JOINT INVESTIGATION REPORT	FOR INCIDENT NO: 126	7621 JIV report S/N: 0073	3 <b>0</b>
		the field by all the participating parties)	
A. GENERAL INFORMATIO	N:		
1. Spill incident Number:	267621 2.Ty	pe of incident* DIL SPILL	
3. Name of Location	" BOMU - BI	NNY PIPELINE	
		IVERS 6. LGA GOKANA	
	•	B. Asset owner/District PIPELIN	
B. INCIDENT INFORMATION			
	TH OCTOBER		
c. Investigation End date	7TH OCTOBER	OBER, 2014/12:19 H evestigation duration, days: <u>DNE(1</u> )	lours Vaav
d. Description of spill poi		rvestigation duration, days. VNE	<del>)</del> va i
_	_	<b>¬</b>	
Firmed soil	Loose soil	Recently excavated area	
Under water	<b>Z</b> Swampy	Exposed pipe surface	
□Well Platform (on \	Vater)	□Drill Rig	
WAS OBSERVE POINT EXPOSURE	d as at lime of re, the affected been illegally	FERDAM CONSTRUCTS SURROUNDED BY A BUN INVESTIGATION, ON S PIPELINE SECTION DE-COATED, IMPACTE WITH ORGANIC MAT	SPILL WAS D SOIL
e. Description of leak poi	•		
Drilled hole	Hack saw cut	☐ Tear ( ),	
Complete Rupture	☐Inward dent,	☐Well head tampering	
	I hot tap valve, Failed Clamp	Missing Pipeline/Flowline	
Crude oil theft (ille		☐Third party tampering with Clam	n
☐Third party tamperi	=: =	☐ Third party tampering with flange	-
Corrosión	Saver-pit over flow	•••••	-,
☐Bulging Outward		I wall failure  Accidental 3 <sup>rd</sup> party eq	minment
		com unit failure  Cold vent	(a.p.mem
Relief valve failure	·		
f. Incident caused by:			
_	: (Sabotage□; crude theft <b>Z</b> : Line t	theft□; Accidental 3 <sup>rd</sup> party damage□)	
		)	

<sup>\*</sup>This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Eucroachment f) Fire,

Nort	asuring unit M			Easting:		
	67126 M	N		5369	69 MI	£
DIEK ACCES	POMENT	<del>-</del>		<u>.</u>		
RISK ASSES	Type of environment:	•				
□Land	Swamp	□Water	□Se	asonal swamp	Shoreline/Wa	terfront
i.	Type of environment to	which oil has	spread:			
Land	Swamp	□water	□Ri	ver (identify)		
ii.	Weather condition					
Rain 11. Distance	☐Sunny from the nearest sensit	□Dry ive habitat	□Wet	□Windy	□Hot	□cool
Drin D Built Farn D Fish D Fish	nlands Farm/Pond			[m, ] [m, ] [m, ] [m, ] [m, ] [m, ]	n	
	nent measures put in pl					
□Boor <b>☑</b> Othe	ns Trench	□Dyke	-	atural depression 4 BUILT		□ <sub>No</sub> SPILL
	res or video coverage			[Y]/[N]		
14. Further	response/repair initiate	d as at the time	of JIV?	[Y] [N <b>.</b> ]	<b>/</b> .	
yes to item 14, gi	ve brief description:	4				
No		APPL	، ٦٦ د	ABLE	)	
15. Was ther	e any disruption to the	investigation?		 [Y] [N]	/	
	ive brief description:			_		

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1267621 JIV report S/N: 00730

# D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL

16. Structures / Properties

S/N Type of Structures	Description	Size	Number	Comments
NONE W		N AR	EA OF	IMPACT

17. Crops/Economic Trees

S/N Type of crops	Young	Medium	Matured	Quantity	Comments
NONE	WITHIN	1 A1	REA C	F MI	ACT

18. Fish/Nets/Ponds

S/N Fish/Nets/Ponds	Description	Quantity/Size	Comments	
NONE	WITHIN A	REA	OF IM	PACT

19. Others (Specify) i.e. Animal Traps

NONE WATER ASEA	
THUISE WITHIN AREA OF TH	PACT-

GRAND COUPTION OF LEAK POINT (while detail report of the leak point should be contained in the eals of specific states of the site should be added as an appendix 1)

GATE VALVE

SECTION OF 28" BOMU - BONNY
PIPELINE AT BODO-CITY SHOWING
ONE NO.4"CRUDE OIL THEFT

1807

POINT AT 12 0' CLOCK

POSITION.

