the towel(s) in a plastic bag and place the bag in the "dirty area";
- (h) Step 8 - Send the decontaminated person to a remotely located emergency medical station where qualified medical personnel can evaluate the person and if necessary, the person shall be treated on-scene or transported to a hospital for treatment;
- (i) Step 9 - If the person is found to be medically fit, send him or her to a rest and rehabilitation area and observe their well-being while they rest; complete and verify records regarding the individual's decontamination and medical evaluation and if at any time the person shows signs or symptoms of chemical exposure, have them evaluated again by on-scene medical personnel and transport them to a hospital.

(34) Steps 5 through 7 shall be performed inside a tent, decontamination trailer, or building in order to protect the person from the elements as well as from on-lookers and showering shall be done with warm water.

(35) If at any time during the decontamination process the contaminated person is suffering significant medical distress, the person shall be removed from the decontamination area and treated immediately by qualified medical personnel.

(36) Unless it is a life-threatening situation, the patient shall be decontaminated as much as is practicable prior to treatment.

(37) After people have been decontaminated, the Decontamination Team shall attempt to decontaminate PPE, tools, and equipment as much as possible and items that absorbed chemicals shall have to be disposed of or sent to private contractors for proper decontamination.

(38) Protective clothing shall be decontaminated in accordance with the manufacturer's recommendations.

(39) Respiratory protective equipment and monitoring or sampling devices shall be sent to the manufacturer or a qualified servicing center for decontamination and repair and brooms, shovels, and similar tools shall be disposed of.

(40) The Decontamination Team may find it necessary or beneficial to transport containerized or bagged equipment to an off-scene facility in order to perform more effective decontamination.

(41) Where equipment is transported off-site under subregulation (40), proper procedures shall be followed in order to ensure the safety of personnel and to prevent the spread of contaminants.

(42) Following equipment decontamination, the items shall undergo a swipe test to determine whether equipment is completely clean and the cloth or paper patches used in the swipe tests shall be analyzed at a qualified laboratory.

(43) Equipment shall not be reused unless it is free of external and internal contaminants.

(44) Following the decontamination process, the Decontamination Team shall clean and disassemble the decontamination area, dispose of wastes, and return the site to its normal state.

(45) More specifically, the Decontamination Team, under the direction of the Decontamination Officer, health department, and DEC, shall do the following-

- (a) decontaminate all of the decontamination equipment that is salvageable, so it can be reused;
- (b) place all waste materials in drums;
- (c) decontaminate all members of the Decontamination Team and make arrangements for removal and disposal of confined wastewater and other wastes; and
- (d) disassemble the decontamination area and coordinate the return of any borrowed resources.

### **223. Dealing with Specific Health and Safety Hazards (Guidelines)**

(1) Each spill incident shall present a unique set of potential health and safety hazards and there is, therefore, no one set of hazards that you shall encounter consistently, and no one set of preventative or remedial measures that can be recommended.

(2) The issues outlined below, however, issues pertinent to some of the more common health and safety hazards.

(3) The responsible person/operator shall ensure that appropriate oil spill preventive and remedial measures are place.

### **224. Chemical Exposures (Guideline)**

(1) Preventing or minimizing exposure to toxic chemicals shall be the primary concern of everyone involved and there are four major ways in which a chemical can gain entry into your body including through inhalation, ingestion, dermal (skin) and eye absorption, and injection (puncture wound).

(2) For most spill/leak incidents, the most significant concern shall be exposure via inhalation and the persons involved shall assess the threat to themselves by comparing the ambient air concentrations or others measure at a site with the different chemical exposure thresholds established by NEMA.

(3) If these levels are exceeded, the operator or responsible person shall keep all persons lacking appropriate protective gear from the hazardous area.

(4) The personnel shall familiarize themselves with the special terminology used to describe the various exposure thresholds.

(5) Potential chemical exposure through the skin or eyes may also be a significant concern and wearing personal protective clothing and splash goggles can minimize the possibility of a chemical exposure to the skin or eyes.

(6) If a chemical comes in contact with the skin or the eyes, the person shall flush skin or eyes with water for at least 15 minutes and seek medical attention.

(7) The ingestion or accidental injection of a hazardous substance during spill response activities is not common, but exposure by these means is possible, the personnel shall be aware, however, that smoking, eating, drinking, and gum chewing in the contaminated areas can increase potential for ingesting hazardous substances.

(8) Wearing safety shoes, avoiding physical hazards, and using your common sense shall help minimize the possibility of accidental exposure via a puncture wound.

## **225. Explosive Conditions (guidelines)**

(1) The operator/responsible person shall routinely carryout equipment training, calibration, and maintenance using explosimeter at incidents to determine if explosive atmospheres and flammable vapors are present.

(2) Explosimeter readings are meaningful only if there is approximately 21 percent oxygen present as, lower readings would be indicative of an oxygen-deficient atmosphere.

(3) **Do not** depend on your explosimeter readings if the oxygen level is less than 19.5 percent or greater than 21 percent.

(4) A reading of 10 percent of the lower explosive limit (LEL) serves to trigger continued monitoring; proceed cautiously with all further work.

(5) At 25 percent of the LEL, all work shall cease and you (and others) shall immediately evacuate the area and measures shall then be taken, if possible, to reduce the vapor concentrations.

(6) The measures under subregulation (7) shall be taken to minimize the possibility of an explosion or a fire by-

- (a) using non-sparking, explosion-proof instruments when first monitoring an unknown spill or leak situation;
- (b) keeping all potential ignition sources away from an explosive or flammable environment; and
- (c) using chemical compatibility tables whenever placing different chemicals in close proximity, so as to avoid a chemical reaction that could lead to an explosion or fire.

(7) The operator of responsible person shall also be concerned with the ignitability of petroleum contaminated soils and may consider the following two issues-

- (a) whether the soil qualifies as a hazardous waste; and
- (b) whether the soils need special handling to control the safety hazards associated with the volatile organic emissions coming off such soils.

(8) The operator or responsible person shall consider potential threats in the management of petroleum-contaminated soils. . . .since these soils can contribute significant amounts of volatile compounds to the air or be the source of dissolved contaminants in ground water.

(9) Soils saturated with free product may also ignite if exposed to flame or heat and therefore, while a petroleum-contaminated soil may not be classifiable as ignitable under the hazardous waste regulations, these soils can present a flammability hazard if not properly managed.

