

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2580753 JIV report S/N:

0467

(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: 2580753 2. Type of incident\* OIL SPILL  
3. Name of Location: 14" OKORDIA - RUMUEKPE PIPELINE  
4. Name of nearest community AKALAMINI 5. State: RIVERS 6. LGA AHOADA - WEST  
7. Production Facility/Installation 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: 23<sup>RD</sup> FEBRUARY, 2020  
b. Start date/time of Investigation: 25<sup>TH</sup> FEBRUARY, 2020 / 10:15 HRS  
c. Investigation End date: 25<sup>TH</sup> FEBRUARY, 2020 Day(s) on site: ONE (1) DAY  
d. Description of spill point environment

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Firm soil                | <input checked="" type="checkbox"/> Loose soil | <input checked="" type="checkbox"/> Recently excavated area |
| <input type="checkbox"/> Under water              | <input type="checkbox"/> Swampy                | <input type="checkbox"/> Exposed pipe surface               |
| <input type="checkbox"/> Well Platform (on water) | <input type="checkbox"/> Drill Rig             | <input type="checkbox"/> Sand bag(s)                        |

Additional observations around the spill point: 5 NUMBER DRILLED HOLES WERE OBSERVED WITHIN 100-METER LENGTH ON THE 14" OKORDIA - RUMUEKPE PIPELINE. EACH OF THE DRILLED HOLES WAS 10MM DIAMETER AND ALL AT 12 O'CLOCK POSITIONS.

## e. Description of leak point (tick as applicable);

- |   |   |  |
|---|---|--|
| <input checked="" 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 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 <sup>rd</sup> 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 3<sup>rd</sup> 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)

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

h. Measuring unit NGS 84

	Northing:	Easting:
①	5.11634	6.49227
②	5.11641	6.49216
③	5.11648	6.49207
④	5.11678	6.49181
⑤	5.11686	6.49151

## 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    
  <sup>SEASONAL</sup> Swamp    
  Waterbody (specify) \_\_\_\_\_

iii. Weather condition

- Dry    
  Wet    
  Windy    
  Hot

### 11. Distance to Sensitive habitat within 100m radius

- |   |   |     |                                  |
|---|---|-----|----------------------------------|
| <input type="checkbox"/> Government reserved and designated protected area                    | [ | ,m] | } NONE SEEN WITHIN THE VICINITY. |
| <input type="checkbox"/> Drinking water source  | [ | ,m] |                                  |
| <input type="checkbox"/> Surface water <input type="checkbox"/> Borehole                      | [ | ,m] |                                  |
| <input type="checkbox"/> Built up Area  | [ | ,m] |                                  |
| <input type="checkbox"/> Residential Area <input type="checkbox"/> Commercial/Industrial Area | [ | ,m] |                                  |
| <input type="checkbox"/> Farmlands  | [ | ,m] |                                  |
| <input type="checkbox"/> Fish Farm/Pond   | [ | ,m] |                                  |
| <input type="checkbox"/> Fishing net  | [ | ,m] |                                  |
| <input type="checkbox"/> Others (specify) _____   | [ | ,m] |                                  |

### 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:

CRUDE OIL RECOVERY AND REPAIR WORK ARE ON GOING.

