

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2452330 JIV report S/N: 1030143

(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: 2452330 2. Type of incident\* OIL SPILL  
3. Name of Location 14" OKORDIA-RUMUKEPE PIPELINE  
4. Name of nearest community UKPELEDE 5. State: RIVERS 6. LGA AITOADA WEST  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date Reported: 10<sup>th</sup> SEPTEMBER, 2019  
b. Start date/time of investigation: 15<sup>th</sup> SEPTEMBER, 2019; 11:30 HRS  
c. Investigation End date: 16<sup>th</sup> SEPT, 2019 Actual investigation duration, days: (2) TWO DAYS  
d. Description of spill point environment

- |   |                                     |   |
|---|-------------------------------------|---|
| <input type="checkbox"/> Firm soil                | <input type="checkbox"/> Loose soil | <input checked="" type="checkbox"/> Recently excavated area |
| <input checked="" 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  |   |

Additional observations around the spill point:

NOT APPLICABLE

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

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Drilled hole  | <input type="checkbox"/> Hack saw cut         | <input type="checkbox"/> Tear (_____)                                      |
| <input type="checkbox"/> Complete Rupture                                      | <input type="checkbox"/> Inward dent,         | <input type="checkbox"/> Well head tampering                               |
| <input checked="" 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 <sup>rd</sup> party equipment impact |
| <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) construction e) Encroachment f) Fire, g) non leaking Theft point removal  
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# JOINT INVESTIGATION REPORT

INCIDENT NO: 2452330 JIV report S/N: 1030143

g. Spill point coordinates

h. Measuring unit

Northing:	Easting:
5.09203	6.52887

## C. RISK ASSESSMENT

10. Type of environment:

- Land     
  Swamp     
  Water     
  Seasonal swamp     
  Shoreline/Waterfront

i. Type of environment to which oil has spread:

- Land     
  Swamp     
  Water     
  River (identify) \_\_\_\_\_

ii. Weather condition

- Rain     
  Sunny     
  Dry     
  Wet     
  Windy     
  Hot     
  Cool

11. Distance to Sensitive habitat within 100m radius

- |  |          |
|--|----------|
| <input type="checkbox"/> Government reserved and designated protected area | [Nil, m] |
| <input type="checkbox"/> Drinking water source                             | [Nil, m] |
| <input type="checkbox"/> Built up area                                     | [Nil, m] |
| <input checked="" type="checkbox"/> Farmlands                              | [30, m]  |
| <input type="checkbox"/> Fish Farm/Pond                                    | [Nil, m] |
| <input type="checkbox"/> Fishing net                                       | [Nil, m] |
| <input type="checkbox"/> Others (specify)                                  |          |

12. Containment measures put in place;

- Booms     
  Trench     
  Dyke     
  Natural depression     
  Pit     
  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 BY CLAMPING ONGOING.

15. Was there any disruption to the investigation?

[Y]       [N]

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2452330 JIV report S/N: 1030143

If yes to item 15 give brief description: NOT APPLICABLE

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

If yes to item 16 give brief description: FLOODED TERRAIN

**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
NOT APPLICABLE					

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
	PALM TREE	---	---	YES	5	IMPACTED
	RATTIA PALM	---	---	YES	4	IMPACTED
	---	---	---	---	---	---

