

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N:

0487

(Note: As practicable as possible the JIV report is to be signed in the field by all the participating parties)

A. GENERAL INFORMATION:

1. Fountain Incident Number: 2620231 2. Type of incident* OIL SPILL
3. Name of Location 12" OGUTA - EGBEMA PIPELINE AT UMUNKWU
4. Name of nearest community UMUNKWU 5. State: IMO 6. LGA OGUTA
7. Production Facility/Installation CRUD OIL PIPELINE
8. Asset Owner/Hub THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED (SPDC)/PIPELINE

B. INCIDENT INFORMATION:

9. Details of incident
a. Date Reported: 3RD APRIL, 2020
b. Start date/time of Investigation: 4TH APRIL, 2020/1430HRS
c. Investigation End date: 4TH APRIL, 2020 Day(s) on site: ONE DAY
d. Description of spill point environment
 Firm soil Loose soil Recently excavated area
 Under water Swampy Exposed pipe surface
 Well Platform (on water) Drill Rig Sand bag(s)

Additional observations around the spill point:

e. Description of leak point (tick as applicable):

- | | | |
|--|---|--|
| <input type="checkbox"/> Smooth round-edge hole | <input type="checkbox"/> Rough-edge hole | <input type="checkbox"/> Hack saw cut |
| <input type="checkbox"/> Complete Rupture | <input type="checkbox"/> Inward dent, | <input type="checkbox"/> Well head tampering |
| <input type="checkbox"/> Failed Weld-on illegal hot tap valve | <input type="checkbox"/> Failed Clamp, | <input type="checkbox"/> Missing Pipeline/Flowline |
| <input checked="" type="checkbox"/> Crude oil theft (illegal bunkering) point, | <input type="checkbox"/> Saver-pit over flow | <input type="checkbox"/> Third party tampering with Clamp |
| <input type="checkbox"/> Third party tampering with valve setting | <input type="checkbox"/> Bulging Outward | <input type="checkbox"/> Third party tampering with flange, |
| <input type="checkbox"/> Flare System/Bund wall failure | <input type="checkbox"/> Cold vent | <input type="checkbox"/> Surge vessel overflow, |
| <input type="checkbox"/> Valve Failure | <input type="checkbox"/> Relief valve failure | <input type="checkbox"/> Accidental 3 rd party equipment impact |
| <input type="checkbox"/> Tear (_____) | | |
| <input type="checkbox"/> Others (specify) _____ | | |

f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3rd party damage
 Operational Others (including Mystery spills) _____

*This can be: (a) Oil Spill (b) Drilling fluid/Chemical (c) Siltation (d) Water Leak (e) Fire (f) Non-leaking theft point removal

Version 2020/01

Distribution of copies: White (Asset Owner); Pink (DPR); Green (NOSDRA); Yellow (State Ministry of Environment); Blue (Host Community)

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N: 0487

g. Spill Point Coordinates (*Incidents $\leq 100m$ apart to be aggregated into one Joint Investigation Report)

h. Measuring unit

Northing:	Easting:
5.64758	6.75031
/	/
/	/

C. RISK ASSESSMENT

10. Details of Environment

i. Type of environment where spill occurred (select one):

- Land
 Swamp
 Water
 Seasonal swamp
 Shoreline/Waterfront

ii. Type of environment to which oil has spread:

- Land
 Swamp
 Waterbody (specify) _____

iii. Weather condition

- Dry
 Wet
 Windy
 Hot

11. Distance to Sensitive habitat within 100m radius

- Government reserved and designated protected area [,m]
- Drinking water source [,m]
 - Surface water Borehole
- Built up Area [,m]
 - Residential Area Commercial/Industrial Area
- Farmlands [,m]
- Fish Farm/Pond [,m]
- Fishing net [,m]
- Others (specify) _____ [,m]

} NONE SEEN
WITHIN VICINITY

12. Containment measures put in place:

- Booms
 Trench
 Dyke
 Pit
 Natural depression
 None
- Others: _____

13. Any pictures or video coverage?

[N]

14. Further response/repair initiated as at the time of JIV?

[N]

If yes to item 14, give brief description:

RECOVERY OF FREE PHASE CRUD OIL / DITCH PREPARATION FOR CLAMPING ON GOING.

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N: 0487

15. Was there any disruption to the investigation? [Y] [X]

If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed? [Y] [X]

Reason(s):

- Delayed Community Access Approval
 Security Challenges
 Access constraint due to terrain
 Others (specify) _____

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

17. Structures / Properties

S/N	Type of Structures	Description	Size	Number	Comments
NONE SEEN WITHIN AREA OF IMPACT					

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
NONE SEEN WITHIN AREA OF IMPACT						