## **226. Oxygen-deficient environments (Guidelines)**

- (1) A reading of less than 20.9 percent oxygen content shall be indicative of an oxygen-deficient atmosphere.
- (2) Sustained oxygen levels below 16 percent are life threatening.
- (3) You are most likely to encounter depressed oxygen levels in confined, poorly ventilated spaces such as (but not limited to) basements, belowground utility vaults, sewers, or the interior of a tank.
- (4) Simple asphyxiants such as methane, nitrogen, and carbon dioxide can also displace the air in a confined space resulting in decreased oxygen levels, and chemical reactions that utilize oxygen can result in decreased atmospheric oxygen levels.
- (5) You shall always measure oxygen levels (and take a LEL reading) with an oxygen meter or combined oxygen meter-explosimeter before entering a confined area.
- (6) Where measurements indicate an oxygen-deficient atmosphere, take steps to increase ventilation of the area until the oxygen level is safe, and/or use breathing equipment that would allow you to enter the area safely.

### **227. Heat and Cold Stress**

Heat or cold stress can be a concern. If you anticipate having to deal with temperature extremes, know how to recognize the symptoms of heat or cold stress, know how to deal with their effects, and have the necessary materials on hand to deliver treatment.

### **228. Noise Hazards**

- (1) Excessive noise levels can represent two kinds of hazards.
  - (2) The first and most obvious is that high noise levels can cause discomfort, pain, or a temporary or permanent hearing loss. You shall avoid working in any environment where noise levels are above your discomfort threshold without the use of hearing protection.
  - (3) A noise emanating from a stressed container may also be a warning of impending container failure, requiring appropriate safety precautions.
  - (4) The second hazard associated with excessive noise is the inability to communicate effectively with others at the incident scene.
  - (5) Your own hearing and that of others is also reduced when you and others are wearing many types of personal protective equipment.
  - (6) Make sure communication between yourself and others at the incident site is audible and clear, and monitor your own surroundings.
  - (7) Comply with Noise Regulations and guidelines.

### **229. Ionizing Radiation**

- (1) You may encounter spills that expose you to ionizing radiation hazards.
  - (2) There are three main types of ionizing radiation including alpha, beta, and gamma. A Geiger-Mueller radiation meter can be used to detect all three of these forms of ionizing radiation.

(3) Alpha radiation travels approximately one quarter of an inch in air with little penetrating power and does not pose a substantive health risk when the source is external to the human body. If an alpha-emitting source is ingested or inhaled accidentally, however, alpha radiation shall pose a significant health threat.

(4) Both beta and gamma radiation emanating from an external source can penetrate human skin causing damage to the skin and underlying blood vessels.

(5) Gamma radiation has the greatest penetrating power and can appreciably damage internal organs if exposure is substantial.

(6) The typical background radiation level at sea level in New York State is approximately 0.01 millirems per hour and at levels greater than 2 millirems per hour, cease all site activities and evacuate the work area.

### **230. Mechanical or Physical Safety Hazards (guidelines)**

(1) There are numerous mechanical and physical safety hazards that may be encountered at an incident scene including-

- (a) holes or ditches;
- (b) electrical shock;
- (c) sharp objects;
- (d) slippery surfaces and steep grades;
- (e) unstable surfaces (such as in a trench); and
- (f) heavy equipment operation.

(2) Many of these hazards can be compounded by loss of foot and hand dexterity, decrease in peripheral vision, and added body heat load that occurs when an individual is outfitted with some kinds of personal protective equipment.

(3) Since it is often difficult for heavy equipment operators to see or hear other workers around them (especially when the equipment operator is also wearing personal protective equipment), exercise caution while working around such equipment or avoid working in the same area while such equipment is operating. Warning sounds or lights may not be sufficient to alert the preoccupied worker.

(4) If you shall work in the vicinity of operating heavy equipment, maintain eye contact with the operator.

(4) The use of low-voltage electrical equipment with ground-fault interrupters and water-tight, corrosion-resistant connecting cables shall help to minimize the hazard associated with the use of electrical systems on-site. You shall also determine the location(s) of underground electrical cables and overhead power lines so that response actions can be planned accordingly. In general, heavy equipment shall not be operated within 15 feet of overhead power lines.

### **231. Working In or Near Water**

(1) When working in, on, or near the water, be sure that you have on proper clothing and a life jacket. Always work in teams of at least two people, and be conscious of currents. If you work in or from a boat, be sure to balance the load you carry and move about carefully.

(2) Exercise extra caution when working with electricity near water.

**232. Hazards during removal of underground storage tanks (Guidelines)**

(1) NEMA and all the personnel involved shall be informed of several safety and health hazards present during removal of underground storage tanks (UST).

(2) The hazards, many of which could be life threatening, may include-

- (a) fire and explosion involving the UST or product that has leaked out;
- (b) cave-in of the excavation site;
- (c) electrical hazards if underground or overhead power cables are accidentally damaged;
- (d) fire hazard if underground natural gas lines are accidentally damaged;
- (e) improperly supported heavy equipment including the crane; and
- (f) inhalation of hazardous vapors.

(3) The responsible person shall take great care of greatest hazard which is fire and explosion and flammable vapors, possibly within their flammability range between upper and lower explosive limits.

(4) Open flames, lit smoking materials, or sparks from any source including frictional sparking, static sparking should be prohibited since this could result in ignition of flammable vapors and, possibly, explosion of the tank.

(5) The responsible person shall take care of tanks that are empty or near empty to avoid the risk of explosion due to the amount of vapor space within the tank.

(6) A tank that has been removed from the ground shall be protected since this presents the possibility of a tank explosion involving rocketing of the tank ends and 360 degree scattering of tank fragments.

(7) The responsible person shall consider other safety hazards that may face UST removal crews, as well and backhoes which may unintentionally damage underground electrical or natural gas lines, especially when equipment operators are not aware that these lines are present.

(8) Backhoe operators shall also be careful not to inflict damage to the UST.

(9) As the excavation deepens, there is a real possibility of cave in occurring unless the backhoe is located far enough away and the excavation is properly shored.

(10) When the tank lifting operation is taking place, the involved crane can present several hazards and If it has not been properly supported and stabilized, the crane can fall over, and if it is too close to the excavation, the excavation may collapse and, possibly, result in the crane or at least its boom falling into the trench and on top of the UST.

(11) The operator shall take care while operating, as the crane may come in contact with any onsite power lines, thus, causing an electrocution hazard.

(12) Removal of USTs may also present a health hazard; that of hazardous vapor inhalation.

(13) Even petroleum products, common UST commodities, can be harmful to inhale due to hazardous or carcinogenic vapors such as benzene, toluene, and xylene and care must be taken.

(14) Other UST commodities, such as solvents, shall likely pose acute or chronic health hazards, as well.

(15) Despite the hazards involved in the removal of USTs, BSPR and other people involved in the operation shall take several precautions and mitigative actions to prevent accidents and lessen the impact of these hazards.

