

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422923 JIV report S/N: 1030223

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

## A. GENERAL INFORMATION:

1. Fountain Incident Number: 2422923 2. Type of incident: OIL SPILL  
3. Name of Location: 16" NUN RIVER - KOLD CREEK PIPELINE  
4. Name of nearest community: OTUEGNE 5. State: BAYELSA 6. LGA: OGBIA  
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 Reported: 9<sup>th</sup> AUGUST, 2019  
b. Start date/time of investigation: 24<sup>th</sup> AUGUST, 2019/1300hrs  
c. Investigation End date: 18<sup>th</sup> JANUARY, 2020 Actual investigation duration, days: TWO (2) DAYS  
d. Description of spill point environment  
 Firm soil  Loose soil  Recently excavated area  
 Under water  Swampy  Exposed pipe surface  
 Well Platform (on Water)  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) Silting d) construction e) Encroachment f) Fire, g) non leaking Theft point removal  
Version 2019/01  
Distribution of copies: White (Asset Owner); Pink (DPR); Green (NOSDRA); Yellow (State Ministry of Environment); Blue (Host Community)

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422923 JIV report S/N: 1030223

g. Spill point coordinates

h. Measuring unit

WGS 84

Northing:	Easting:
4.84263	6.23425
/	/
/	/

## 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 | [ | m] | NONE SEEN |
| <input type="checkbox"/> Drinking water source                             | [ | m] |           |
| <input type="checkbox"/> Built up area                                     | [ | m] |           |
| <input type="checkbox"/> Farmlands   | [ | m] | WITHIN    |
| <input type="checkbox"/> Fish Farm/Pond                                    | [ | m] | VICINITY  |
| <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 ACTIVITY AND CRUDE OIL RECOVERY

15. Was there any disruption to the investigation?

[Y]  [N]

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422923

JIV report S/N: 1030223

If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed?

[Y]     [N]

If yes to item 16 give brief description: ACCESS CONSTRAINT DUE TO 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
NONE WITHIN AREA OF IMPACT					

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
1.	PALM TREE	✓	✓	✓	17 NOS	IMPACTED
2.	KAFIA PALM		✓	✓	12 NOS	IMPACTED

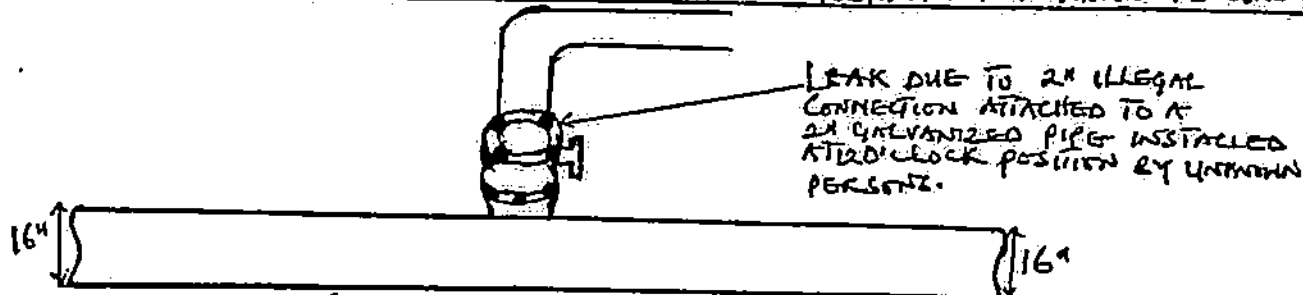
19. Fish/Nets/Ponds

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) A SECTION OF 16" NUN RIVER - KOLD CREEK PIPELINE AT OTUEQUE SHOWING A 2" ILLEGAL CONNECTION ATTACHED TO A 2" GALVANIZED PIPE INSTALLED AT 12 O'CLOCK POSITION BY UNKNOWN PERSONS.