HOM BOMU

ELBOW

To BONNY

-4" Spool

PIECE

FAILED 4" BALL VALVE

Page 3 of 8

ILLEGAL CONCRETE DE-COATING

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1267621 JIV report S/N: 00730

# F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION 20. Impacted area boundary Coordinates (If more, Print and attach as an appendix)

20.	· MN bh Mi	b BELT
S/N	Northing (M)	Easting (M)
1	67131	536980
2	67121	536974
3 4	67110	536966
4	67113	536951
	67117	536949
5	67130	536960
7	67138	536962
8	67140	536968
9	67136	536979
:		

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 126762 JIV report S/N: 00730 G. INCIDENT INFORMATION:

J, 111	CIDENT	muo	WITTE I	
20.	Impacte	d Area	Details	

•	Total cal	culated area of impact_	0.053	Ha	
•	Impact v	vithin SPDC R.O.W	745	·	
•	Impact o	utside SPDC R.Q.W	<u>N0</u>	<u> </u>	
21. Volume	of oil rec	overed before complet	ion of JIV (V <sub>rec.</sub> )	):	
	[	Reco	vered oil V <sub>ree</sub> :	NIL	Barrels
Controlled	recovery	evacuation from sour	ce with no impac	et to environment:	•
		NIL	Barrels		

22. Net Estimated Spilled Volume V <sub>Ex</sub> (1	<u>bbls)*</u> =	29.89	
Estimated Reported Volume** V <sub>rep</sub> (bbls)=	30	BARRELS	

\*Notes:

Volume estimation was done using an excel based tool (see attached for details on the calculation)

Reported spilled volume is an estimate

Write other relevant notes taken into consideration for estimating the spilled in the box below:

NOT APPLICABLE

Calculation of the respective estimated volume is to be done on site as far as practicable using the new spill volume estimation software on site; Conversion of  $m^3$  to barrels is Volume (m3) x 6.29; \*\*Round up estimated volume to next whole number using the following rules:

Any spill volume in excess of 1 bbl is rounded up to the next whole number.

Any spill volume in less than 1 bbl is rounded up to the next 0.1 bbl.

Examples: Calculated volume = 15.3 bbl ------ Reported volume = 16 bbl Calculated volume = 0.35 bbl ------ Reported volume = 0.4 bbl Calculated volume = 0.01 bbl ------ Reported volume = 0.1 bbl.

Wherever this estimation tool is not applicable please refer to paragraph 6c (Deviations) of the JIV procedure to use appropriate steps for column estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

#### **ESTIMATION OF OIL SPILL VOLUME**

#### OIL SPILLED ONSHORE/OFFSHORE (Leak stopped at source) Impacted Area Details **Total Calculated Area of Impact** 531.00 m² i Impact within SPDC R.O.W 531.00 m<sup>2</sup> ii Impact outside SPDC R.Q.W 0.00 m<sup>2</sup> 1 Volume of oil recovered before completion of JiV (V<sub>rec.i</sub>) i Estimated Recovered oil (Net) 0.00 bbis Estimated Recovered oil (Net) V<sub>rec</sub>J 0.00 bbls 2 Computation of estimated residual volume on site Computation of volume of free phase oil (on land or confined water body) i Total area occupied by pool of free phase oil 225.00 m<sup>2</sup> ii Average depth of pool of free phase oil 0.015 m iii Emulsification factor (If applicable, else 0%) al% Estimated Volume of pool of free phase oil, Vpool 3.38 m<sup>3</sup> Estimated Volume of pool of free phase oil, Vpool 21.23 bb/s Computation of estimated volume of infiltrated oil in the soil (V int) Volume of infiltrated oil at spill point (V<sub>inf a</sub>) i Total area covered by the oil (infiltration) 1.00 m<sup>2</sup> ii Average depth of infiltration above leaking facility i.e. pipeline/flowline 2.000 m Clay iv Pe (effective porosity of the soil) v Cause of spill Third party interference ▼ Calculation of days for infiltration below the leaking point on pipeline or flowline Incident Date Days on Site JIV Date 10/13/2014 14:15 10/17/2014 14:55 If 'cause of spill' is operational, use 1 week as worst case scenario except where 'days on site' exceeds 7. Infiltration of oil types in various soil types vs time. Soil type Approximate time to reach 1m depth below ground level Oil type Sand Loam Bonny Medium 3 weeks 3 years > 10 years Bonny Light 2 days 2 months > 10 years vii Oil type Bonny Light viil Average depth of infiltration below leaking facility i.e. pipeline/flowline 0.001 ix Total depth below ground surface of infiltration of oil 2.001 m Estimated Volume of inflitrated oil, V inte 0.16 m<sup>3</sup> Estimated Volume of infiltrated oil, V int a 1.01 bbis 2 Volume of inflitrated oil at second spill point [if applicable] ( $V_{inf,b}$ ) i Total area covered by the oil (infiltration) m<sup>2</sup> ii Average depth of infiltration above leaking facility i.e. pipeline/flowline m iii Soil type iv P. (effective porosity of the soil) 0 % v Average depth of infiltration below leaking facility i.e. pipeline/flowline 0.000]m vi Total depth below ground surface of infiltration of oil 0.000 m Estimated Volume of infiltrated oil, V<sub>inf b</sub> 0.00 m<sup>3</sup> Estimated Volume of infiltrated oil, V int b sidd 00.0

