

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2862015 JIV report S/N: 0000751

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

## A. GENERAL INFORMATION:

1. Fountian Incident Number: 2862015 2. Type of incident: OIL SPILL  
3. Name of Location: 14" OKORDIA - RUMUKEPE TRUNKLINE (PIPELINE)  
4. Name of nearest community: AKINIMA 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 (SPDC) / PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date Reported: 15TH FEBRUARY, 2021  
b. Start date/time of Investigation: 18TH FEBRUARY, 2021, 1400HRS  
c. Investigation End date: 18TH FEBRUARY, 2021 Day(s) on site: ONE (1) DAY  
d. Description of spill point environment

- |   |                                     |   |
|---|-------------------------------------|---|
| <input type="checkbox"/> Firm soil                | <input 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:

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

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Smooth round-edge hole                     | <input type="checkbox"/> Rough-edge hole      | <input checked="" 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

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# JOINT INVESTIGATION REPORT

000751

INCIDENT NO: 2862015 JIV report S/N:

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

h. Measuring unit

W9584

Northing:	Easting:
5.129886	6.473486
/	/

## 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 [30 ,m]  
 Fishing net [    ,m]  
 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:

REPAIR BY CLAMPING ONGOING

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000751

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Z	Z

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Dry       Wet       Windy       Hot

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- 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 [ 30 ,m]
- Fishing net [      ,m]
- Others (specify) \_\_\_\_\_ [      ,m]

### 12. Containment measures put in place:

Booms     Trench     Dyke     Pit     Natural depression     None

Others: \_\_\_\_\_

13. Any pictures or video coverage? NY [N]

14. Further response/repair initiated as at the time of JIV? NY [N]

If yes to item 14, give brief description:

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Version 2020/01

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2862015 JIV report S/N: 0000751

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) \_\_\_\_\_

**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>PALM TREE</u>	<u>THREE</u>	<u>TWO</u>	<u>NIL</u>	<u>FIVE</u>	<u>OK</u>
2.	<u>RAPIA PALM</u>	<u>TEN</u>	<u>NIL</u>	<u>NIL</u>	<u>TEN</u>	<u>OK</u>

19. Fish/Nets/Ponds

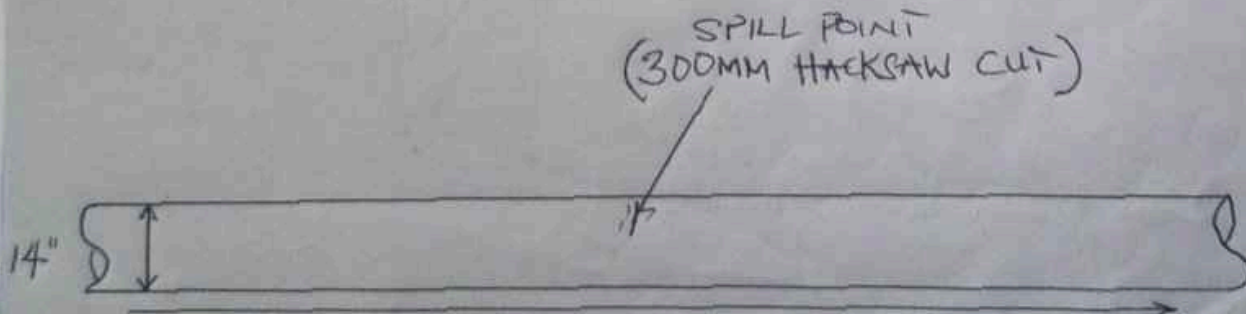
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
1.	<u>POND</u>	<u>SHALLOW</u>	<u>FOUR</u>	<u>OK</u>

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)

A SECTION OF 14" OKORDIA-RUMUEKPE TRUNKLINE (PIPELINE) AT AKINIMA SHOWING HACKSAW CUT AT 2:00 O'CLOCK POSITION CAUSED BY UNKNOWN PERSON(S).



FROM OKORDIA MANIFOLD TO RUMUEKPE

Version 2020/01



2862015

PTS	X	Y
SP	6.473486	5.129886
1	6.473711	5.129683
2	6.473601	5.129886
3	6.473377	5.130075
4	6.473404	5.130226
5	6.4734	5.130392
6	6.473407	5.130466
7	6.473289	5.130398
8	6.473234	5.130349
9	6.473333	5.130207
10	6.473369	5.129989
11	6.473311	5.129938
12	6.473192	5.129891
13	6.473151	5.129826
14	6.473215	5.129756
15	6.473073	5.129718
16	6.47298	5.129474
17	6.473122	5.129352
18	6.473182	5.129449
19	6.473128	5.129522
20	6.473105	5.129499
21	6.473119	5.129556
22	6.47321	5.129566
23	6.473251	5.129634
24	6.473353	5.129871
25	6.473524	5.129659
26	6.473175	5.130147
27	6.473002	5.130094
28	6.473	5.13018
29	6.472971	5.130204
30	6.472907	5.130105

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2862015 JIV report S/N: 0000751

## G. INCIDENT INFORMATION:

### a. Impacted Area Details \*

- Total calculated area of impact ( $H_a$ ) 0.31 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, 0.00009)

\* Express in Hectares ( $H_a$ )

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

Recovered oil $V_{rec}$ :	<u>NIL</u>	Barrels
---------------------------	------------	---------

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

<u>NIL</u>	Barrels
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c. Net Estimated Spilled Volume  $V_{res}(bbbls)^*$  = 323.86 BARRELS

Estimated Reported Volume\*\*  $V_{rep}(bbbls)$  = 324 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:

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 volume estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

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INCIDENT NO: 2862015 JIV report S/N: : 000751