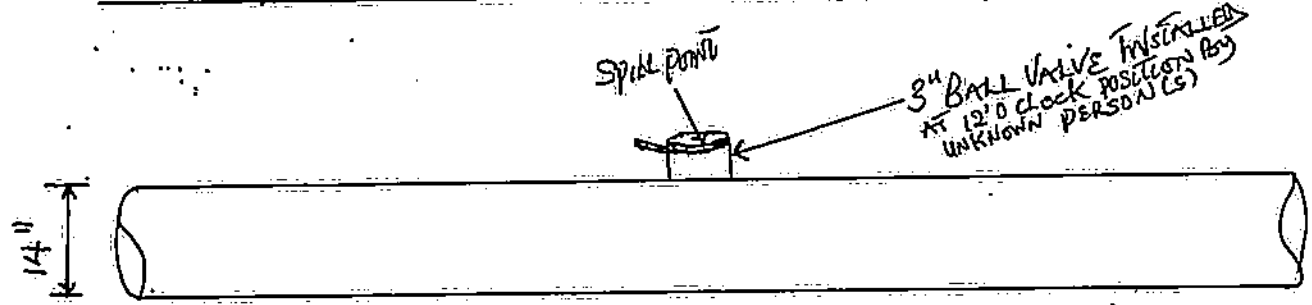
19. Fish/Nets/Ponds

S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NOT APPLICABLE				

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

S/N	Others	Description	Quantity/Size	Comments
NOT APPLICABLE				

**E. GRAPHIC DESCRIPTION OF LEAK POINT** (while detail report of the leak point should be contained in the leak report, overview sketch of the site should be added as an appendix 1) SECTION OF 14" OKORDIA - RUMMERKE PIPELINE AT UKPELEDE SHOWING CRUDE OIL LEAK POINT INSTALLED AT 12 O'CLOCK POSITION





Spill along 14" Okordia / Rumuekpe Trunk Line at Ukpelede

Incident No.: 2452330, Date of incident:10/09/2019 Date of Jiv: 15/09/2019.

PNT_ID	LAT	LONG
819	5.09182	6.52918
820	5.09184	6.52909
821	5.09181	6.5291
823	5.09165	6.52892
822	5.09161	6.52889
824	5.09181	6.52856
825	5.09221	6.52844
826	5.09234	6.5287
827	5.0938	6.52928
828	5.09447	6.52946
829	5.09518	6.52954
830	5.09511	6.53018
831	5.09505	6.53019
832	5.09488	6.53021
833	5.09468	6.53016
834	5.09433	6.53001
835	5.09423	6.53012
836	5.09399	6.53004
837	5.09368	6.5301
838	5.09331	6.52998
839	5.09319	6.52988
840	5.09307	6.52995
841	5.09295	6.52989
842	5.09225	6.52935
843	5.09219	6.5293
844	5.09189	6.52914
845	5.09185	6.52919
SP	5.09203	6.52887

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2452330 JIV report S/N: 1030143

**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 3.215854 HA
- Impact within SPDC R.O.W. YES
- Impact outside SPDC R.O.W. YES

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

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

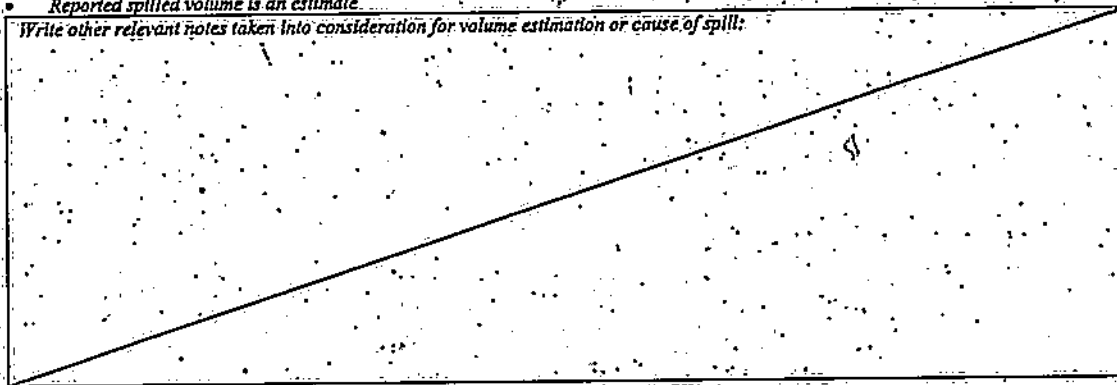
<u>NIL</u>	Barrels
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<b>c. Net Estimated Spilled Volume <math>V_{Est}</math>(bbls)* = <u>124.400 BLS</u></b>
<b>Estimated Reported Volume** <math>V_{rep}</math>(bbls) = <u>125 BLS</u></b>

**\*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:



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.