19. Fish/Nets/Ponds

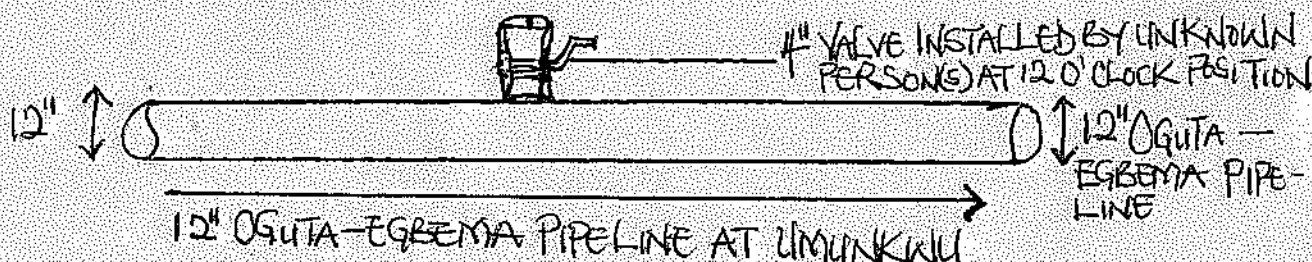
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE SEEN WITHIN AREA OF IMPACT				

20. Others (Specify) e.g. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
NONE SEEN WITHIN AREA OF IMPACT				

E. GRAPHIC DESCRIPTION OF LEAK POINT (while detailed description of the leak point should be contained in the leak report, overview sketch of the site should be added as appendix 1)

A SECTION OF 12" OGUTA-
 EGBEMA PIPELINE AT UMUNKWU SITOWING 4" VALVE INSTALLED AT
 12 O'CLOCK POSITION BY UNKNOWN PERSON(S).



PNT_ISD	LAT	LONG
1	5.64818	6.7511
2	5.6482	6.75105
3	5.64822	6.75103
4	5.64813	6.75096
5	5.64792	6.75084
6	5.64784	6.75079
7	5.64784	6.75074
8	5.64782	6.75073
9	5.64781	6.75077
10	5.64777	6.75073
11	5.64765	6.75071
12	5.64765	6.75067
13	5.64769	6.75055
14	5.64773	6.75054
15	5.64784	6.75006
16	5.64768	6.75001
17	5.64759	6.75014
18	5.64748	6.7503
19	5.64689	6.74979
20	5.64685	6.74978
21	5.64684	6.74972
22	5.64668	6.74953
23	5.64656	6.74945
24	5.64651	6.74946
25	5.6465	6.74958
26	5.64643	6.74961
27	5.64625	6.74945
28	5.64623	6.74946
29	5.64623	6.74951
30	5.64625	6.74959
31	5.64619	6.74957
32	5.64612	6.74958
33	5.64605	6.74963
34	5.64601	6.7497
35	5.64606	6.74974
36	5.6461	6.74984
37	5.64611	6.74987
38	5.64612	6.74989
39	5.64613	6.75003
40	5.6463	6.75004
41	5.64633	6.7499
42	5.64633	6.74988
43	5.64641	6.74978
44	5.64638	6.74967
45	5.64647	6.74963
46	5.64656	6.74966

47	5.64664	6.74965
48	5.64673	6.74971
49	5.64683	6.74981
50	5.64688	6.74993
51	5.64699	6.75001
52	5.64705	6.75003
53	5.64714	6.75011
54	5.64715	6.75017
55	5.64718	6.75021
56	5.64729	6.75032
57	5.64719	6.7504
58	5.64727	6.75053
59	5.64731	6.75055
60	5.64735	6.75067
61	5.64745	6.75063
62	5.64749	6.75052
63	5.64752	6.75055
64	5.64756	6.75069
65	5.64764	6.75073
66	5.64776	6.75074
67	5.64779	6.75079
68	5.64784	6.75086
69	5.64787	6.75086
70	5.64794	6.75087
71	5.64794	6.75091
72	5.64801	6.751
73	5.64808	6.75104
74	5.64814	6.75106

SP

5.64758	6.75031
---------	---------

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N: 0487

G. INCIDENT INFORMATION:

a. Impacted Area Details *

- Total calculated area of impact (Ha) 0.65HA
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W YES

* Round off to 2 decimal places if area is $\geq 100 \text{ m}^2$ or to 4 decimal places if area is $< 100 \text{ m}^2$ (e.g. 14.55, 0.0051, 0.0009)
* Express in Hectares (Ha)

b. Volume of oil recovered before completion of JIV (V_{rec}):

Recovered oil (V_{rec}):	<u>150</u>	Barrels
-------------------------------------	------------	---------

Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
------------	---------

c. Net Estimated Spilled Volume V_{est} (bbls)* = 459.92 BARRELS

Estimated Reported Volume** V_{rep} (bbls) = 460 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 volume estimation or cause of spill:

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 (m^3) \times 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.

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N:0487

d. General Status of the site

- | |
|--|
| i. 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 <input type="checkbox"/> |
| ii. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/> |

e. Representatives

This report was filled, agreed and signed by the following joint investigation team representatives:

- Host Community:
- Department of Petroleum Resources [DPR]:
- National Oil Spill Detection and Response Agency [NOSDRA]:
- State Ministry of Environment [SME]:
- The Shell Petroleum Development Company [SPDC]:
- Separate DPR form has been filled out with same findings
- Separate NOSDRA form has been filled out with same findings
- Separate SME form has been filled out with same findings

Tick as applicable

JOINT INVESTIGATION REPORT

INCIDENT NO: 2620231 JIV report S/N 487

f. Appendix 1: Overview sketch of the site

