

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2084608 JIV report S/N: 1049

(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: 2084608 2. Type of incident\* OIL SPILL  
3. Name of Location 12" ADIBAWA - OKORDIA PIPELINE  
4. Name of nearest community IKARAMA 5. State: BAYELSA 6. LGA YENAGDA  
7. Type of Production facility/Installation OIL PIPELINE  
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LTD (SPDC)/PIPELINE

## B. INCIDENT INFORMATION:

### 9. Details of incident

- a. Date of incident: 24<sup>TH</sup> MAY 2018  
b. Start date/time of investigation: 31<sup>ST</sup> MAY 2018 / 12 00 NOON  
c. Investigation End date: 31<sup>ST</sup> MAY 2018 Actual investigation duration, days: ONE (1) 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"/> Exposed pipe surface    |
| <input type="checkbox"/> Well Platform (on Water) | <input type="checkbox"/> Drill Rig         |  |

Additional observations around the spill point: THE JOINT INVESTIGATION TEAM OBSERVED A HACK SAW CUT AT 10'O'CLOCK POSITION.

### 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"/> 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) \_\_\_\_\_

\*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire,

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g. Spill point coordinates

h. Measuring unit

WGS 84

Northing:	Easting:
<u>5.165045</u>	<u>6.457797</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):

[ ] ,m } **NON SEEN**  
 [ ] ,m } **WITHIN VICINITY**  
 [ ] ,m }  
 [ ] ,m }  
 [ ] ,m }  
 [ ] ,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:

SPILL RESPONSE / LEAK REPAIR

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**

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

**17. Crops/Economic Trees**

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
1	PALM TREES	MANY	MANY	MANY	MANY	IMPACTED
/						

**18. Fishing Nets/Fish Ponds**

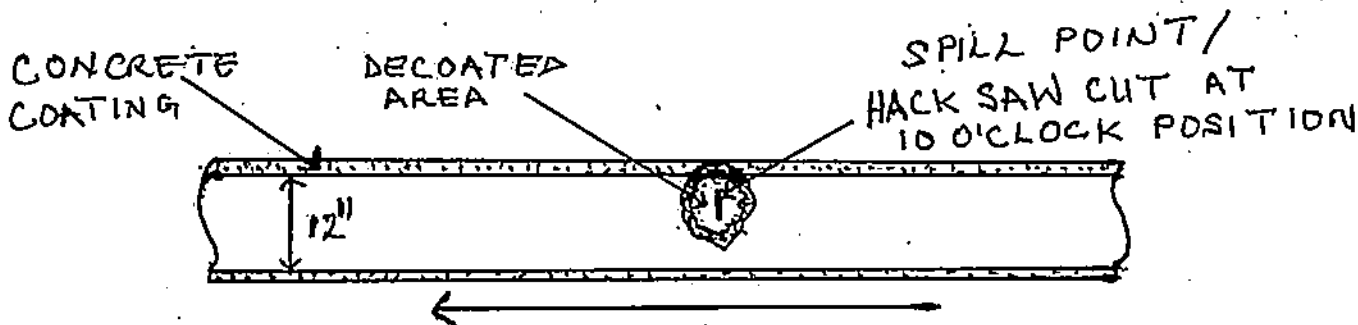
S/N	Nets/Ponds	Description	Quantity/Size	Comments
<b>NONE WITHIN AREA OF IMPACT</b>				

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

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

**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 I)

A SECTION 12" ADIBAWA — DKORDIA PIPELINE AT IKARAMA SHOWING HACK SAW CUT IN A DECOATED AREA, AT 10 O'CLOCK POSITION, BY UNKNOWN PERSONS.



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

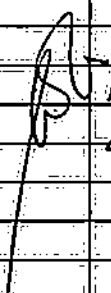
20. Impacted area boundary Coordinates (If more, Print and attach as an appendix)

S/N	Northing	Easting

SEE APPENDIX A

3/15/2018

Coordinate list of impacted area of Inc.no(2084608)-Appendix A		
WGS 84		
PTS	Y(Northings)	X(Eastings)
288	5.165045	6.457797
289	5.16491	6.4574
291	5.16502	6.45757
293	5.165283	6.458101
294	5.165408	6.458237
295	5.1656	6.45813
296	5.16567	6.45817
297	5.16511	6.45741
298	5.16516	6.45747
299	5.16522	6.45752
300	5.16536	6.45758
301	5.16548	6.45762
302	5.16553	6.45758
303	5.16581	6.45816
304	5.16586	6.45823
305	5.16601	6.45835
306	5.16615	6.45833
307	5.1662	6.45827
308	5.16684	6.45841
309	5.16721	6.45829
310	5.16737	6.45839
313	5.16755	6.45837
314	5.16853	6.45879
315	5.168537	6.458594
316	5.16865	6.45887
317	5.1689	6.45889
319	5.169	6.45889
320	5.165028	6.457839
321	5.164873	6.457678
322	5.165628	6.457857
323	5.166069	6.457994
324	5.166753	6.458041
325	5.167282	6.457988
326	5.168698	6.45869
327	5.168912	6.458773
328	5.169043	6.458761
/	/	/


  
 31/05/2018

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**G. INCIDENT INFORMATION:**

**a. Impacted Area Details**

- Total calculated area of impact 1.6ha
- 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  $V_{Est}$  (bbls)\* =**

165.29 BARRELS

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

166 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: ( $m^3$ ) 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 6e (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
- ii. Investigation of the incident site showed that there is residual impact on site requiring further works

## 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 1: Overview sketch of the site

