

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2270427 JIV report S/N: 0247

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

## A. GENERAL INFORMATION:

1. Spill incident Number: 2270427 2. Type of incident\*: OIL SPILL  
3. Name of Location 36" NKPOKU - BOMU PIPELINE  
4. Name of nearest community RUMUOHIOLO (ENEKA) 5. State: RIVERS 6. LGA OBIO/AKPOR  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED (SPDC) PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date of incident: 19TH FEBRUARY, 2019  
b. Start date/time of investigation: 20TH FEBRUARY, 2019 / 11:00 AM  
c. Investigation End date: 20TH FEBRUARY, 2019 Actual investigation duration, days: 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             |   |

Additional observations around the spill point: SANDBAGS CONCEALING CRUDE OIL THEFT POINT WAS OBSERVED BY THE JOINT INVESTIGATION TEAM.

### 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"/> Corrosion  | <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  Mystery spills  Others(specify) \_\_\_\_\_

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g. Spill point coordinates

WCS 84

Measuring unit	
Northing: <u>LAT</u>	Easting: <u>LONG</u>
<u>4.92164</u>	<u>7.0388</u>
<u>Benbo</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     
  Water     
  River (identify) \_\_\_\_\_

ii. Weather condition

- Rain     
  Sunny     
 Dry     
 Wet     
 Windy     
 Hot     
 Cool

11. Distance from the nearest sensitive habitat

- Government reserved and designated protected area
- Drinking water source
- Built up area
- Farmlands
- Fish Farm/Pond
- Fishing net
- Others (specify): \_\_\_\_\_

NIL ,m  
 NIL ,m  
 NIL ,m  
 NIL ,m  
 NIL ,m  
 NIL ,m  
 NONE

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 AND RECOVERY ACTIVITIES ARE ONGOING

15. Was there any disruption to the investigation?

[Y]

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If yes to item 15 give brief description:

NOT APPLICABLE

**D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL**

**16. Structures/Properties**

SN	Type of Structures	Description	Size	Number	Comments
NONE WITHIN AREA OF IMPACT					

**17. Crops/Economic Trees**

SN	Type of crops	Young	Medium	Matured	Quantity	Comments
NONE WITHIN AREA OF IMPACT						

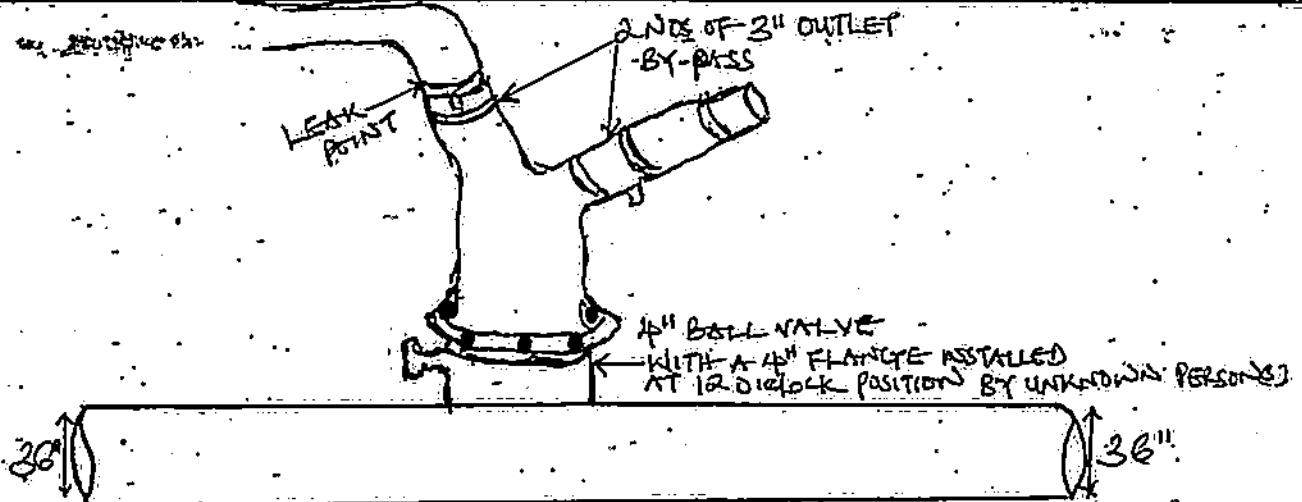
**18. Fishing Nets/Fish Ponds**

SN	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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

