

JOINT INVESTIGATION REPORT

INCIDENT NO: 2664212 JIV report S/N: 0547

(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: 2664212 2. Type of incident: OIL SPILL
3. Name of Location: NEW 20" KOLOCREEK - RUMUEKPE PIPELINE
4. Name of nearest community: OKOMA 1 5. State: RIVERS 6. LGA: AHOADA EAST
7. Production Facility/Installation: CRUDE OIL PIPELINE
8. Asset Owner/Hub: THE SHELL PETROLEUM DEVELOPMENT COMPANY
OF NIGERIA LIMITED / PIPELINE

B. INCIDENT INFORMATION:

9. Details of incident
a. Date Reported: 13TH JUNE 2020
b. Start date/time of Investigation: 14TH JUNE 2020 / 12:30 HRS
c. Investigation End date: 16TH JUNE 2020 Day(s) on site: THREE (3) DAYS
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:

NOT APPLICABLE

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 type="checkbox"/> Crude oil theft (illegal bunkering) point, | <input type="checkbox"/> Saver-pit over flow | <input checked="" 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

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

Version 2020/01

JOINT INVESTIGATION REPORT

0547

INCIDENT NO: 2664212 JIV report S/N:

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

h. Measuring unit: WGS 84

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4.972102</u>	<u>6.651281</u>

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 ^{SEASONAL}
 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:

OIL SPILL RECOVERY AND REPAIR ACTIVITIES ARE ONGOING

JOINT INVESTIGATION REPORT

INCIDENT NO: 2664212 JIV report S/N: 0547

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

If yes to item 15 give brief description:

NOT APPLICABLE

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

Reason(s):

- Delayed Community Access Approval Security Challenges Access constraint due to terrain
 Others (specify) NOT APPLICABLE

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
<u>NONE WITHIN AREA OF IMPACT</u>					

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
1	<u>RAFFIA PALM</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>FEW</u>	<u>IMPACTED BY SPILL.</u>

19. Fish/Nets/Ponds

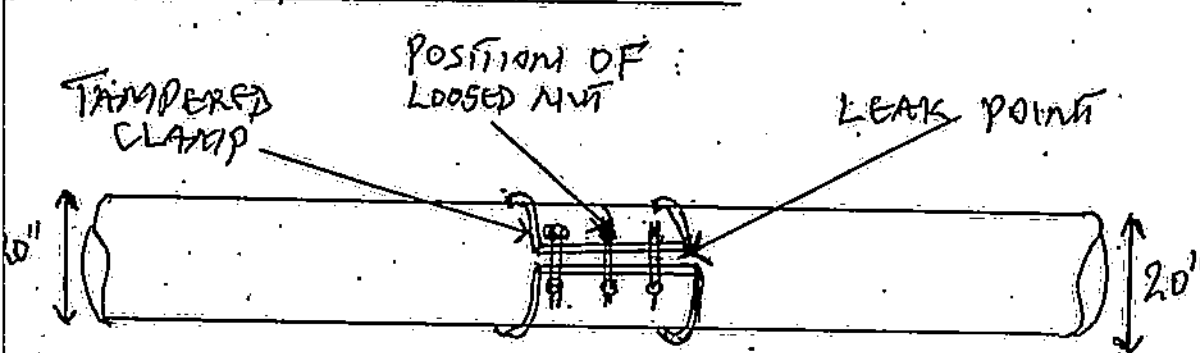
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

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

S/N	Others	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

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)

SECTION OF NEW 20" KOLOCREEK - RUMUKEPE PIPELINE AT OKOMA 1. SHOWING POSITION OF TAMPERED CLAMP BY UNKNOWN PERSONS



FROM KOLOCREEK TO RUMUKEPE

20" KOLO CREEK- RUMUEKPE T/L @ OKOMA-1

INC. NO: 2664212

PT_ID	LONG_X	LAT_Y
SP	6.651281	4.972102
P1	6.651213	4.972181
P2	6.651304	4.972149
P3	6.651307	4.972092
P4	6.651311	4.972014
P5	6.651231	4.972027
P6	6.651202	4.972091
P7	6.651171	4.972135
P8	6.651176	4.972169
P9	6.651016	4.972094
P10	6.651069	4.972008
P11	6.650875	4.972064
P12	6.650867	4.972043
P13	6.65071	4.972058
P14	6.650692	4.972037
P15	6.650756	4.971808
P16	6.650707	4.971604
P17	6.650484	4.971245
P18	6.650071	4.970968
P19	6.649614	4.970861
P20	6.649235	4.970325
P21	6.648594	4.969883
P22	6.647678	4.969972
P23	6.647192	4.970426
P24	6.647544	4.970911
P25	6.647485	4.971377
P26	6.647616	4.971614
P27	6.648287	4.971669
P28	6.648902	4.971617
P29	6.649231	4.971943
P30	6.64973	4.972066
P31	6.650267	4.972122
P32	6.65086	4.97214
P33	6.650885	4.972092
P34	6.651134	4.972143
P35	6.651182	4.972209



JOINT INVESTIGATION REPORT

INCIDENT NO: 2664212 JIV report S/N: 0547

G. INCIDENT INFORMATION:

a. Impacted Area Details *

- Total calculated area of impact (Ha) 5.79 HA
- 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>83</u>	Barrels
----------------------------------	-----------	---------

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

	Barrels
--	---------

c. Net Estimated Spilled Volume V_{Est} (bbls)* =

	<u>654.11 BARRELS</u>
Estimated Reported Volume** V_{rep} (bbls) =	<u>655 BARRELS</u>

*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: 2664212 JIV report S/N:0547

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
- ii. Investigation of the incident site showed that there is residual impact on site requiring further works

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: 2664212 JIV report S/N 0547

f. Appendix 1: Overview sketch of the site