(16) Precautions and mitigative actions include, but are not limited to, the following-

- (a) establishing a site safety plan and ensure that all on-site personnel abide by it;
- (b) eliminating all sources of ignition, and strictly enforce a "No Smoking" policy at the removal site;
- (c) throughout the removal operation, monitor for flammable or hazardous vapors, and cease operations whenever vapors reach 20% of the lower explosive limit;
- (d) wear appropriate protective clothing;
- (e) have at least one fire extinguisher, with a minimum rating of 20BC, readily available and a rating of 20BC indicates that the extinguisher shall, upon proper usage, effectively extinguish a 20 square foot area of fire involving a flammable liquid and that it can also be used to safely extinguish electrical fires;
- (f) keep unnecessary people away from the excavation and heavy equipment;
- (g) prior to excavating (the top of the tank shall have been excavated during tank closure)-
  - (i) check the locations of underground and overhead electrical and other utility lines so that you can avoid damaging or contacting them;
  - (ii) introduce an inert material including nitrogen gas and dry ice into the tank to reduce the changes of ignition of vapors and the atmosphere inside the tank shall be lowered to less than 20% of the lower explosive limit;
  - (iii) plug or cap all accessible holes at the top of the tank;
  - (iv) take and analyze soil samples around the tank;
  - (v) position a supervisor in a location where he/she can safely observe the excavation operation and remain in radio or visual contact with the backhoe operator. (Note: Radios, if used, shall be intrinsically safe.);
- (h) during the excavation operation, ensure that the backhoe maintains a safe distance away from the excavation and that excavated materials are placed at least two feet back from the edge;
- (i) prior to the tank lifting (removal) operation-
  - (i) ensure that the crane is fully capable of lifting the tank;
  - (ii) position the crane away from overhead wires and far enough back from the excavation to prevent cave-in;
  - (iii) ensure that the crane has been adequately stabilized;



(iv) when personnel enter the trench to attach lifting straps around the tank, the trench shall first be monitored to ensure that safe entry is possible and shored in accordance with OSHA regulations; and

(v) position a supervisor in a location where he/she can safely observe the removal operation and remain in radio or visual contact with the crane operator;

(j) during the removal operation-

(i) ensure that the crane maintains a safe distance away from the trench;

(ii) cease operations if the sling/cable supporting the tank comes loose or appears weakened or overstressed;

(iii) ensure that the removed tank is carefully placed onto the awaiting transport truck and secured to the truck tightly; and

(iv) if the tank is leaking any liquid product, initiate appropriate emergency response actions.

### **233. Transport of materials and waste disposal**

(1) When the oil is recovered, it may store in trenches built on the coastal border or any other place approved by NEMA.

(2) The trenches referred to under subregulation (1) shall be fenced in order to hinder access of non-authorized people and they shall clearly signal to prevent falls.

(3) Safe and clear routes shall be established for vehicles which come to deliver and collect materials, besides the establishment of decontamination routes to avoid secondary contamination.

(4) The responsible person shall put in place measures to avoid secondary contamination of areas not previously affected.

(5) The transport of waste to storage, treatment and final deposition sites shall be in accordance with the National Environment (Waste Management) Regulations.

### **234. First aid (guidelines)**

(1) Particularities of the spill response work increase the risk of injuries or the emergence of illnesses.

(2) It is necessary to adopt prevention mechanisms of contagious illnesses and other effects of the contact with the contaminated environment.

(3) The water and food shall be of the best quality to prevent the risk of catching diseases.

(4) In addition, the personnel shall be trained or made aware of-

(a) localization of hospital facilities in the neighbouring areas;

(b) vaccines eventually necessary; and

(c) evacuation procedures eventually necessary in case of serious injury.

### **235. Other risks (Guidelines)**

(1) Mainly in case assistance by international experts is needed, it is necessary to consider case by case other types of risks such as endemic illnesses.

(2) Procedures shall be applied in accordance with the guidance from the country's authorities where it is necessary to displace people, taking into consideration the following-

- (a) travel arrangements (visas, routes);
- (b) air safety;
- (c) accommodation
- (d) interpreters and translation of documents;
- (e) risks of kidnappings and assaults;
- (f) risks specific to the country, such as civil war, terrorism; and
- (g) evacuation.

(3) The severity of these potential threats shall be carefully considered before the assumption of any commitment and all the measures and mitigation and protection plans shall be established, tested and actuated before exposure of the individual to any situation.

(4) Some clues on safety in different situations are presented below-

(a) in land response-

- (i) test the existence of explosive or poisonous gases;
- (ii) create safe accesses to avoid falls and slips;
- (iii) gather the most competent individuals available as a guarantee of greater safety in their performance;
- (iv) ensure realization of adequate safety meetings;
- (v) pay particular attention to tides Arrange shelter and adequate safety periods;
- (vi) implement a team work system to avoid solitary work;
- (vii) never allow entry in excavations and adequately mark the trenches;
- (viii) assess the operations if the weather conditions deteriorate, especially if the sea becomes dangerous;
- (ix) ensure the existence of adequate first aid and evacuation facilities; and
- (x) establish a good communications system.

(b) selection of personal protection equipment and facilities at the workplace is an essential element in the guarantee of safety during response operations and the selection of the most appropriate equipment requires ability and experience and it shall consider-

- (i) the work conditions and anticipated hazards;

- (ii) type of activities to develop;
- (iii) people to be exposed;
- (iv) compatibility between parts of the equipment;
- (v) the physical effort required by the job;
- (vi) the selected work methods;
- (v) duration of PPE usage;
- (vi) the necessity to keep good communication and vision simultaneously after usage of PPE;
- (vii) reference for high cost and high duration PPE versus disposable and low cost PPE; and
- (viii) consultation with safety officers and experienced response personnel is important for the selection of the best type of equipment.

### *Key Installations at Worksite*

#### **236. Sanitary and personal hygiene facilities**

- (1) The site's safety map shall contain information on the localization of the facilities.
- (2) Drinking and non drinking water supply shall be guaranteed.

#### **237. Decontamination procedures**

- (1) A personnel, equipment and vehicle decontamination containing the following, shall be put in place-
  - (a) a description of the localization and a layout of the decontamination facilities;
  - (b) a list of the necessary decontamination equipment;
  - (c) the necessary PPE for the people processing the decontamination;
  - (d) procedures adequate to the different types of material to find;
  - (e) procedures and measures to prevent secondary contamination;
  - (f) methods and procedures to reduce the risk of contact of the personnel with contaminating material during the removal of PPE;
  - (g) safe methods of deposition of clothing and equipment that is not completely contaminated; and
  - (h) reviews, whenever local conditions change or there is reassessment of the site hazards based on new information.

**238. Decontamination facilities**

The decontamination zones shall progressively take personnel and equipment from the “hot” zone to the “cold” zone, passing by the “warm” zone.