SN	Others	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

**E. GRAPHIC DESCRIPTION OF LEAK POINT** (while detailed report of the leak point should be contained in the leak report, overview sketch of the site should be added as an appendix) A SECTION OF 36" NKPOKU - BOMU PIPELINE AT ENERA CHOWING A 4" BALL VALVE WITH A 4" FLANGE REDUCE TO 2 INCHES OF 3" OUTLET BY-PASS ALL INSTALLED AT 12 O'CLOCK POSITION BY UNKNOWN PERSONS



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

20: Impacted area boundary Coordinates (If more, Print and attach as an appendix)

S/N	Northing	Easting

SEE ATTACHED FOR IMPACTED AREA COORDINATES

2270427\_JIV ALONG 36"NKPOKU-BOMU TNP AT RUMUOCHIOLU ENEKA  
COORDINATES IN WGS-84

PNT_ID	LAT	LONG
SPILL OINT	4.92164	7.03887
1	4.92165	7.03889
2	4.92166	7.03888
3	4.92164	7.03885
4	4.92163	7.03885
5	4.92164	7.03885
6	4.92168	7.03885
7	4.92162	7.03875
8	4.92157	7.03878
9	4.92161	7.03889
10	4.92163	7.03885
11	4.92175	7.03903
12	4.92195	7.03918
13	4.92208	7.03933
14	4.92212	7.0393
15	4.92215	7.0393
16	4.92196	7.03914
17	4.92188	7.0391
18	4.92235	7.03944
19	4.92225	7.03943
20	4.92207	7.03949
21	4.92179	7.03961
22	4.92194	7.03963
23	4.92195	7.0396
24	4.92198	7.03957
25	4.92202	7.03957
26	4.92204	7.03959
27	4.92214	7.03957
28	4.92217	7.03967
29	4.92221	7.03966
30	4.92227	7.03962
31	4.92226	7.03959
32	4.92239	7.03959
33	4.92239	7.03949
34	4.92235	7.03944
35	4.92236	7.03959
36	4.9223	7.0396
37	4.9223	7.03963
38	4.92237	7.03961
39	4.92235	7.03944
40	4.92235	7.03936
41	4.92237	7.03932
42	4.92234	7.0393
43	4.92232	7.03931
44	4.92233	7.03942
45	4.9223	7.03941
46	4.92231	7.03945

*Fzen to*  
*28/02/19*

47 4.92235 7.03944  
48 4.92207 7.03949  
49 4.92186 7.03911

*Handwritten:*  
From do  
2/10/19

*Faint, mostly illegible text, possibly bleed-through from the reverse side of the page.*

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INCIDENT NO: 2270429 JIV report S/N: 0247

**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.115538 Ha
- Impact within R.O.W yes
- Impact outside R.O.W yes

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

Recovered oil $V_{rec}$ :	<u>40</u>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<u>390</u>	Barrels
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<b>c. Net Estimated Spilled Volume <math>V_{est}</math> (bbls)* =</b>	<u>275.76 BARRELS</u>
<b>Estimated Reported Volume** <math>V_{rep}</math> (bbls) =</b>	<u>276 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 estimating the spilled volume in the box below:

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 volume 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 JIV 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

