

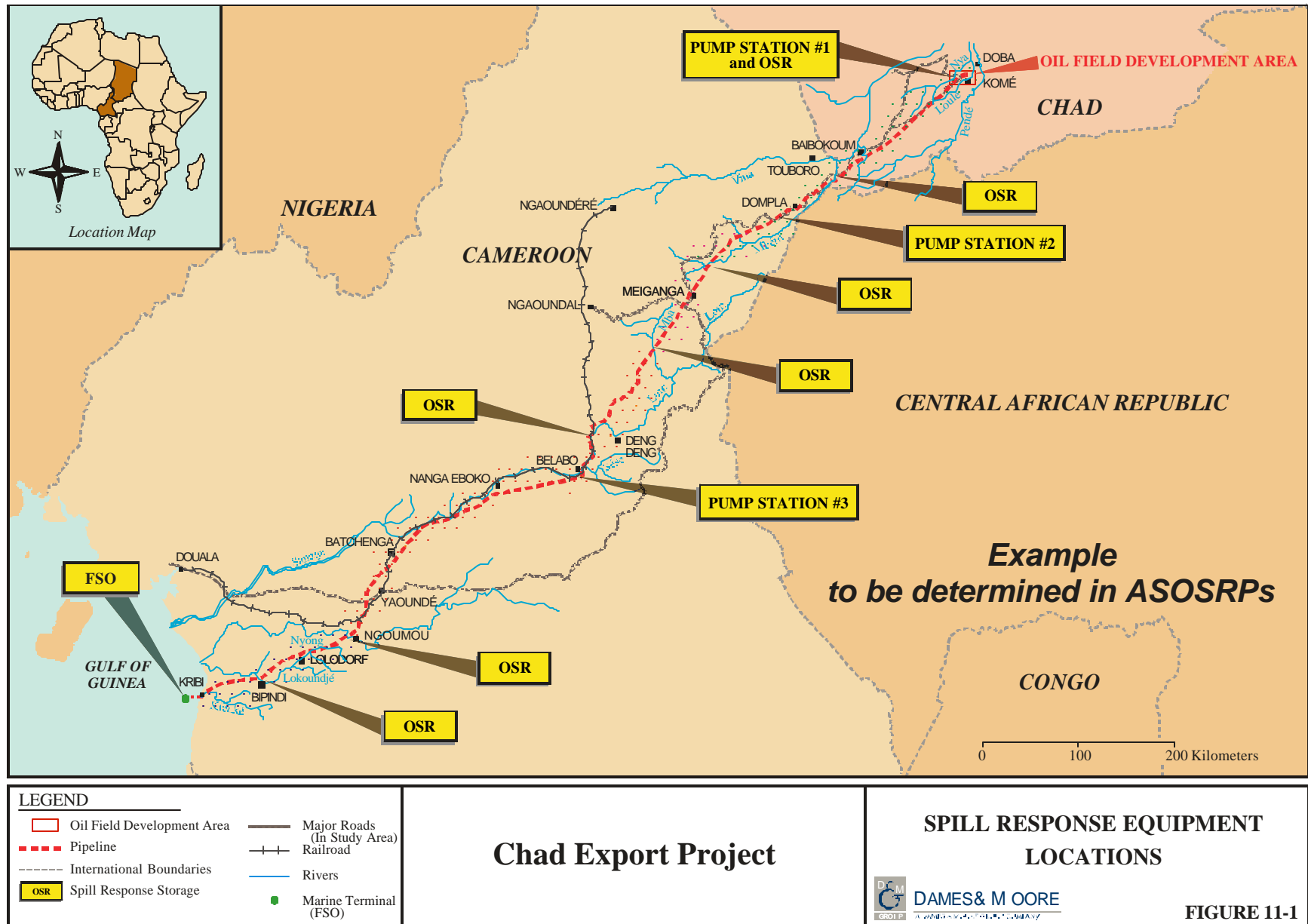
11. RESPONSE EQUIPMENT

11.1. Introduction

EEPCI, TOTCO, and COTCO will have in-country response capabilities to effectively handle Tier 1 spills. These resources will be staged at the OFDA, at Maintenance Area office locations, at key river crossings, offshore aboard the FSO and support vessel, and at the Pressure Reduction Station (Figure 11-1, NOTE: spill equipment locations to be finalized upon completion of ASOSRPs). Cascading of resources between these locations for in-country response comprises the first strategy to meet Tier 2 response needs. The in-country resources may be augmented by mobilizing resources from within the region from sources such as CNA and Mutual Aid assistance. Tier 3 response will utilize a combination of the above and resources provided by worldwide oil spill cleanup contractors, such as Oil Spill Response Ltd. (OSRL).