Total Area of the pool of free phase oil in touch with soil   Soil hope   P. (effective porosity of the soil)   Soil hope   P. (effective porosity of the soil hope   P. (effective porosity of the soil)   P. (effective porosity of the soil)   P. (effective porosity of the soil hope   P. (effective porosity of the soil)   P. (effective porosity of the s		outside immediate spill point(s) regio	on (V <sub>infe</sub> )		
Soil type P <sub>e</sub> (effective perosity of the soil) Average depth below ground surface of infiltration of oil  Coopy   P <sub>e</sub> (effective perosity of the soil) Average depth below ground surface of infiltration of oil  Coopy   P <sub>e</sub>   Coopy   P <sub>e</sub>    Setimated Volume of infiltrated oil, V <sub>erc</sub>   0.19 bbls  Volume of infiltrated oil outside immediate spill point(s) region (superficial impact, V <sub>erc</sub> ) Total Area covered by the oil (infiltration) Total Area overed by the oil (infiltration) Total Area overed by the oil (infiltration) Total Area overed by the oil (infiltrated oil, V <sub>erc</sub>   0.000 m² Estimated Volume of infiltrated oil, V <sub>erc</sub>   0.000 bbls  Estimated Volume of infiltrated oil, V <sub>erc</sub>   0.00 bbls  Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of infiltrated oil, V <sub>erc</sub>   0.19 m² Estimated Total Volume of oil on open water based on standard coloration Total area of oil on open water Estimated Volume of oil on water based on coloration  Spill sector from USCO FOO (2000 Edited)   Percentage coverage   0.0000 Silvery   0.00000 Silvery   0.0000000 Silvery   0.00000 Silvery   0.00000 Silvery   0.00000 Silvery   0.00000   0.00000 Silvery   0.00000   0.00000 Silvery   0.00000   0.00000 Silvery   0.00000   0.000000000000000000000000					
P <sub>s</sub> (effective porosity of the soil)  Average depth below ground surface of infiltration of oil  D.001 m  Estimated Volume of Infiltrated oil, V <sub>eff</sub> Status overed by the oil (infiltrated oil, V <sub>eff</sub> Volume of Infiltrated oil outside Immediate spill point(s) region (superficial Impact, V <sub>eff</sub> )  Total Area other pool of free phase oil in touch with soil  Average depth below ground surface of infiltration of oil  Average depth below ground surface of infiltration of oil  Average depth below ground surface of infiltration of oil  Estimated Volume of infiltrated oil, V <sub>eff</sub> 0.00 m³  Estimated Volume of infiltrated oil, V <sub>eff</sub> 0.19 m³  Estimated Total Volume of infiltrated oil, V <sub>eff</sub> 1.19 bble  Computation of volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Spill Factors from USCO FOO! (1909 Estimo)  Link to Company Valume  Average depth of sill on water based on coloration  Link to Company Valume  Average depth of oil on water based on coloration  Silvery 0.0000  Bight Color 0.0000  Bight Color 0.0000  Bight Color 0.0000  Dull 0.0001  Dull 0.0001  Dull 0.0001  Estimated Volume of oil on open water, V <sub>est</sub> 0.0000  Embision (39% Oil) 1 0.00000  Embision (39% Oil) 1 0.00000  Embision (39% Oil) 1 0.00000  Farcant Total 0.00000  Estimated Volume of oil on open water, V <sub>est</sub> 0.00 bble  Estimated Volume of oil on open water, V <sub>est</sub> 0.00 bble  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation	•	ee phase oit in touch with soil			20.00 m²
Average depth below ground surface of infitrated oil, V <sub>nete</sub> 0.03 m²  Estimated Volume of Infitrated oil, V <sub>nete</sub> 0.18 bbts  Volume of Infitrated oil outside Immediate spill point(s) region (superficial Impact, V <sub>nete</sub> )  Total Area overed by the oil (infitration)  Total Area overed by the oil (infitration)  Total Area of the pool of fee phase oil in touch with soil  Average depth below ground surface of infitration of oil  Estimated Volume of Infitrated oil, V <sub>nete</sub> 0.000 m²  Estimated Volume of Infitrated oil, V <sub>nete</sub> 0.000 bbts  Estimated Total Volume of Infitrated