

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2419671 JIV report S/N: 1030097

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

## A. GENERAL INFORMATION:

1. Fountain Incident Number: 2419671 2. Type of incident\* OIL SPILL AND FIRE  
3. Name of Location 24" NKPOKU - BOMU PIPELINE  
4. Name of nearest community EGBALOR 5. State: RIVERS 6. LGA ELEME  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY  
OF NIGERIA LIMITED / PIPELINE.

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date Reported: 6<sup>TH</sup> AUGUST, 2019  
b. Start date/time of investigation: 7<sup>TH</sup> AUGUST, 2019 / 12:55 HRS  
c. Investigation End date: 12<sup>TH</sup> AUGUST, 2019 Actual investigation duration, days: TWO (2) DAYS  
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             |   |

Additional observations around the spill point:

THE SPILL POINT WAS OBSERVED BEING BURNED BY FIRE

## 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) \_\_\_\_\_

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g. Spill point coordinates

h. Measuring unit

(KEGS 84)

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>4-782796</u>	<u>7-192037</u>
_____	_____
_____	_____

### 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 <sup>SEASONAL</sup>    
  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 | [ |                        | ,m] |
| <input type="checkbox"/> Drinking water source                             | [ |                        | ,m] |
| <input type="checkbox"/> Built up area                                     | [ | <u>NONE SEEN</u>       | ,m] |
| <input type="checkbox"/> Farmlands   | [ |                        | ,m] |
| <input type="checkbox"/> Fish Farm/Pond                                    | [ | <u>WITHIN VICINITY</u> | ,m] |
| <input type="checkbox"/> Fishing net                                       | [ |                        | ,m] |
| <input type="checkbox"/> Others (specify).                                 | [ |                        | ,m] |

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:

REPAIR WORK ONGOING

15. Was there any disruption to the investigation?

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If yes to item 15 give brief description:

NOT APPLICABLE

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

If yes to item 16 give brief description: 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
NONE WITHIN AREA OF IMPACT					

**18. Crops/Economic Trees**

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
1	PALM TREE	—	✓	✓	25	IMPACTED BY SPILL

**19. Fish/Nets/Ponds**

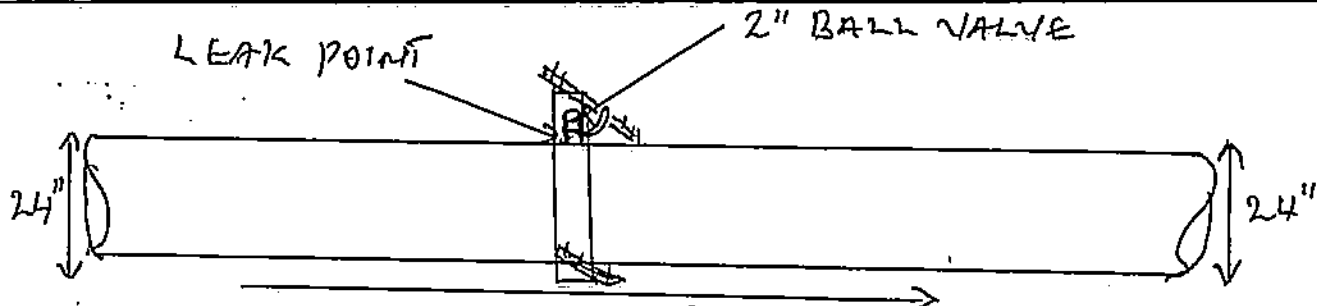
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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

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

**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 24" MKPOKU - BOMU PIPELINE AT EGBALOR SHOWING CRUDE OIL THEFT POINT INSTALLED AT 12 O'CLOCK POSITION



From Mkpoku to Bomu

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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 an appendix)

S/N	Northing	Easting

*SEE ATTACHED*

JIV ALONG 24" NKPOKU-BOMU TRUNK LINEAT EGBALOR

PNT_ID	LAT	LONG
SP	4.782797	7.192037
B4	4.78292	7.1921
B5	4.782977	7.192071
B6	4.782971	7.192027
B7	4.782991	7.191938
B8	4.783066	7.191752
B9	4.783123	7.19164
B10	4.78316	7.191651
B11	4.78324	7.191523
B12	4.783391	7.191642
B13	4.783471	7.191627
B14	4.783433	7.191907
B15	4.783302	7.192011
B16	4.783342	7.192211
B17	4.783506	7.192175
B18	4.783567	7.191966
B19	4.783505	7.191921
B20	4.78354	7.19164
B21	4.783664	7.191587
B22	4.783804	7.191392
B23	4.783845	7.191115
B24	4.783758	7.190813
B25	4.783832	7.190485
B26	4.783618	7.190201
B27	4.783413	7.190178
B28	4.783181	7.190333
B29	4.783177	7.190608
B30	4.783381	7.190911
B31	4.78301	7.191619
B32	4.782876	7.191611
B33	4.78269	7.19193
B34	4.782799	7.19197
B35	4.782751	7.192071
B36	4.782815	7.192143