**PART XII- SECONDARY CONTAINMENT AND IMPRACTICABILITY DETERMINATIONS****239. Introduction**

- (1) The purpose of this Part is to prevent discharges of oil into water bodies and adjoining shorelines.
- (2) One of the primary ways through which the Part sets out to do this is the secondary containment requirements which provides an essential line of defense in the event of a failure of an oil container (primary containment), such as a bulk storage container, a mobile or portable container, pipes or flowlines or other oil-filled operational equipment.
- (3) The system provides temporary containment of spilled oil until the appropriate response actions are taken to abate the source of the discharge and remove oil from areas where it has accumulated before the oil reaches the body.
- (4) The secondary containment requirements are divided into two categories-
  - (a) general provisions addressing the potential for oil discharges from all regulated parts of a facility and containment method, design, and capacity are determined by good engineering practice to contain an oil discharge until clean-up occurs;
  - (b) specific provisions address the potential of oil discharges from specific parts of a facility where oil is stored or handled.
- (5) The general secondary containment requirements are intended to address the most likely oil discharge from bulk storage containers; mobile or portable containers; production tank battery, treatment, and separation installations; a particular piece of oil-filled operational or process equipment; (non-rack) transfer activity or piping in accordance with good engineering practice.
- (6) The specific secondary containment requirements are intended to address a major container failure of the entire contents of the container or compartment associated with a bulk storage container; single compartment of a tank car or tank truck at a loading or unloading rack; mobile or portable containers and production tank batteries, treatment, and separation installations.
- (7) The purpose of this Part is to clarify the relationships among the various general and specific secondary containment requirements of the OSCP rule, and to demonstrate how these requirements apply and discusses the rule’s impracticability determination provision, which may be used when a facility owner or operator is incapable of installing secondary containment by any reasonable method.
- (8) The additional requirements that accompany an impracticability determination, the documentation needed to support such a determination, and the role of the NEMA? Authority inspector in reviewing secondary containment requirements and impracticability determinations are also provided for.

**240. Facilities requiring Secondary Containment Provisions**

The following facilities require secondary containment-

- (a) all facilities with potential for discharge including piping, oil filled operating and manufacturing equipment and non-rack related transfer areas;

- (b) loading and unloading racks;
- (c) bulk storage containers;
- (d) onshore storage racks;
- (e) onshore storage, mobile or portable oil containers;
- (f) onshore production, bulk storage containers including tank batteries, separation and treating facility installations;
- (g) onshore oil mobile drilling or work over equipment; and
- (h) offshore oil drilling, production and work over equipment.

### **PART XIII- POLLUTION INCIDENT SCENARIO AND HAZARD IDENTIFICATION**

#### **241. Preparation of an inventory**

To allow for an effective response operators shall prepare an inventory of the oils present on their installation to identify the potential for oil pollution incidents and allow an assessment of the associated environmental hazards.

#### **242. Pollution incident scenario identification**

(1) In order to manage and respond to oil pollution incidents operators shall produce an installation specific hydrocarbon inventory that identifies the various types and volumes of hydrocarbons present on their installation together with their dispersion characteristics.

(2) Hydrocarbons shall be categorised in accordance with the ITOPF category grouping as summarised in subregulation....

(3) The category groupings referred under subregulation (2) include-

- (a) 1 = ITOPF category Group I SG < 0.8 e.g. Kerosene / Gasoline;
- (b) 2 = ITOPF category Group II SG 0.8-0.85 e.g. light crude, gas oils;
- (c) 3 = ITOPF category Group III SG 0.85-0.95 e.g. medium crude;
- (d) 4 = ITOPF category Group IV SG > 0.95 or Pour Point > 30 degrees

(4) Operators shall, identify potential worst case scenarios which could give rise to an oil pollution incident to the land or water body from their installations such as well blowout or diesel tank rupture or from operations involving a third party, such as offloading of fluids via tanker.

(5) The information under subregulation (3) shall be used to determine the correct response strategy and subsequent management of any oil pollution incidents.

(6) Operators shall identify potential situations which could give rise to a pollution incident, including worst-case scenarios.

(7) An effective OPEP shall allow operators to respond effectively and efficiently to all identified oil pollution incident scenarios-

(8) All OPEPs associated with existing installations and production wells, exploration, appraisal and development (production) drilling operations, or work-over and intervention operations on hydrocarbon

producing wells that are undertaken in Uganda shall assess and provide for an effective response to an identified worst-case scenario where all containment barriers have failed resulting in a blow-out.

(7) The response would normally require the drilling of a relief well.

(8) The OPEP shall in addition consider the worst-case scenario relating to the total loss of the installation's hydrocarbon inventory.

(9) Worst case scenarios shall be accurately identified and assessed using the guidelines in regulation.....

(10) Operators of oil pipelines shall have in place the capability to detect loss of inventory from their pipelines.

(11) Total loss of pipeline inventory is determined as the worst case pipeline scenario.

(12) Any pipeline OPEP shall make reference to specific pipeline emergency procedures and provide details of the time required to shut down and the potential quantities that may be released.

(13) Detection limits for main trunk lines shall be provided within the justification document.

### **243. Worst Case Scenarios**

(1) The following information shall be taken into consideration when preparing the OPEP submission-

- (a) well and reservoir information relevant to the scale of potential releases of hydrocarbons, including information relating to the nature of the hydrocarbons and the well flow characteristics; the potential daily release rate; and the total quantity of hydrocarbons that could be released during the maximum time that it could take to stop the release and where there are reservoir characteristics relevant to this information, such as High Pressure and High Temperature (HP/HT) conditions, this information shall be included;
- (b) identification of the worst-case scenario in relation to the potential release of reservoir hydrocarbons and for all operations relating to exploration, appraisal and development wells including normal production operations, drilling, well intervention, and well abandonment the worst-case scenario shall be the quantity of reservoir hydrocarbons that could potentially be released if all containment barriers failed, i.e. a well blow-out with total loss of containment.
- (c) the scenario shall be directly related to the particular circumstances of the installation, the proposed activities, and the reservoir characteristics, and shall be consistent with the information used by other operational departments, well engineering.
- (d) if the operation involves the drilling of a dry gas well, and no oil or condensate is expected; or there is insufficient reservoir pressure for a well to flow unaided; or if the flow rate is likely to reduce significantly during the period of any release, this shall be reflected in the OPEP as it is likely that shall affect the pollution response strategy and the assessment of any potential environmental impact.
- (e) If the OPEP covers a number of wells, the highest flow rate well shall be used to identify the worst-case scenario, and this shall be explained in the OPEP and related environmental submissions as it may conflict with the information provided in applications relating to the other wells;

- (f) identification of the worst-case scenario in relation to the potential release of the installation hydrocarbon inventory, which shall normally be the total diesel fuel inventory, although other inventories such as drilling fluid base oil may be relevant.

