

# JOINT INVESTIGATION REPORT

INCIDENT NO: 1600815 JIV report S/N: Nº 0000153

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

## A. GENERAL INFORMATION:

1. Spill incident Number: 1600815 2. Type of incident\* OIL SPILL  
3. Name of Location 16" NUNRIVER - KOLOCREEK PIPELINE  
4. Name of nearest community OPOROMA 5. State: BAYELSA 6. LGA SOUTHERN ITAW  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District SPDC / PIPELINE

## B. INCIDENT INFORMATION:

9. Details of incident  
a. Date of incident: 23<sup>RD</sup> MARCH, 2016  
b. Start date/time of investigation: 10<sup>TH</sup> APRIL 2016 / 13:15 PM  
c. Investigation End date: 1<sup>ST</sup> MAY, 2016 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:

ON ARRIVAL AT SITE, JOINT INVESTIGATIONAL TEAM OBSERVED EARTHEN BUND WALL AROUND THE SPILL POINT.

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

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Drilled hole                               | <input checked="" 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 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"/> 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

NGS 84

Northing:	Easting:
LAT. 4.811972	LONG 6.115472
/	/
/	/
/	/

## 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 from the nearest sensitive habitat

Government reserved and designated protected area [        ,m]  
 Drinking water source [        ,m]  
 Built up area NONE SEEN [        ,m]  
 Farmlands WITHIN VICINITY. [        ,m]  
 Fish Farm/Pond [        ,m]  
 Fishing net [        ,m]  
 Others (specify).

12. Containment measures put in place:

Booms     Trench     Dyke     Natural depression     Pit     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:

RECOVERY ACTIVITIES ONGOING. REPAIR WORK WAS DONE BY CLAMPING

15. Was there any disruption to the investigation?

NY [N]

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If yes to item 15 give brief description:

THERE WAS AN EXPLOSION ON THE FIRST DAY OF THE INVESTIGATION  
10<sup>TH</sup> APRIL, 2016 ON THE PIPELINE RIGHT OF WAY JUST AT THE TIME THE  
JOINT INVESTIGATION TEAM ARRIVED AT SITE

**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
	NONE WITHIN AREA OF IMPACT				

**17. Crops/Economic Trees**

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

**18. Fishing Nets/Fish Ponds**

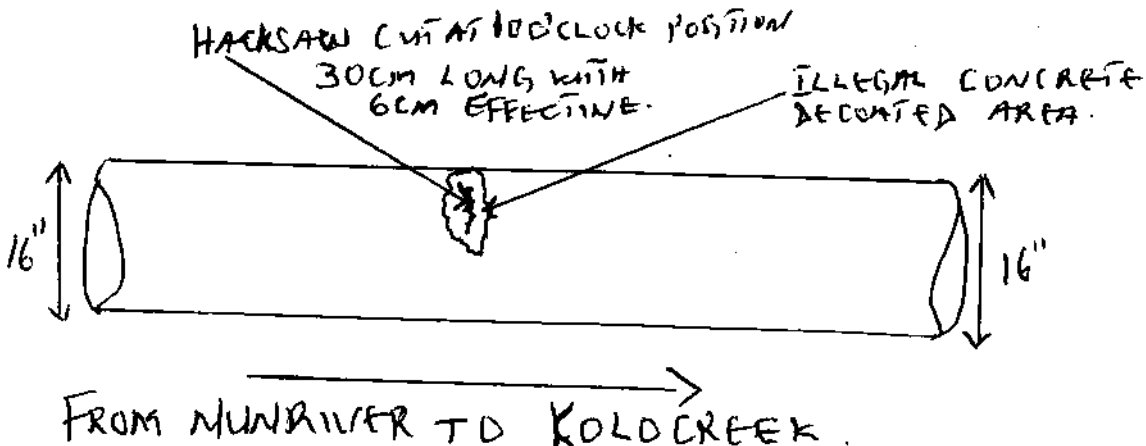
S/N	Nets/Ponds	Description	Quantity/Size	Comments
	NONE WITHIN AREA OF IMPACT			

**19. 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 16" MUMRIVER - KOLOCREEK PIPELINE AT OPOROMA  
SHOWING HACK SAW CUT AT 10 O'CLOCK POSITION





**APPENDIX A**

**IMPACTED AREA COORDINATES FOR 16" NUN RIVER - KOLOCREEK PIPELINE AT OPOROMA**

**INCIDENT NO: 2016\_1600815**

**(WGS 84)**

<b>PT_NO</b>	<b>LAT</b>	<b>LONG</b>
1	4.812833	6.117556
2	4.81275	6.117556
3	4.812583	6.117556
4	4.812583	6.1175
5	4.812713	6.117445
6	4.812782	6.117512
7	4.812273	6.116482
8	4.812472	6.11675
9	4.812445	6.116758
10	4.812444	6.116639
11	4.812361	6.116389
12	4.812278	6.116417
13	4.81225	6.116306
14	4.812222	6.11625
15	4.812222	6.116167
16	4.812139	6.116194
17	4.812222	6.116167
18	4.812194	6.116083
19	4.812111	6.115972
20	4.812111	6.115889
21	4.812056	6.115833
22	4.811972	6.115694
23	4.811944	6.115583
24	4.811944	6.115528
25	4.811861	6.115361
26	4.811917	6.115333
27	4.811944	6.115444
28	4.811979	6.115488
29	4.812	6.115472
30	4.812028	6.115444
31	4.812028	6.115417
32	4.812	6.115417
33	4.811972	6.115444
34	4.812	6.115306
35	4.812	6.11525
36	4.812056	6.115222
37	4.812139	6.115111
38	4.812222	6.115028
39	4.81225	6.114972
40	4.812306	6.114889
41	4.812333	6.114889
42	4.812389	6.114833



43	4.8125	6.114694
44	4.812583	6.114583
45	4.812667	6.114444
46	4.812638	6.114424
47	4.812559	6.114575
48	4.812473	6.114668
49	4.812355	6.114811
50	4.812266	6.114871
51	4.812214	6.114965
52	4.812097	6.115098
53	4.812014	6.115199
54	4.811959	6.115311



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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 0.22467 Hg (0.225 Hg)
- 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 $V_{rec}$ :	177	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

NIL	Barrels
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**c. Net Estimated Spilled Volume  $V_{est}(bbls)^*$  =**

279.33 BARRELS

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

280 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 estimating the spilled 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<sup>3</sup>) 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

<p><b>This report was filled, agreed and signed by the following joint investigation team representatives:</b></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

Location: 16" NUNRIVER - KOLOCRATE PIPELINE AT OPOROMA.

