

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1872120 JIV report S/N:

N<sup>o</sup> 0000316

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

## A. GENERAL INFORMATION:

1. Spill incident Number: 1872120 2. Type of incident\* OIL SPILL  
3. Name of Location 20" OPUKUSHI - BRASS CREEK PIPELINE  
4. Name of nearest community TAMOGBENE 5. State: BAYELSA 6. LGA EKEREMOR  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF

## B. INCIDENT INFORMATION:

NIGERIA LIMITED / PIPELINES

### 9. Details of incident

- a. Date of incident: 9<sup>TH</sup> JUNE, 2017  
b. Start date/time of investigation: 23<sup>RD</sup> AUGUST, 2017 AT 0942HRS  
c. Investigation End date: 23<sup>RD</sup> AUGUST, 2017 Actual investigation duration, days: ONE DAY  
d. Description of spill point environment

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

### Additional observations around the spill point:

ON EXCAVATION, THE JOINT INVESTIGATION TEAM OBSERVED A FAILED 4" VALVE ILLEGALLY ATTACHED TO THE 20" OPUKUSHI - BRASS CREEK PIPELINE AT 12 O'CLOCK POSITION. THE LEAK HAS STOPPED AS AT THE TIME OF THIS INVESTIGATION.

### 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) Situation d) construction e) Encroachment f) Fire.

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g. Spill point coordinates

h. Measuring unit WGS 84 (DECIMAL-DEGREE)

Northing:	Easting:
4.93719	5.70725
/	/
/	/

## 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

- |  |   |     |   |                             |
|--|---|-----|---|-----------------------------|
| <input type="checkbox"/> Government reserved and designated protected area | [ | ,m] | } | NONE WITHIN<br>THE VICINITY |
| <input type="checkbox"/> Drinking water source                             | [ | ,m] |   |                             |
| <input type="checkbox"/> Built-up 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     
  Natural depression     
  Pit     
  None
- Others: COFFER-DAM

13. Any pictures or video coverage?

[Y]       [N]

14. Further response/repair initiated as at the time of JIV?

[Y]        [N]

If yes to item 14, give brief description:

NOT APPLICABLE

15. Was there any disruption to the investigation?

[Y]        [N]

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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**

S/N	Type of Structures	Description	Size	Number	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>				

**17. Crops/Economic Trees**

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>					

**18. Fishing Nets/Fish Ponds**

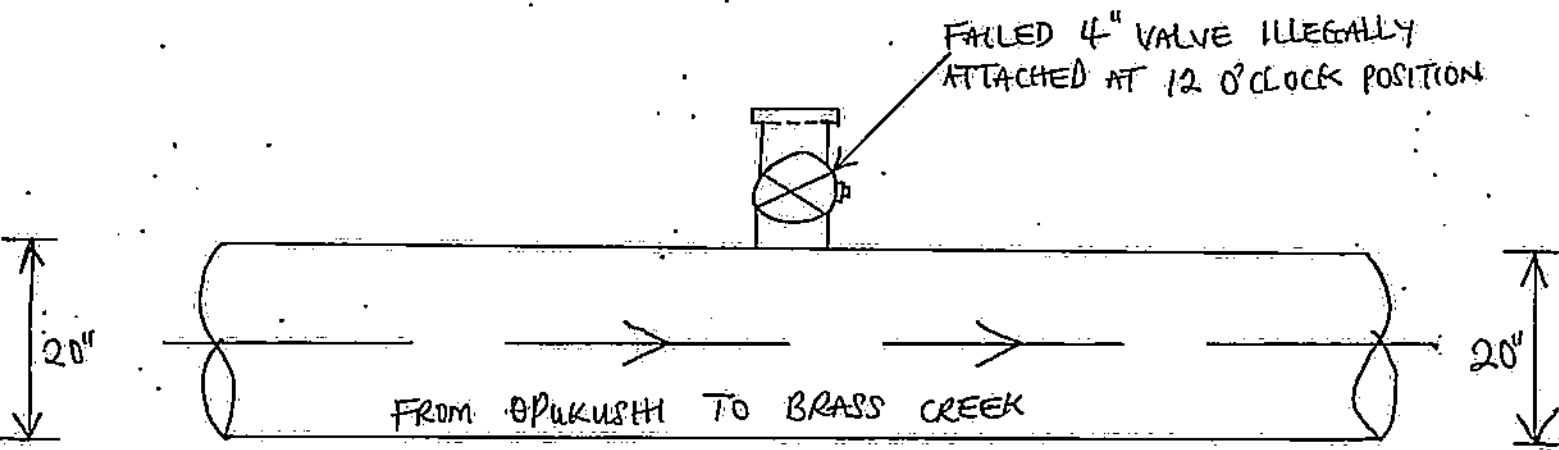
S/N	Nets/Ponds	Description	Quantity/Size	Comments
	<u>NONE WITHIN AREA OF IMPACT</u>			

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

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

**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 20" OPUKUSHI - BRASS CREEK PIPELINE AT TAMDEBENE AXIS SHOWING: A FAILED 4" VALVE ILLEGALLY ATTACHED AT 12 O'CLOCK POSITION



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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)

WGS 84 (DECIMAL - DEGREE)

S/N	Northing	Easting
	4.93717	5.70719
	4.93715	5.7073
	4.93723	5.70731
	4.93725	5.70721
	4.93732	5.70749
	4.93725	5.70742
	4.93741	5.70789
	4.93731	5.70713
	4.9383	5.70694
	4.93816	5.70783

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## G. INCIDENT INFORMATION:

### a. Impacted Area Details

- Total calculated area of impact 0.76 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>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 $V_{ES}$ (bbls)\* =

70.78 BBLs

Estimated Reported Volume\*\*  $V_{rep}$  (bbls) = 71 BBLs

#### \*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 in the box below:

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  $m^3$  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 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 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]:
- Asset Owner:
- Signatories agree with reported findings:
- Separate DPR form has been filled out with same findings

*Tick as applicable*

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f. Appendix I: Overview sketch of the site