The spill response resources considered for this GOSRP are illustrated in the following. The quantity and specific type of equipment to be deployed will be determined in conjunction with the ASOSRPs.

Figure 11-1. Spill Response Equipment Locations (to be finalized upon completion of ASOSRPs)



11.2. Response Equipment for Tier 1 Spills

11.2.1. FSO & PRS (Kribi)

Item	Specifications	Quantity	Comments
COMMUNICATIONS (See Section 13.)			
CONTAINMENT & PROTECTION			
Offshore Boom			Mild sea conditions will allow use of internal floatation, fence boom, Reel Pak, etc.
Harbor/River Boom			
Geotextile			For shoreline protection
Tow Bridles, Anchors and other Ancillary Equipment			
RECOVERY			
Skimmers			Open water, high capacity
Portable Skimmer			
PUMPS			
			Screw
Hoses/Fittings			
CHEMICALS			
Dispersant			
VESSELS			
Response Vessel			W/ boom and Dispersant Spraying System
Boom boats			
CLEANUP			
Hot Water Pressure Cleaner			
Shovels, Rakes, Diggers, etc.			
SORBENTS			
Booms			
Pillows			
Rolls			
Sheets			

**Example
to be determined
in ASOSRPs**

Item	Specifications	Quantity	Comments
TEMPORARY STORAGE			
Sea bladder or barge			Towable
Drums			
Fast tanks			
HEAVY EQUIPMENT			
Bulldozer			
Front-end Loader			
Excavator			
MISCELLANEOUS			
Light Set			
Generator			
PPE			
Safety Items			(Safety Shoes, Hard Hats, etc.)
Personal Items			(Coveralls, Boots, etc.)

**Example
to be determined
in ASOSRPs**

11.2.2. OFDA and Transportation System

The equipment specified in the following table provides an overview of the type of equipment to be purchased and maintained at locations defined once the ASOSRPs are developed. This equipment will be inventoried and maintained, on a regular inspection schedule.

Item	Specifications	Quantity	Comments
COMMUNICATIONS (See Section 13)			
CONTAINMENT			
River boom			
Tow bridles, anchors, and ancillary equipment			
RECOVERY			
Skimmer			
PUMPS			
Hoses/Fittings			
CHEMICALS			
Dispersant			
VESSELS			
Response Vessel			
Boom boats			
CLEANUP			
Vacuum			
Shovels, Rakes, Diggers, etc.			
SORBENTS			
Booms			
Pillows			
Rolls			
Sheets			
TEMPORARY STORAGE			
Drums			
Fast tanks			

**Example
to be determined
in ASOSRPs**

Item	Specifications	Quantity	Comments
HEAVY EQUIPMENT			
Bulldozer			
Front-end Loader			
Excavator			
MISCELLANEOUS			
Light Set			
Generator			
PPE			
Safety Items			(Safety Shoes, Hard Hats, etc.)
Personal Items			(Coveralls, Boots, etc.)

**Example
to be determined
in ASOSRPs**

11.2.3. Key River Crossings

The equipment specified in the following table provides an example of the type of equipment to be purchased and maintained in a spill response conex at designated river crossings as defined in the ASOSRPs. This equipment will be inventoried and maintained on a regular inspection schedule. The river crossings that may be evaluated in ASOSRPs are:

Table 11-1. Major River Crossings

River	Maintenance Area	Pipeline Kilometer
Loulé	MA-1	2
Lim	MA-1	140
Mbéré	MA-1	178
Mbéré	MA-1 and -2	324
Mba	MA-2	432
Pangar	MA-3	487
Mouyai	MA-3	529
Lom	MA-3	539
Sessé	MA-3	585
Yong	MA-3	608
Tédé	MA-3	709
Afamba	MA-3	811
Nyong	MA-4	907
Lokoundjé	MA-4	946
Mougue	MA-4	994
Lokoundjé	MA-4	1007
Kienké	MA-4	1062

Item	Specifications	Quantity	Comments
CONTAINMENT			
River boom			
Tow bridles, anchors, and other ancillary equipment			
VESSELS			
Boom boat			
CLEANUP			
Recovery Skimmers			
Shovels, Rakes, Diggers, etc.			
Pump/Hose fittings			
SORBENTS			
Booms			
Pillows			
Rolls			
Sheets			
TEMPORARY STORAGE			
Drums			
PPE			
Safety Items			(Safety Shoes, Hard Hats, etc.)
Personal Items			(Coveralls, Boots, etc.)
Decon Tub & Solution			

**Example
to be determined
in ASOSRPs**

11.3. Response Equipment for Tier 2 Spills

Cascading of Tier 1 equipment represents the first strike capability for spill response. In addition to the equipment already listed in Section 11.2, EEP, TOTCO, and COTCO will maintain quantities of materials, as shown in this example listing, to initiate a Tier 2 spill as evaluated from ASOSRPs.