FROM NUN RIVER TO KOLD CREEK PIPELINE    Version 2019/01



Coordinate list of 16" Nun-River- Kolo.creek Pipeline at Otuegwe(Inc.no=2422923)

WGS 84

PTS	X(Eastings)	Y(Northings)
469	6.23425	4.84263
454	6.23526	4.84307
455	6.23524	4.84308
456	6.23528	4.84304
457	6.23559	4.84294
458	6.236041	4.842492
459	6.23502	4.84284
460	6.235	4.84289
461	6.23493	4.84285
462	6.23484	4.84284
463	6.23468	4.84274
464	6.23471	4.84267
465	6.23456	4.8427
466	6.23449	4.84267
467	6.23444	4.84263
468	6.23439	4.84275
470	6.234	4.84258
471	6.23394	4.84259
472	6.23392	4.84275
473	6.23396	4.84283
474	6.23392	4.84286
475	6.23411	4.843
476	6.23409	4.84302
477	6.2343	4.84306
478	6.23428	4.8431
479	6.23423	4.84251
480	6.23426	4.84241
484	6.23506	4.84224
487	6.23542	4.84307
488	6.234851	4.84298
489	6.23433	4.841987
490	6.233759	4.841749
491	6.233029	4.841773
492	6.233269	4.842477
493	6.233588	4.84298
65	6.23424	4.84219
66	6.2339	4.84193
67	6.23381	4.84216
68	6.23381	4.8424
69	6.2337	4.84245
70	6.23344	4.84238
71	6.23325	4.84242
73	6.23355	4.84273

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422923, JIV report S/N: 1030223

**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 2.57 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>95</u>	Barrels
---------------------------	-----------	---------

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

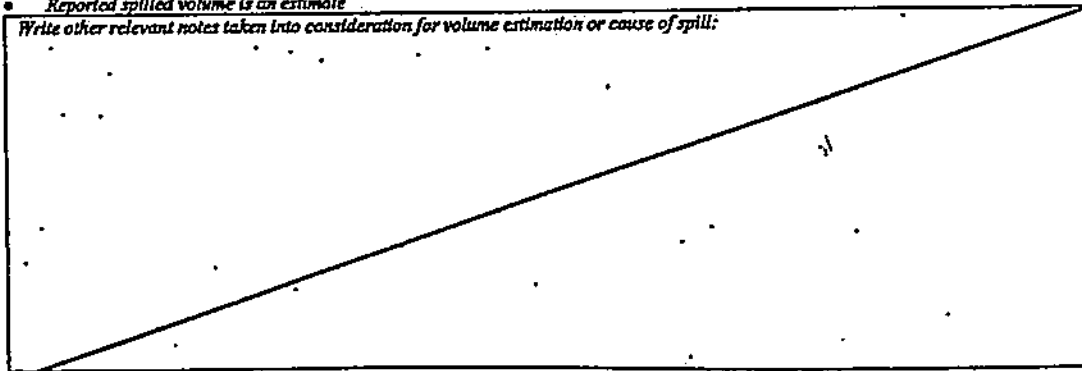
<u>NIL</u>	Barrels
------------	---------

<b>c. Net Estimated Spilled Volume <math>V_{est}</math> (bbls)* =</b>	<u>140.79 BARRELS</u>
<b>Estimated Reported Volume** <math>V_{rep}</math> (bbls) =</b>	<u>141 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.