(2) Although it is not relevant for well operations, the worst-case assessment of pipeline releases shall be based on the total volume of liquid hydrocarbons present in the isolated pipeline and, in the case of major trunk lines, the modelling shall assess three potential release locations, at the offshore installation; at the mid-point; and at a location as close to the landfall location as can be accommodated by the model.

(3) Although the OPEP shall always address the worst-case scenarios, operators are reminded that comparatively small releases of certain types of oil, or small releases in sensitive areas, or small releases in certain circumstances, have the potential to result in a significant environmental impact and may therefore require a substantial response.

#### **244. Well Flow Rates**

(1) Well flow-rate shall be specific to the well(s) that is the subject of the OPEP or OPEP Addendum.

(2) If the OPEP covers more than one well, details of each wells flow rates shall be included to allow the user to gain a quick understanding of potential release rates in the event of a well incident and the well with the maximum flow rate shall be used for modelling purposes and to determine adequate response recourses.

(3) The flow rate shall be based on information relating to the particular installation, activity and reservoir, and shall be provided in cubic metres per day or hour and the units clearly stated.

(4) The flow rate shall be consistent with information included in the PON15 and any other relevant regulatory submissions, or any discrepancy shall be explained.

(5) The selected flow rate shall be used to calculate the predicted total loss of hydrocarbons during the period covered by the modelling, and during the estimated time taken to stop the release, and the calculated volumes shall be clearly stated.

#### **245. Modelling**

(1) When developing an OPEP oil pollution modelling shall be used to determine the impact of potential oil pollution with results providing an indication as to the trajectory and likely fate (weathering and transport) of the oil.

(2) Deterministic and stochastic modelling shall be carried out based on the identified installation specific worst-case release scenarios to determine the fate of the released liquid hydrocarbons and the output shall be considered alongside relevant environmental sensitivities, to inform the response strategy.

(3) The models shall be run for a period of time that is sufficient to identify the potential directions of travel and the areas likely to be at risk and as a minimum, the models shall be run for a period of 10 days under worst-case liquid hydrocarbon release conditions, or until there are no released hydrocarbons remaining on the water or land until they have evaporated or dissipated.

(4) If the minimum 10-day modelling period does not clearly identify the potential areas at risk, then the modelling period shall be extended.

(5) Trajectory modelling shall use the same inputs as the stochastic modelling.

(6) Conclusions of both the deterministic and stochastic modelling shall include-

- (a) likelihood of impacts on environmental sensitivities such as bird populations, conservation areas or other users of the land or water body and the scale of that impact at different times of the year;
- (b) the identification of the areas that could be impacted as a result of any release;
- (c) what time scale is the oil likely to disperse completely to the water body shall the oil become prior to dispersion; and
- (d) no counter pollution measures shall be taken into consideration when assessing the impact.

(7) For oil installations deterministic modelling shall be carried out for both diesel and oil and stochastic modelling shall be carried out for oil.

(8) For gas and condensate installations deterministic modelling shall be carried out for diesel and gas or condensate and stochastic modelling shall be carried out for diesel.

(9) In all cases, the modelling shall be undertaken using relevant weather, current and temperature data obtained from scientifically-validated historic data sources, and the origin of this information shall be fully referenced.

(14) Currently-available models are capable of meeting the above requirements, to enable operators to develop a competent response strategy that adequately addresses all potential release scenarios.

#### **246. Environmental Impact Assessment (Should we leave this to EIA?)**

(1) Operators shall carry out an assessment of the potential environmental impacts associated with their identified oil pollution scenarios to ensure that a timely and adequate oil pollution response is developed within the OPEP.

(2) The OPEP shall contain a brief summary of the predicted environmental and socio-economic impacts of the worst-case release of liquid hydrocarbons, taking account of the results of the modelling undertaken to identify the areas that could be impacted as a result of any liquid hydrocarbon release and sensitivity data relevant to those areas.

(3) Details of environmentally sensitive areas that could be impacted by a release shall be obtained from appropriate contacts, such as the relevant fisheries authorities, NFA, UWA, NEMA and Directorate of Water Resources.

(4) A base line description of the surrounding environment highlighting sensitive components with seasonal variations and all environmental sensitivities at risk in Uganda shall be included in the OPEP submissions.

(5) Where required, a Protection Plan shall be prepared and submitted to NEMA in accordance with guidelines issued by NEMA and the relevant local authorities shall be contacted in addition to the bodies detailed above to ensure that comprehensive and up-to-date environmental information is included in the plan.

#### **247. Summary of pollution incident scenario and environmental impact assessment**

(1) Full pollution incident scenario and environmental assessment information may provide too much detail in the final OPEP document and may not add value during any response and shall be summarised in accordance with the guidance contained in regulation...



(2) Full details of the assessment shall be included within the OPEP application in a separate Justification Document for approval.

#### **248. Socio-economic impacts**

(1) Any significant potential socio-economic impacts that could have a bearing on the response strategy shall be summarised in the OPEP for example, in certain areas, it may be important to ensure that fishermen or fish farmers are regularly advised of the location and direction of movement of a spill; or it may be important to avoid using dispersants in areas where there would be a possibility of dispersed oil contaminating harvested or farmed shellfish stocks or it may be necessary to take specific measures to prevent oil coming ashore in areas with a high amenity value.

(2) It is not necessary to try to quantify the economic impact, but any significant potential impacts shall be identified and clearly linked to the response strategy.

#### **249. Pollution incident Assessment**

(1) During a pollution incident, an assessment shall be carried out to determine an effective response strategy.

(2) All efforts shall be made to identify the volume and type of oil discharged to help determine the dispersion characteristics, fate and likely impact of the oil.

(3) Arrangements shall be in place to monitor the movement, spreading and emulsification of any oil discharged to allow an assessment of the potential threat to the environment to be made.

(4) An initial assessment may be performed by visual inspection from the installation or standby vessel; however, this may have limitations if the extent of the pollution is large or moving away from the installation and therefore, aerial surveillance and oil pollution modelling may be required to allow the extent, trajectory and fate of the oil to be more accurately observed and predicted.

(5) Details of the procedures and mechanisms used by operators to assess any oil pollution shall be included within the OPEP.

(6) The level of assessment required shall be determined in accordance with the circumstances and severity of any pollution incident when it occurs.

#### **250. Volume and tracking of oil pollution**

(1) Efforts shall be made to quantify the maximum total volume lost using measured or calculated data from operational or production losses.

(2) Where this is not possible the Bonn Agreement Oil Appearance Codes (BAOAC) shall be used to estimate losses from a visual assessment or aerial surveillance of oil on the environment.