Version 2019/01

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2452330 JIV report S/N: 1030143

## 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:

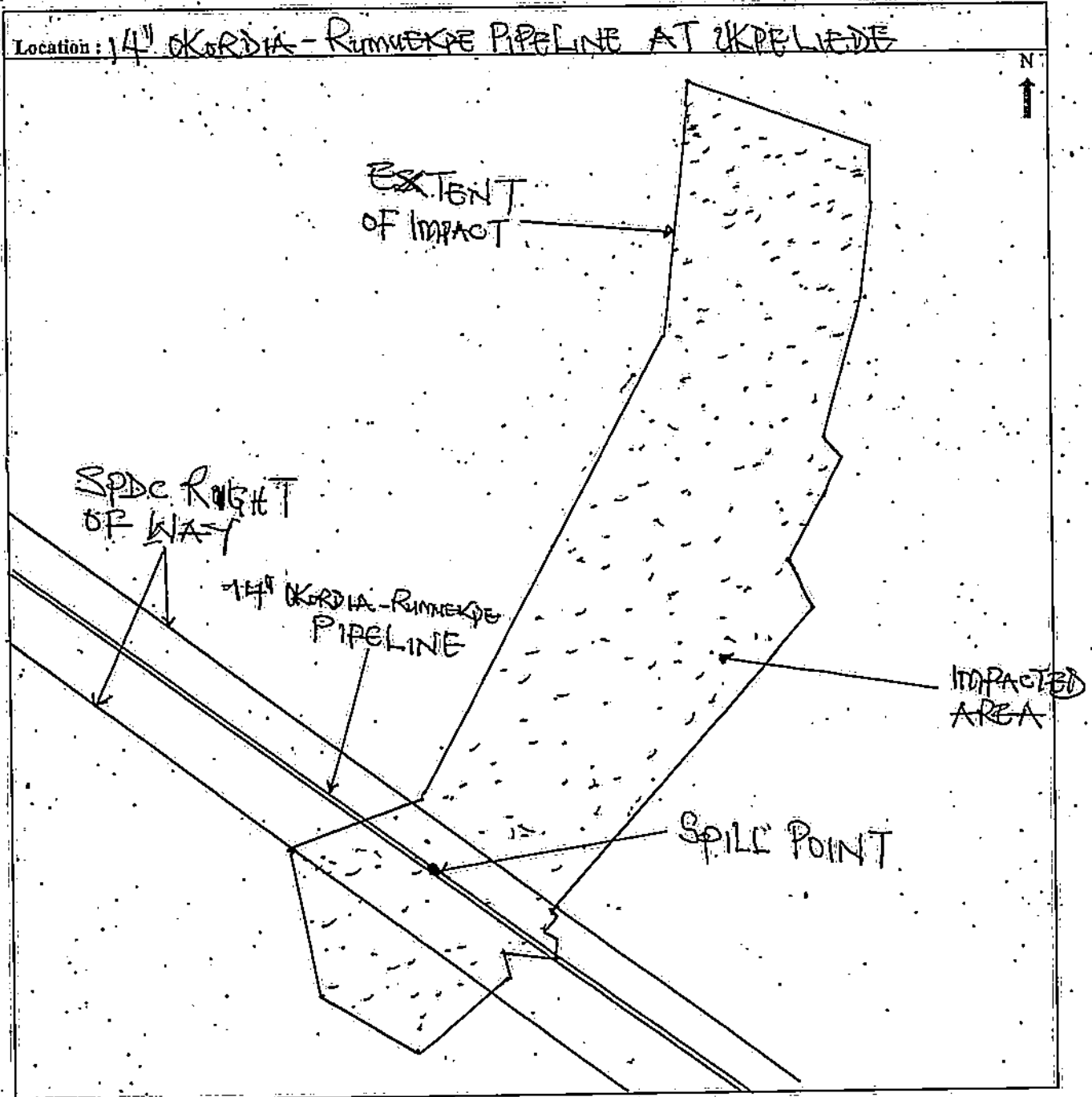
- Host Community:
- Department of Petroleum Resources [DPR]:
- National Oil Spill Detection and Response Agency [NOSDRA]:
- State Ministry of Environment [SME]:
- Shell Petroleum Development Company [SPDC]:
- *Separate DPR form has been filled out with same findings*

*Tick as applicable*

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INCIDENT NO: 2452330 JIV report S/N: 1030143

f. Appendix 1: Overview sketch of the site



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