11.3.1. Spill Trailers

Item	Quantity	
Safety Equipment		
safety goggles		
neoprene gloves		pairs
nitrile gloves (100/box)		box
chemical gloves		pairs
steel-toed rubber boots		pairs
outer booties		pairs
Self-Contained Breathing Apparatus (SCBA) 60-min.		
Emergency Evacuation Breathing Apparatus (EEBA) w/ airline		
50' airlines		
full face respirators		
half face respirators		
organic vapor cartridges		pk/2
saranex suits		
full encapsulated/Type A suits		
tyvek suits — disposable		
rain suits		
hard hats		
safety harness		
splash shield holders		
caution tape (English/French)		roll
hazard tape (English/French)		roll
industrial first-aid kit (25 man)		
emergency eye wash station		
Tools		
non-spark shovels		
utility tool kit, non sparking		
crow bar, non-spark		
sledgehammer, 5lb		
brass bung wrench, non-spark		
pipe wrenches (10" & 14")		
drop lights		
extension cords, heavy duty, 50ft		
fire extinguisher; all purpose		
rope, 3/8" poly		spool

**Example
to be determined
in ASOSRPs**

Item	Quantity	
push broom — 36" wide, HD		
drum dolly		
duct tape		cases
Spill Control		
drain protector; 36"		
drum repair kit		
gasoline tank car repair kit		
diesel tank/tank car repair kit		
small diesel leak repair kit		
HD plastic overpack drum, 65 gallon		
2" transfer pump		
2" transfer hoses, fuel 20'		
1000 gallon capacity XR-5 berm		
Universal spill kit 18 gallon receptacle		
Decontamination		
Decontamination pool — personnel		
decontamination solution		
emergency disposable shower		
2-Stage pump & Filter		
decontamination shower		
6 mil poly sheeting, 20 x 100ft		
Miscellaneous		
water-proof field log books		
traffic cones		
hazard reflectors		
10 gallon water cooler		
40 kW Generator set		
Exterior floodlights		

**Example
to be determined
in ASOSRPs**

11.3.2. Regional Equipment

Spill response equipment from regional locations, such as Mutual Aid resources or equipment available from CNA can be utilized to enhance the Tiers 2 and 3 capabilities. Examples of the types of equipment from such sources are provided in the following listing (general information from CNA). Complete regional equipment lists will be maintained in this section of the GOSRP.

Item	Specifications	Quantity	Comments
COMMUNICATIONS			
Radios	SSB		
	UHF		
	VHF		
	Walkie Talkie		
Mobile Command Center			
CONTAINMENT			
Offshore Reel Pak	24"		
Harbour/River Boom	16"		
River Boom	12"		
Lake Boom	6"		
Pocket Boom	3"		
RECOVERY			
Sea Skimmer			
Portable Skimmer			
PUMPS			
Herding Pumps	3", Centrifugal		
Herding Pumps	2", Centrifugal		
Unloading Pumps			
Hoses	4", 3", 2"		
CHEMICALS			
Dispersants	55 gallon drums		
VESSELS			
Fast Response Vessels			W/ boom and Dispersant Spraying System
Flat Bottom Boats	W/ Outboard Engine		
CLEANUP			
Hot Water Cleaner			
Shovels, Rakes, Diggers, etc.			
SORBENTS			

**Example
to be determined
in ASOSRPs**

Item	Specifications	Quantity	Comments
Booms			
Pillows			
Rolls			
Sheets			
TEMPORARY STORAGE			
Tow bladder	10,000 gallon		Towable
Drums	200 liter		
Steel tanks	500 gallon		
HEAVY EQUIPMENT			
Fork Lift			
Flat Bed Truck with Crane	5 Ton		
MISCELLANEOUS			
Light Set			
Generator			
PPE			
Safety Items			(Safety Shoes, Hard Hats, etc.)
Personal Items			(Coveralls, Boots, etc.)

**Example
to be determined
in ASOSRPs**

11.4. Response Equipment for Tier 3 Spills

Response equipment for Tier 3 support will come from worldwide OSR cooperatives. The Project considers OSRL, based in the UK, as an example source of such equipment. Resources available from the worldwide OSR cooperatives are transportable via aircraft to sites around the world. Other resources may also be requested from ECI contractors such as East Asia Response Ltd. (EARL) and the Clean Caribbean Cooperative. The equipment listing in the following is provided as a sample only. An equipment list for OSRL is pending completion of formal service contracts. Actual equipment lists for the Project's international OSR spill response support will be amended to this GOSRP prior to mobilization. These equipment lists will be checked and updated regularly to reflect any significant changes in capability.