oil, V <sub>nete</sub> 0.00 bbts  Estimated Total Volume oil Infitrated oil, V <sub>nete</sub> 0.19 m²  Total area of oil on open water based on standard coloration  Total area of oil on open water based on coloration  Total area of oil on open water based on coloration  Total area of oil on open water based on coloration  Total area of oil on open water based on coloration  Total area of oil on open water based on coloration  Silvery 0.0000 0.0000  Silvery 0.0000 0.00000  Bisch Color 0.0000 0.00000  Dark 0.0000 0.00000  Dark 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>nete</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>nete</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.00000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.00000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.00000 0.00000  Estimated Volume of oil on open water, V <sub>netee</sub> 0.0000000000000000000000000000000000					
Estimated Volume of Infiltrated cill, V <sub>int 2</sub> 0.18 bbts  Volume of Infiltrated cill, V <sub>int 2</sub> 0.18 bbts  Volume of Infiltrated cill, V <sub>int 2</sub> 0.18 bbts  Volume of Infiltrated cill outside Immediate spill point(s) region (superficial Impact, V <sub>int a</sub> )  Total Area cowered by the oil (infiltration of cill 0.001 m  Average depth below ground surface of infiltration of cill 0.001 m  Estimated Volume of Infiltrated cill, V <sub>int a</sub> 0.00 bbts  Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.00 bbts  Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.01 pm <sup>3</sup> Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated cill, V <sub>int a</sub> 0.19 m <sup>3</sup> Total area of cill on open water based on standard coloration  Total area of cill on open water  Table of average depth of cill on water based on coloration  Spill Featon from USCO FOO (1900 Edition)  Back 10 color 1 0.0000  Back 0.0000  Back 0.0000  Datk 0.0000  Datk 0.0000  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Residence time of spilled cill (days on site)  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Residence time of spilled cill (days on site)  Estimated Volume of cill on open water, V <sub>int a</sub> 0.0000  Residence time of spilled cill (days on site)  Estimated Volume available for evaporation  Evaporation feetors (E-Fector) for SPDC Crude cill  Residence time of spilled cill (days on site)  Estimated volume available for evaporation  Estimated volume available for evaporation  Estimated volume available for evaporation	P <sub>e</sub> (effective porosity of the	: soil)			8 %
Volume of Infiltrated oil, Viere   V	Average depth below groun	nd surface of infiltration of oil	•	•	0.001 m
Volume of Infiltrated oil, Vint   V	Estimated Volume of Infi	Itrated oil, V <sub>infe</sub>			0.03 m <sup>3</sup>
Total Area of the pool of free phase oil in touch with soil  Average depth below ground surface of infiltration of oil  Estimated Volume of Infiltrated oil, V <sub>ourd</sub> Estimated Volume of Infiltrated oil, V <sub>ourd</sub> Estimated Total Volume of Infiltrated oil, V <sub>ourd</sub> 1.19 bble  Computation of volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Spili Factors from USCO FOO (1900 Edition)  Biarchy Visible  Thickness (num)  Parrentings coverage  (N)  Volume (m1)  Biarchy Visible  1.0.00004  Silveny  0.00006  Silveny 0.00000  Silveny 0.00000  Bialch Color 0.0000  Dull 0.0000  Dull 0.0000  Daris 0.0000  Daris 0.0000  Emulsion (30% Oil 0.0000  Percent Total: 0.7 0,0000  Percent Total: 0.7 0,0000  Percent Total: 0.7 0,0000  Percent Total: 0.7 0,0000  Residence time of spilled oil (days on site)  Color of evaporated volume  Featurated Volume of oil on open water, V <sub>ent</sub> 0.00 bble  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  Effector 25 %	Estimated Volume of infi	itrated oil, V <sub>inf c</sub>			<del></del>