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 1.215692 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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**c. Net Estimated Spilled Volume  $V_{est}$  (bbls)\* =**

<u>404.39 BARRELS</u>	
<u>Estimated Reported Volume** <math>V_{rep}</math> (bbls) = 405 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:

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 ( $m^3$ ) x 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 <input type="checkbox"/>
ii. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/>

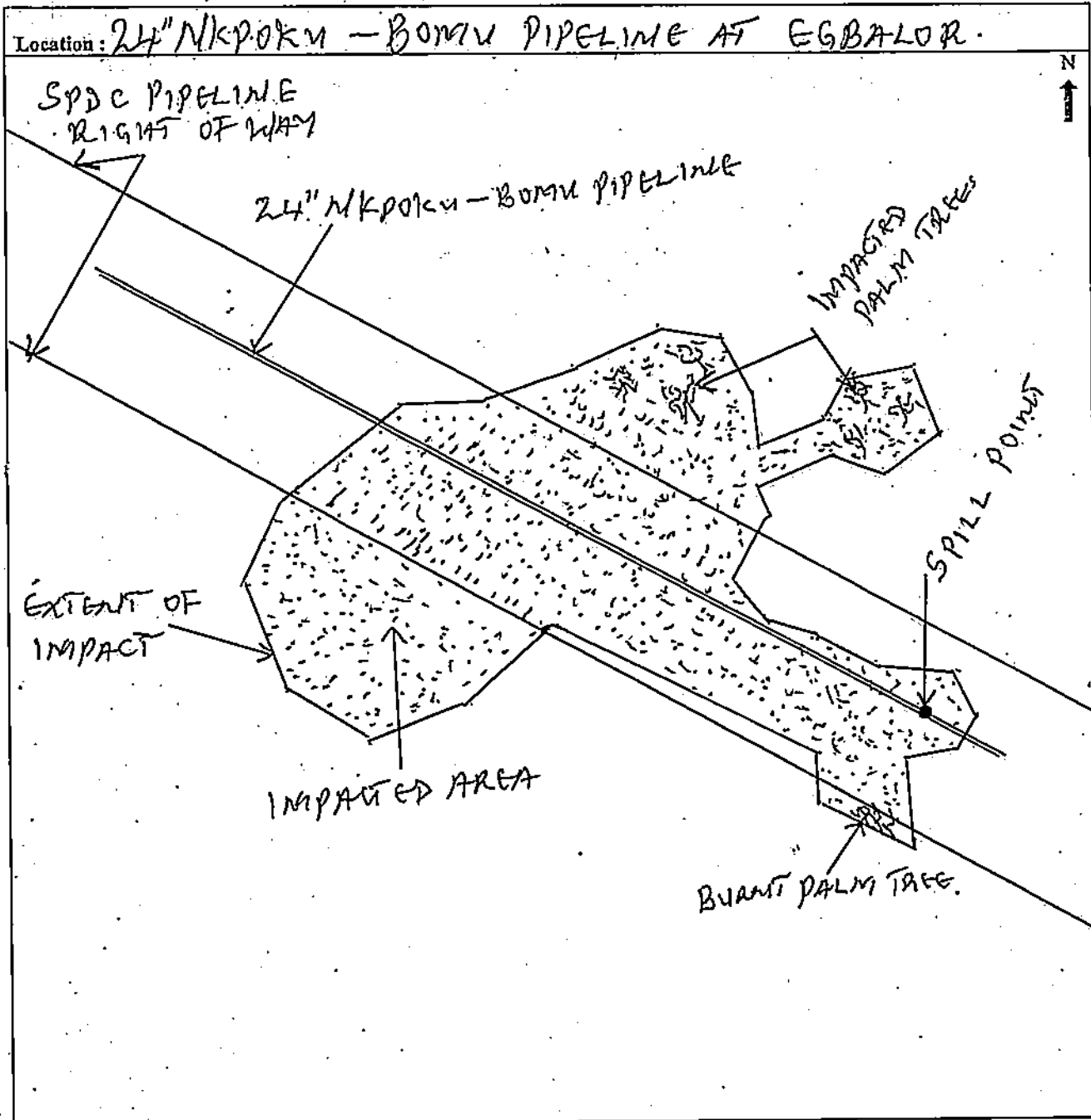
## e. Representatives

<p>This report was <u>filled</u>, <u>agreed</u> and <u>signed</u> by the following joint investigation team representatives:</p> <ul style="list-style-type: none"><li>• Host Community: <input checked="" type="checkbox"/></li><li>• Department of Petroleum Resources [DPR]: <input checked="" type="checkbox"/></li><li>• National Oil Spill Detection and Response Agency [NOSDRA]: <input checked="" type="checkbox"/></li><li>• State Ministry of Environment [SME]: <input checked="" type="checkbox"/></li><li>• Shell Petroleum Development Company [SPDC]: <input checked="" type="checkbox"/></li><li>• Separate DPR form has been filled out with same findings <input checked="" type="checkbox"/></li></ul> <p style="text-align: right;"><i>Tick as applicable</i></p>
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f. Appendix 1: Overview sketch of the site



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