## 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*

Version 2020/01

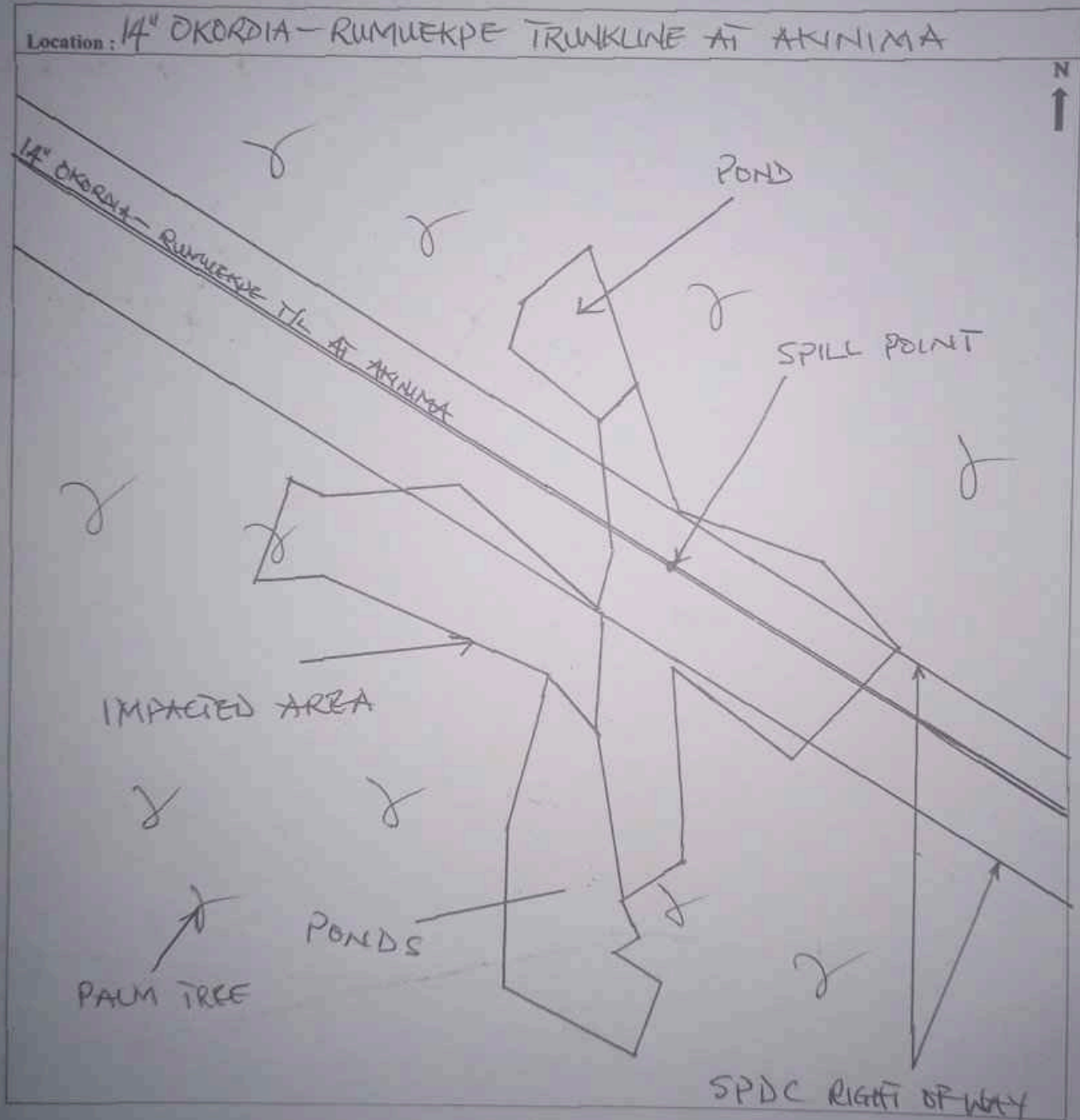
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## f. Appendix 1: Overview sketch of the site



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**g. SIGNATORIES: JOINT INVESTIGATION TEAM MEMBERS**

*Having read through the JIV report, the following representatives append their respective signatures in agreement with the content therein:*

S/N	Name	Members present	Designation	Signature/Date and Time
1	SA'IDU ABDULAZEEZ PUHAFAMAD	DEPARTMENT OF PETROLEUM RESOURCES (DPR)	ENV OFFIC REGULATOR	<i>[Signature]</i> 14:40hrs 18/02/2021
2	OLUNWA PAUL CHUKWUKA	NATIONAL OIL SPILL DETECTION AND RESPONSE AGENCY (NOSDRA)	PE S REGULATOR	<i>[Signature]</i> 14:45hrs 18/02/2021
3	<del>OSIBULU, GP.</del> IJEIJE	STATE MIN. OF ENVIRONMENT	REGULATOR	<i>[Signature]</i> 18/02/2021 14:45hrs
4	PATRICK ORIKE	HOST COMMUNITY REPRESENTATIVE	COMMUNITY SEC.	<i>[Signature]</i> 18/02/2021 14:45hrs
5	OPARA FREEDOM	THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA (SPDC)	JII GOVERNANCE	<i>[Signature]</i> 18/02/2021 14:00hrs
6	FUHELFE BARBA	THE NIGERIA POLICE FORCE	CID	<i>[Signature]</i> 14:56hrs 18/2/2021

### ACKNOWLEDGEMENT OF RECEIPT OF JIV REPORT COPIES

S/N	ATTESTATION	NAME	SIGNATURE/DATE
1	DPR copy received by:		
2	NOSDRA copy received by:		
3	STATE MINISTRY OF ENVIRONMENT copy received by:		
4	HOST COMMUNITY copy received by:		