Total Area of the pool of free phase of in touch with soil   m²   i Total Area of the pool of free phase of in touch with soil   m²   m²   i Total Area of the pool of free phase of in fluctuon of oil   m²   m²   m²   m²   m²   m²   m²   m	Volume of infiltrated oil (	viteida immediata spili point(s) regio	vo /suserficial impact	F.W A	
Total Area of the pool of free phase oil in touch with soil  Average depth below ground surface of infiltration of oil  Estimated Volume of infiltrated oil, V <sub>brtd</sub> Estimated Volume of infiltrated oil, V <sub>brtd</sub> Estimated Total Volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Thickness (even)  Barety Visible  Barety Visible  Thickness (even)  Silvery  0,0000s  Silvery  0,0000s  Silvery  0,0000s  Bight Color  Dull  0,0001  Dull  0,0001  Estimated Volume of oil on open water, V <sub>rest</sub> 0,0000  Estimated Volume of oil on open water, V <sub>rest</sub> 0,000 m²  Estimated Volume of oil on open water, V <sub>rest</sub> 0,000 bits  Estimated Volume of oil on open water, V <sub>rest</sub> 0,000 bits  Valuation of evaporated volume  Evaporation Factors (E-Factor) for SPOC Crude oil  Residence time of spilled oil (days on site)  Bonny Light  Bonny Light  Bonny Medium  1,7 days  1,7 days  1,7 days  2,2,42 bits  Estimated volume available for evaporation  Estimated volume available for evaporation			ai (auporrious impass	n ♥ Inf d I	m²
Estimated Volume of Infiltrated oil, V <sub>Brt</sub> 0.00 bbis  Estimated Total Volume of Infiltrated oil, V <sub>Brt</sub> 0.119 m³  Estimated Total Volume of Infiltrated oil, V <sub>Brt</sub> 0.119 bbis  Estimated Total Volume of Infiltrated oil, V <sub>Brt</sub> 1.19 bbis  Computation of volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Link to Coverzoo Visual.  Alia  Thickness (mim)	•	'			
Estimated Volume of Infiltrated oil, V <sub>Brd</sub> 0.00 m <sup>3</sup> Estimated Total Volume of Infiltrated oil, V <sub>Brd</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated oil, V <sub>Brd</sub> 0.19 m <sup>3</sup> Estimated Total Volume of Infiltrated oil, V <sub>Brd</sub> 1.19 bble  Computation of volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Link to Coverage Massa.  Als  Thickness (earn)	i Average depth below grou	nd eudace of infiltration of oil			0.001
Estimated Volume of Infiltrated Oil, V <sub>int'</sub>	Menda nobili reion 8.55	to solution of all			
Estimated Total Volume of Inflitrated oil, Vior 1.19 bble  Computation of volume of oil on open water based on standard coloration  Total area of oil on open water  Table of average depth of oil on water based on coloration  Spill Factors from USCG POG (1900 Edition)  Link to Coverage Visual.  Spill Factors from USCG POG (1900 Edition)  Silvery 0.00006  Silvery 0.00006  Silvery 0.00006  Silvery 0.00008  Silvery 0.00008  Dull 0.0001  Dull 0.0001  Dull 0.0001  Emulsion (30% Cill) 1 0.00001  Emulsion (30% Cill) 1 0.00001  Percent Total: 0% 0.0000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Estimated Volume of oil on open water, V <sub>vist</sub> 0.000  Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  Bonny Light Bonny Medium  1.7 days 1.5%  1.7 days 2.5%  1.7 days 2.5%  1.85 15%  E-factor 2.5%					<del></del>
Split   Factors from USCG FOG (2006 Edition)   Link to Coverzoo Yasus .	Estimated Volume of infi	itrated oil, V <sub>kuf d</sub>			0.00 bbis
Computation of volume of oil on open water based on standard coloration   Total area of oil on open water   Table of average depth of oil on water based on coloration	Estimated Total Volume	of infiltrated oil, V <sub>lot</sub>			0.19 m³
Total area of oil on open water   Table of average depth of oil on water based on coloration   Spill Factors from USCO FOO (2000 Edition)   Ald   Percentings coverage   Volume (m3)	Estimated Total Volume	of infiltrated oil, V <sub>lot</sub>			1.19 bbla
Thickness (mm)   Percentage coverage   Volume (m3)	- ,				
Barety Visible	T	Ī	Percentage coverage		1
Silvery   0.00008   0.00000	Pomby Maible		(%)		
Slight Color   0.00015   0.0000					