(3) A maximum and minimum figure shall be provided where BAOAC are utilised in order to allow a suitable assessment of potential pollution, in accordance with NEMA PON1 Guidance.

(4) Initially oil pollution shall be tracked using visual assessment, where possible and an early estimation of the movement of oil on the surface can be calculated using manual trajectory estimations.

(5) During pollution events, it is necessary to have procedures and mechanisms to estimate the volume of oil discharged to the environment and its trajectory as detailed above and included within the OPEP.

#### **251. Aerial surveillance**

(1) The use of aerial surveillance in the monitoring of oil pollution allows an accurate picture to be formed and assists in the development of targeted response options.

(2) Aerial surveillance shall allow-

- (a) oil pollution to be tracked;
- (b) the size and nature of any slick to be determined;
- (c) an estimation of the volume of oil to be made;
- (d) the trajectory and fate of the oil to be determined i.e. is the oil dissipating or emulsifying;
- (e) identification of any environmental sensitivities i.e. rafting seabirds or other users of the sea.

(3) All operators holding an OPEP shall have the capability to mobilise aerial surveillance in accordance with the Minimum Response Requirements detailed in regulation....Table 7.1. and thereafter flight frequency shall be assessed during each incident as part of the response strategy.

(4) Methods used may include helicopters or dedicated aerial surveillance aircraft.

(5) Effective aerial surveillance requires observers to be fully trained and competent in techniques for detecting oil, both visually and through interpretation of a range of remote sensing technologies.

(6) As a minimum, the following shall be available on surveillance aircraft-

- (a) infrared Scanner imaging equipment;
- (b) Ultra Violet Scanner imaging equipment;
- (c) suitable navigation equipment including Global Positioning System (GPS) to ensure the accurate display of search areas and spray patterns and to control the activities of other resources under its control during counter-pollution operations;
- (d) suitably trained and experienced aircrew and other trained staff to ensure an adequate, continuous response capability.

(7) Operators shall be aware that NEMA/PEPD/UWA/NFA may, at their discretion, undertake their own independent aerial surveillance flights.

## **252. Oil modelling during oil pollution incidents**

(1) During actual oil pollution incidents operators shall have oil pollution modelling capabilities available as part of their response arrangements.

(2) Real time parameters shall be used to assist in predicting the trajectory and fate of hydrocarbons and areas of the environment at risk to help determine a targeted response strategy.

## **253. Dispersant and Aerial Surveillance Requirements**

(1) Once the oil pollution incident scenarios and environmental sensitivities have been identified the next stage is to identify suitable response options.

(2) In the event of an oil pollution incident operators shall have the capability to respond to the pollution.

(3) It is not possible to produce a standard OPEP therefore each plan shall be developed to reflect operator, installation, incident and environmental specific criteria.

### *Oil Discharge Reporting Requirements*

#### **254. Reporting oil discharges to the National Response Center and NEMA/Authority**

(1) If a facility or vessel discharges oil in connection with oil activities or which may affect natural resources under the Government, the owner/operator is required to follow certain reporting requirements.

(2) This Part identifies certain types of discharges from regulated facilities that also need to be reported to NEMA.

#### **255. Person subject to reporting requirement**

(1) Any person in charge of a vessel or of a facility regulated under these Regulations is subject to the reporting requirements of the discharge of oil if it discharges a harmful quantity of oil to Uganda's waters, adjoining shorelines or which may affect natural resources under the Government.

#### **256. Definition of "harmful quantity" of discharged oil**

(1) For purposes of these Regulations, "harmful quantity" is any quantity of discharged oil that violates state water quality standards, causes a film or sheen on the water's surface, or leaves sludge or emulsion beneath the surface.

(2) Reporting oil discharges does not depend on the specific amount of oil discharged, but instead can be triggered by the presence of a visible sheen created by the discharged oil or the other criteria described above.

#### **257. Where to report an oil discharge**

(1) A facility shall report discharges to the National Response Center (NRC)/NEMA which is the government's centralized reporting center.

(2) Where reporting directly to NRC is not practicable, reports also can be made to the NEMA/ Police regional office or the Authority for upstream or midstream facility.

#### **258. When to report**

Any person in charge of a vessel or facility shall notify NRC and NEMA immediately after he or she has knowledge of the discharge.

#### **259. Information to be reported**

The person reporting an oil spill shall provide as much information about the incident as possible including-

- (a) name, organization, and telephone number;
- (b) name and address of the party responsible for the incident;
- (c) date and time of the incident;
- (d) location of the incident;
- (e) source and cause of the discharge, if known;
- (f) types of material(s) discharged;
- (g) quantity of materials discharged; and
- (h) danger or threat posed by the discharge to human life and the environment.

#### **260. Oil discharge reporting fact sheet**

The oil spill reporting fact sheet shall contain-

- (a) number and types of injuries (if any);
- (b) weather conditions at the incident location; and

(c) other information to help emergency personnel respond to the incident.

### **261. Handling of reports**

(1) NRC shall relay the information received under regulation---- to the police, NEMA and relevant lead agency, depending on the location of the incident.

(2) After receiving a report, the NEMA, police or relevant lead agency shall evaluate the situation and decides whether government emergency response action is necessary.

### **262. Oil discharge reporting requirements**

(1) Any facility owner or operator shall comply with the reporting requirements under these Regulations.

(2) A discharge shall be reported to the NEMA, NRC when there is a discharge of-

(a) more than **1,000** gallons of oil in a single discharge to state waters or adjoining shorelines; or

(b) more than **42** gallons of oil in each of two discharges to state waters or adjoining shorelines occurring within any twelve-month period

(3) When determining the applicability of reporting requirement, the gallon amount specified in subregulation (2) refers to the amount of oil that actually reaches state waters or adjoining shorelines, not the total amount of oil spilled.

### **263. Information to be submitted to NEMA**

(1) The owner or operator shall provide the following-

(a) name and location of the facility;

(b) owner or operator name;

(c) maximum storage or handling capacity of the facility and normal daily throughput;

(d) corrective actions and countermeasures taken, including descriptions of equipment repairs and replacements;

(e) adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;

(f) cause of the discharge to the waters or land , including a failure analysis;

(g) failure analysis of the system where the discharge occurred;

(h) additional preventive measures taken or planned to take to minimize discharge reoccurrence; and

(i) other information the NEMA may reasonably require.

(2) An owner or operator shall also send a copy of the information under subregulation (1) information to the local government in which the facility is located.

(3) After submission of the information under subregulation (1), NEMA shall review the information submitted by the facility and may require a facility to submit and amend its OSCP.

(4) Facilities and equipment that qualified for the new streamlined requirements may lose eligibility for those options as determined by NEMA.