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422 923 JIV report S/N: 1030223

## 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*

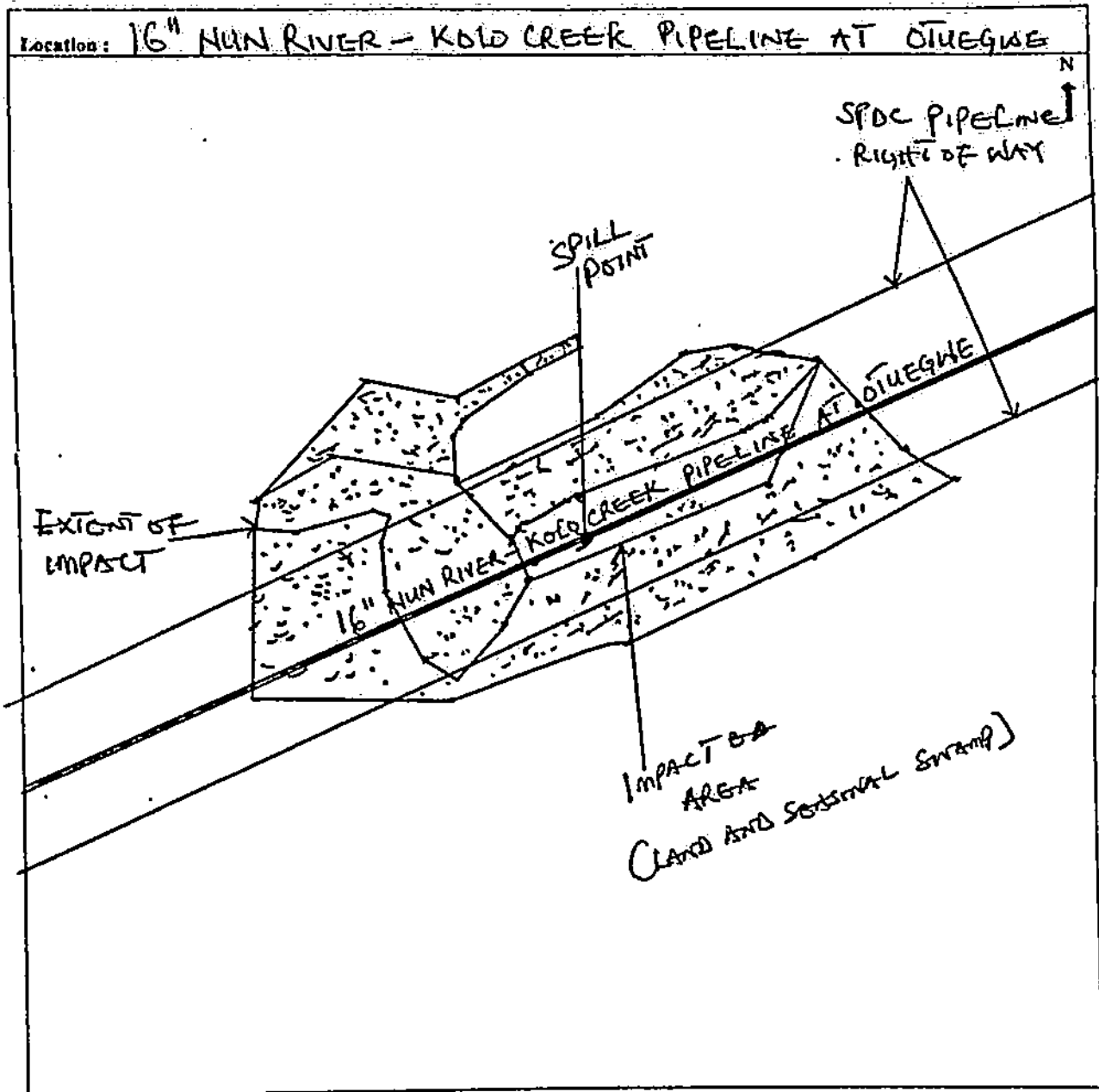
Version 2019/01

Distribution of copies : White (Asset Owner); Pink (DPR); Green (NOSDRA); Yellow (State Ministry of Environment); Blue (Host Community)  
Page 6 of 8

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2422923 JIV report S/N: 1030223

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



Version 2019/01

Distribution of copies: White (Asset Owner); Pink (DPR); Green (NOSDRA); Yellow (State Ministry of Environment); Blue (Host Community)  
Page 7 of 8