Bright Color   0.0003   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.0000					1
Dull					1
Dark					1
Black oil   0.1   0.0000					1
Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> O.00 m³  Estimated Volume of oil on open water, V <sub>wat</sub> O.00 bbis  Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  Residence time of spilled oil (days on site)  Oil type  Bonny Light  Bonny Medium  < 1 day  10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  22.42 bbis		•			
Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> D.00 bbls  Evaluation of evaporated volume    Evaporation Factors (E-Factor) for SPDC Crude oil	Emulsion (30% Oil)	1			1
Estimated Volume of all on open water, V <sub>wat</sub> Q.00 bbls  Culation of evaporated volume  Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  Oil type  Bonny Light Bonny Medium  < 1 day 10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  22.42 bbls  E-factor		Percent Total;	0%	0.0000	
Estimated Volume of oil on open water, V <sub>wat</sub> Q.00 bbls  Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  Oil type  Bonny Light Bonny Medium  < 1 day 10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  22.42 bbls	Fetimated Volume of oil	na nnan watar V			4.00 m³
Evaporation Factors (E-Factor) for SPOC Crude oil  Residence time of spilled oil (days on site)  Oil type  Bonny Light Bonny Medium  < 1 day 10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  25 %  E-factor		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  C1 day  C1 day  C1 day  C1 days  C3 days  C4 days  C5 days  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  E-factor  C0il type  Bonny Medium  10%  5%  15%  25%  15%  No  ▼  22.42 bbis					
Residence time of spilled oil (days on site)  Oil type  Bonny Light  Bonny Medium  10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  22.42 bbls	ulation of evaporated volu	<u>ımē</u>			
Residence time of spilled oil (days on site)  Oil type  Bonny Light  Bonny Medium  10% 5%  1-7 days 25% 15%  > 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation  25 %		Evaporation Factors (E-Factor) for S	PDC Crude oil		l
< 1 day   10%   5%     1-7 days   25%   15%     > 7 days   40%   25%     Was oil recovery before JIV completion done before JIV date?   No	Residence time			·-·	
> 7 days 40% 25%  Was oil recovery before JIV completion done before JIV date?  Estimated volume available for evaporation 22.42 bbls  E-factor 25%		< 1 day	10%	5%	]
i Was oil recovery before JIV completion done before JIV date?  i Estimated volume available for evaporation  22.42 bbls  i E-factor	<u> </u>	1-7 days			1
Estimated volume available for evaporation 22.42 bbls  E-factor 25 %	<u> </u>	> 7 days	40%	25%	J
i E-factor 25 %	Was oil recovery before Ji	V completion done before JIV date?		1	No 🔻
	i Estimated volume available	e for evaporation			22.42 bbls
Estimated Volume of evaporated oil, V <sub>evap</sub> 7.47 bbis	i E-factor			1	25 %
The state of the s	Estimated Volume of eva	porated oil. V		<del></del>	7.47 bbis
		handara and a final		-	

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# 23. GENERAL STATUS OF THE SITE

A.	Joint investigation of the incident site found that there is no residual impact after the initial response and JIT therefore recommend that the site be closed out
В.	Investigation of the incident site showed that there is residual impact on site requiring further works

## 24. REPRESENTATIVES

nis rej	port was filled, agreed and signed by the following joint investigation representatives:
•	Host Community:
•	Department of Petroleum Resources [DPR]:
•	National Oil Spill Detection and Response Agency [NOSDRA]:
•	State Ministry of Environment [SME]:
•	Nigeria Police Force  NPF : 🛛
•	Shell Petroleum Development Company  SPDC :
•	Signatories agree with reported findings:
•	Separate DPR form has been filled out with same findings
	Tick as applicab

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25. Appendix 1: Overview sketch of the site