### *On Oil Pollution Emergency Plan Requirements*

#### **264. Purpose of an OPEP**

- (1) Operators are responsible for, and shall be able to respond to, pollution incidents relating to their installations or infrastructure.
- (2) These Regulations require operators to produce a fit-for-purpose, operational document, that clearly sets out the procedures for responding to offshore oil pollution incidents in an effective and efficient manner, and in co-ordination with the National Oil Spill Contingency Plan.
- (3) The scope of an OPEP shall cover many different activities and functions.
- (4) When developing the OPEP, it is therefore essential that a multi-disciplinary team approach is used to capture operational, response and environmental requirements.
- (5) Team members may include, but not be limited to, senior management, offshore and onshore operational personnel including relevant contractors, response personnel including relevant contractors, Health, Safety and Environment (HS&E) advisors, insurance advisors.
- (6) If contractors or environmental consultants are employed to develop and write the OPEP, relevant information shall be provided and reviewed by appropriate personnel employed by the operator and responsible for incident response, to ensure that a robust and fit-for-purpose document is produced.

#### **265. Category of installations requiring and OPEP**

- (1) All installations, infrastructure and activities that could give rise to an oil pollution event on the UKCS shall be covered by an OPEP.
- (2) This requirement applies to fixed gas, condensate and oil pipelines; storage facilities and facilities, including any connected third party infrastructure that is not the subject of a separate OPEP.
- (3) Where there is any doubt as to whether an OPEP is required, operators shall contact the NEMA inspectors.
- (4) Types and categories of installations and types of activity requiring an OPEP -
  - (a) pipelines including combined platform or handling facility and pipeline OPEP, or separate pipeline OPEP;
  - (b) exploration wells unless addressed within scope of an existing plan;
  - (c) appraisal wells as per exploration wells;
  - (d) refineries;
  - (e) development wells unless addressed within scope of existing plan;
  - (f) decommissioning;
  - (g) well intervention, well work over and well abandonment; and
  - (h) all oil storage facilities; and
  - (i) oil transportation tanks or vehicles.
- (5) OPEPs are therefore required for all oil and gas activities undertaken Uganda which could give rise to a pollution incident.

(6) The facilities and activities covered by the OPEP shall be clearly stated in the submission, and be consistent throughout the document and where appropriate, a schematic shall be included to identify the infrastructure covered by the submission, supported by the data in a table format.

(7) To ensure compliance with these Regulations, OPEP's shall be submitted by operators for approval to NEMA at least 2 months prior to the start of activities.

### *Types of Installations Requiring an OPEP*

#### **266. Single Installation**

All single installations shall have an OPEP and may include a complex of bridge linked installations.

#### **267. Groups of installations**

(1) Groups of installations may be included within one OPEP provided all the actions required in respect of each individual installation are clearly identified and the geographical location of the installations is within a reasonable distance so that the potential environmental impact of a pollution incident from within the group can be treated as comparable.

(2) In most cases groups of installations shall be physically joined by infrastructure and may include offshore installations, and pipelines associated with a host installation.

(3) Where an OPEP covers more than one installation operators shall ensure the document contains specific information relating to each installation thus ensuring that personnel using the document can clearly identify response arrangements associated with their installation.

(4) Operators shall be aware that OPEP requirements associated with groups of installations shall be assessed on a case by case basis to ensure that individual aspects associated with the developments, environmental sensitivities and response arrangements can be taken into account.

(5) Operators may contact NEMA to discuss individual circumstances if required.

#### **268. Pipelines**

(1) Pipelines engaged in the transportation of oil, condensate, wet gas, or gas shall be covered by an OPEP.

(2) Pipeline operators both in-field and trunk export may have a separate pipeline plan or a combined host installation and pipeline plan.

#### **269. Exploration, appraisal and development Wells**

(1) All exploration, appraisal and development drilling and production operations conducted on an installation shall be covered within an approved OPEP.

(2) The operations are from a fixed installation with an existing approved OPEP covering these activities, all exploration, appraisal and development operations shall be covered within the existing OPEP.

(3) All exploration, appraisal and development operations carried out from a mobile drilling unit shall be included within an OPEP.

(4) Where the mobile drilling unit is within the vicinity of a fixed production installation the activities can be covered in an addendum to the existing fixed installation OPEP and each addendum shall require separate approval.

(6) Each new exploration, appraisal and development operation shall require an assessment to ensure that local environmental sensitivities and contingency arrangements have been addressed and the assessments shall be included in the addendum.

(7) If an OPEP covers a number of wells, for example if there is a three-well drilling programme, all the wells shall be identified in the submission.

(8) If only one of the wells is identified in the OPEP, NEMA shall assume that there is an outstanding submission for the other wells, even if the OPEP mentions a multiple-well drilling programme, and this shall inevitably delay the determination of the OPEP, and could delay the determinations of other related environmental submissions.

(9) It is not acceptable to submit an addendum to an obsolete exploration, appraisal and development drilling OPEP.

#### **270. Well intervention, well work overs, well abandonment and decommissioning operations**

(1) Well intervention, well work overs, well abandonment and decommissioning operations require to be included within the scope of an OPEP where there is a risk of oil pollution.

(2) These activities may be incorporated into an existing OPEP and operators are encouraged to include these activities when submitting an OPEP for initial approval.

#### **271. Natural Gas Liquid (NGL)/Gas Storage import and export stations**

All NGL or gas storage import and export stations require an OPEP.

#### **272. Testing and evaluation methods**

(1) Several toxicity test methods including the flash point test, oral toxicity test, dermal toxicity test, and the inhalation toxicity test and those provided for in the Second Schedule shall be adopted in determining the toxicity of oil after an oil spill has occurred.

(2) An owner of an oil storage facility, transporter or distributor of oil or oil products shall adopt any or all of the following response technology and evaluation methods to clean up the environment in case of an oil spill:

- (a) in-situ volatilisation in case of spills of gasoline and other fuel oils; or
- (b) biodegradation and excavation in case of Gasoline, fuels, oils, Coal tar and Residues.

#### **273. Oil Spill Response Technical Guidelines**

(1) Oil spills, as already mentioned, may have very serious impacts on the environment, the coastal activities and all those that, directly or indirectly, use the marine resources.

(2) The severity of those impacts is determined by an ensemble of factors to which the selected response method is not foreign.

(3) This purpose of this section is to consider, in a synthetic manner, potential response techniques against oil spill incidents and propose guidelines for their application.

(4) The Oil Spill Response National Centre shall have additional technical information available to the Incident Command team members.

#### **274. Identification of the spill source**

(1) This is, normally, a relatively easy task when it is about major spills.

(2) In case of spills in port areas, moorings and coastal areas, which may result from incidents or operational discharges, the identification may be very difficult, often being necessary to resort to chemical tests to verify responsibilities.