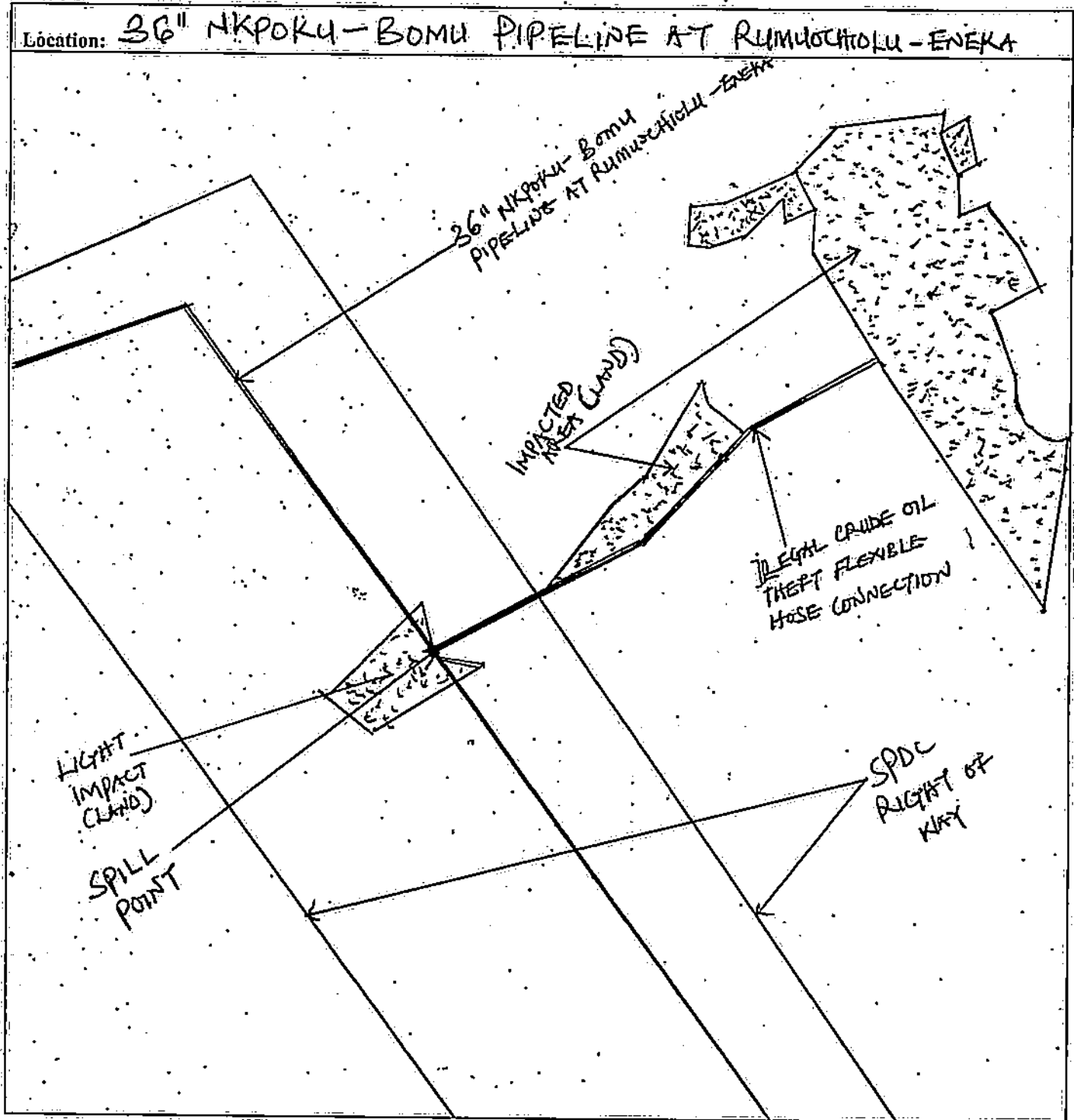
<p>This report was filled, agreed and signed by the following joint investigation team representatives:</p> <ul style="list-style-type: none"><li>• Host Community: <input checked="" type="checkbox"/></li><li>• Department of Petroleum Resources [DPR]: <input checked="" type="checkbox"/></li><li>• National Oil Spill Detection and Response Agency [NOSDRA]: <input checked="" type="checkbox"/></li><li>• State Ministry of Environment [SME]: <input checked="" type="checkbox"/></li><li>• Asset Owner: <input checked="" type="checkbox"/></li><li>• Signatories agree with reported findings: <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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