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

19. Fish/Nets/Ponds

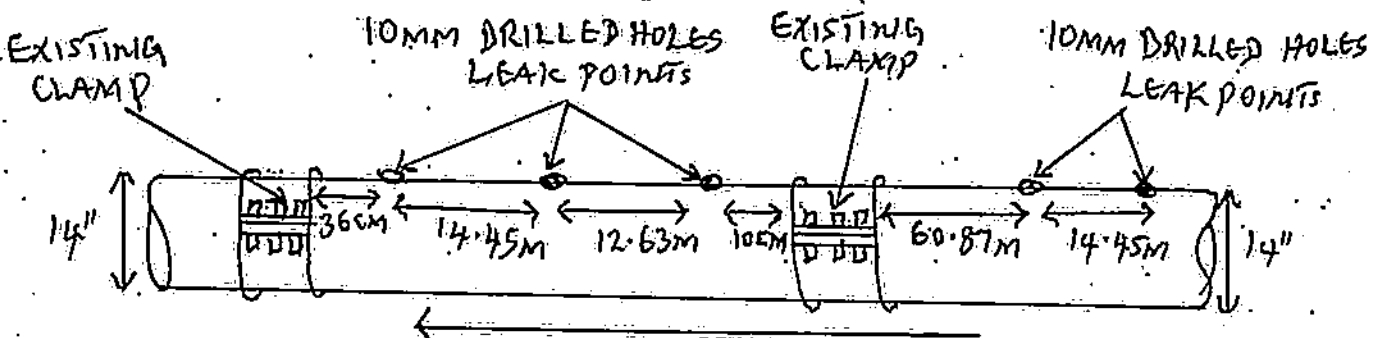
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

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 14" OKORDIA - RUMUKEPE PIPELINE AT AKALAMINI SHOWING 5 NOS DRILLED HOLES AT 12 O' CLOCK POSITIONS BY UNKNOWN PERSON(S).



FROM OKORDIA TO RUMUKEPE

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F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

21. Impacted area boundary Coordinates (*If more, Print and attach as Appendix*)

S/N	Northing	Easting

*ATTACHED*

A hand-drawn diagram is overlaid on the table grid. It consists of several connected line segments forming an irregular shape. The segments are numbered 1 through 6. Arrows point from the numbers to the corresponding segments. The diagram is oriented diagonally across the grid.

2580753: BOUNDARY COORDINATES-WGS 84

PT	LAT	LONG
1	5.11626	6.49233
2	5.11636	6.4922
3	5.1165	6.49195
4	5.11656	6.49206
5	5.11652	6.49209
6	5.11648	6.49218
7	5.11654	6.49223
8	5.11668	6.49224
9	5.11674	6.49232
10	5.11684	6.4924
11	5.11697	6.49237
12	5.11715	6.4924
13	5.11734	6.49257
14	5.11731	6.49268
15	5.11725	6.4927
16	5.11712	6.49281
17	5.11722	6.49287
18	5.11728	6.49303
19	5.11743	6.493
20	5.11751	6.49288
21	5.11765	6.49272
22	5.11764	6.49267
23	5.1177	6.49259
24	5.1177	6.49254
25	5.11784	6.49237
26	5.11798	6.49213
27	5.11802	6.49201
28	5.11801	6.4919
29	5.11806	6.4919
30	5.11805	6.49209
31	5.11787	6.49244
32	5.11772	6.49262
33	5.11768	6.49274
34	5.11746	6.49304
35	5.11739	6.49329
36	5.11737	6.49326
37	5.11739	6.49307
38	5.11726	6.49309
39	5.11721	6.49291
40	5.11711	6.49284

PT	LAT	LONG
41	5.11711	6.49275
42	5.11724	6.49267
43	5.11716	6.49263
44	5.11702	6.4926
45	5.11693	6.49254
46	5.11682	6.49254
47	5.11666	6.49249
48	5.11653	6.49244
49	5.11644	6.49232
50	5.1164	6.49233
51	5.1163	6.49242
52	5.11628	6.49235
53	5.11626	6.49233
1	5.11681	6.4917
2	5.11675	6.49167
3	5.11682	6.4915
4	5.11687	6.49146
5	5.11694	6.4915
6	5.11689	6.49159
7	5.11681	6.4917

*Handwritten signature*

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details \*

- Total calculated area of impact (Ha) 0.42 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 ( $V_{\text{rec}}$ ):

Recovered oil $V_{\text{rec}}$ :	<u>10</u>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
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c. Net Estimated Spilled Volume $V_{\text{Est}}$ (bbls) =	<u>903.18 BARRELS</u>
Estimated Reported Volume** $V_{\text{rep}}$ (bbls) =	<u>904 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  $\text{m}^3$  to barrels is Volume ( $\text{m}^3$ )  $\times 6.29$ ; \*\*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.

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## 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*

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f. Appendix 1: Overview sketch of the site