(3) Such identification becomes primordial also for payment or obtaining compensation for the victims.

### **275. Measures to block or minimize the oil spill**

(1) The greater responsibility of an operator of an oil handling facility in land, shall be to stop the oil spill as fast as possible.

(2) When the spill is originated in a ship, one shall try and proceed to the transfer of the oil contained in the damaged tanks, in order to allow the ship to proceed to the nearest port to be repaired.

(3) This operation may be carried out with the help of tankers, barges or floating tanks.

(4) Floating hoses may also be utilized to help the transfer.

(5) Usually, these operations require great experience and competence.

### **276. Monitoring of oil slicks**

(1) Where the oil slicks drift away to a water body, an immediate response may not be necessary but a regular aerial survey shall be organized in order to confirm the movement of the slicks and the behaviour of the oil.

(2) This technique is worthy of endorsement in the following cases-

(a) light oil spills, especially if the incident occurs far from the lakeshore and sensitive areas and the oil shall disperse by evaporation and natural bio degradation before generating any impact;

(b) oil spills where the local weather conditions push the slicks offshore; considering the winds and predominant currents and this measure requires the following-

(i) look for and mobilize an airplane for aerial survey;

(ii) hire personnel trained to recognize oil in the water: the light reflected on the spilled oil usually makes it difficult to evaluate its extension and volume from the deck of a ship or from land;

(iii) observation from aerial means greatly reduces such difficulty;

(3) Prepare a cartography of the oil, differentiating between concentrations and skin and estimate the quantity of spilled oil.

(4) The oil slicks shall be object of regular aerial survey, particularly in areas where the wind and current conditions are complex and do not follow established templates.

(5) Obtain, if possible, meteorological forecasts for 71 hours periods;

(6) Ensure realization of calculations to predict the probable movement of the slicks.

(7) Opt for surveillance when chemical treatment or recovery is not adequate or necessary.

(8) The oil slicks shall be watched until they are no longer a threat to the coast or sensitive areas.



**277. Appearance of spilled oil**

(1) An oil spill usually has the appearance of “scraps” with thin coatings which may contain concentrations of thicker layers and the thicker layers present dark colours, the intermediate layers may be blue or present iridescence, while the thinner coatings present a silver aspect.

(2) Some phenomena present abnormalities, such as the passage of a ship over the oil spilled by itself or another, the shades of the clouds, the existence of algae, medusas, and plankton and submarine sandbanks but, after acquiring some experience, the observer shall no longer mix these observations with actual evidences of oil spill.

(3) It is not always easy, just by observation, to conclude if the spilled product is crude oil or another product, which may usually be settled making an inspection aboard the ship.

**278. Assessment of the spilled oil quantity**

(1) In order to determine the response level and even the possible penalty for the infringer it is very useful to estimate the quantity of oil spilled.

(2) This estimate may be made establishing-

- (h) the extension of the area affected by the pollution;
- (i) extension of that area covered by the oil;
- (j) the percentage of the coverage by oil, through the colours.

(3) The relations colour or volume until code 5 of the following table derives from results of drills at sea with controlled discharges of oil.

**279. Records Documents to Be Public Documents**

Records kept by an owner of an oil storage plant, transporter, and distributor, of used oil in relation to oil spills shall be public documents.

**280. Register of licences**

The Authority and any other designated body shall maintain a register of holders of licences to store, transport, distribute, or dispose of oil or oil products.

**281. Improvement Notice.**

(1) Where an Inspector has reasonable cause to believe that any person is violating or is about to violate any provisions of these Regulations, he or she may issue an improvement notice against such a person or take any such measures in accordance with the provisions of section 80 of the Act.

(2) Any action taken in accordance with the provisions of sub-regulation (a) of this regulation shall not act as bar to any other civil or criminal proceedings which may be taken under any other provisions of the act in respect to the same activity for which the improvement notice shall have been issued.

**282. Cancellation of Licence**

(1) The NEMA may suspend or cancel any licence issued under the Act if he or she is satisfied that the conditions of the grant of the licence have been violated.

(2) The Commissioner may also suspend or cancel such a licence if he or she is satisfied that the continued operation of the transaction for which it was issued may be injurious to the environment.

## PART XV- REMEDIES AND ENFORCEMENT

**283. Exclusive remedies**

(1) When applicable, the limitations of liability and immunities provided in this Chapter shall be exclusive and shall supersede any other liability provisions provided by any other applicable state law.

(2) The provisions of this Part shall supersede, but not repeal, any conflicting laws of this state.

(3) Any conflicting applicable federal law shall take precedence over this Part.

(4) Notwithstanding any other provision of this law, nothing herein shall be construed to preclude the Department of Wildlife and Fisheries from bringing a civil suit to recover penalties for the value of each fish, wild bird, wild quadruped, and other wildlife and aquatic life unlawfully killed, caught, taken, possessed, or injured pursuant to R.S. 56:40.1 et seq.

**284. Enforcement**

(1) Any violation of the provisions of this Chapter shall be subject to the enforcement, penalty, procedural, and adjudicatory provisions of this regulation.

(2) In addition to other factors required to be considered by the secretary in such proceedings, the coordinator shall submit his report regarding a violation of this Chapter to the secretary, and the secretary shall give due consideration to the report.

**285. Offences**

(1) Any operator of an offshore installation or of an oil handling facility who without reasonable cause-

(a) fails to submit or re-submit an oil pollution emergency plan in accordance with regulation 4(3), (4) or (5);

(b) does not maintain an oil pollution emergency plan, as approved (with alterations directed by the NEMA under regulation 4(5) to (7); or

(c) fails to implement its oil pollution emergency plan in contravention of regulation 4(8), commits an offence and is liable on conviction to a fine not exceeding one Million currency points or imprisonment not exceeding.....or both.

(2) Any person required to make a report under regulation 5 or 6, as the case may be who, without reasonable cause, fails to comply with that requirement in all respects commits an offence and is liable on conviction o a fine not exceeding .....currency points or imprisonment not exceeding.....years or both.

(3) Any person who fails to submit, maintain or implement an OPEP or fail to report an oil pollution incident commits and offence and is liable on conviction to a fine not exceeding.....currency points or imprisonment not exceeding.....years or both.

**286. Penalties**

An oil spiller is by these Regulations to report an oil spill to the Committee in writing not later than 24 hours after the occurrence of an oil spill, in default of which the failure to report shall attract a penalty in the sum of five hundred thousand currency points for each day of failure to report the occurrence.

(3) The failure to clean up the impacted site, to all practical extent including remediation, shall attract a further fine of one million currency points.

(4) Such notice in writing is deemed to have been made, if delivered at the nearest zonal office closer to the impacted site, and of the Committee, the National Control and Response Centre within the stipulated time in subregulation (2).