

THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED.

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1357611 JIV report S/N: 00869

(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: 1357611 2. Type of incident* OIL SPILL
3. Name of Location 18" ASSA - RUMUEKPE TRANS NIGER PIPELINE
4. Name of nearest community EGBEDA 5. State: RIVERS 6. LGA EMOHUA
7. Type of Production facility/Installation OIL PIPELINE 8. Asset owner/District PIPELINE/LAND

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 12TH MARCH, 2015
b. Start date/time of investigation: 14TH MARCH, 2015
c. Investigation End date: 15TH MARCH, 2015 Actual investigation duration, days: TWO DAYS
d. Description of spill point environment

- Firmed soil Loose soil Recently excavated area
 Under water Swampy Exposed pipe surface
 Well Platform (on Water) Drill Rig

Additional observations around the spill point: THE JIV TEAM OBSERVED SAND BAGS AROUND THE ILLEGAL THEFT POINT.

e. Description of leak point (tick as applicable);

- Drilled hole Hack saw cut Tear (_____),
 Complete Rupture Inward dent, Well head tampering
 Failed Weld-on illegal hot tap valve, Failed Clamp Missing Pipeline/Flowline
 Crude oil theft (illegal bunkering) point, Third party tampering with Clamp
 Third party tampering with valve setting, Third party tampering with flange,
 Corrosion Saver-pit over flow, Surge vessel overflow,
 Bulging Outward Flare System/Bund wall failure Accidental 3rd party equipment
impact Valve Failure com unit failure Cold vent
 Relief valve failure Others (specify) _____

f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3rd party damage
 Operational Others (including Mystery spills) _____

*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

Measuring unit	MISRA MID BELI	
Northing: (m)		Easting: (m)
137319.17		478874.31

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 SEEN
WITHIN
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: _____

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:

REPAIR WORK COMPLETED BY
CLAMPING.

15. Was there any disruption to the investigation? [Y] [N]

If yes to item 15 give brief description:

NOT APPLICABLE

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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. Fish/Nets/Ponds

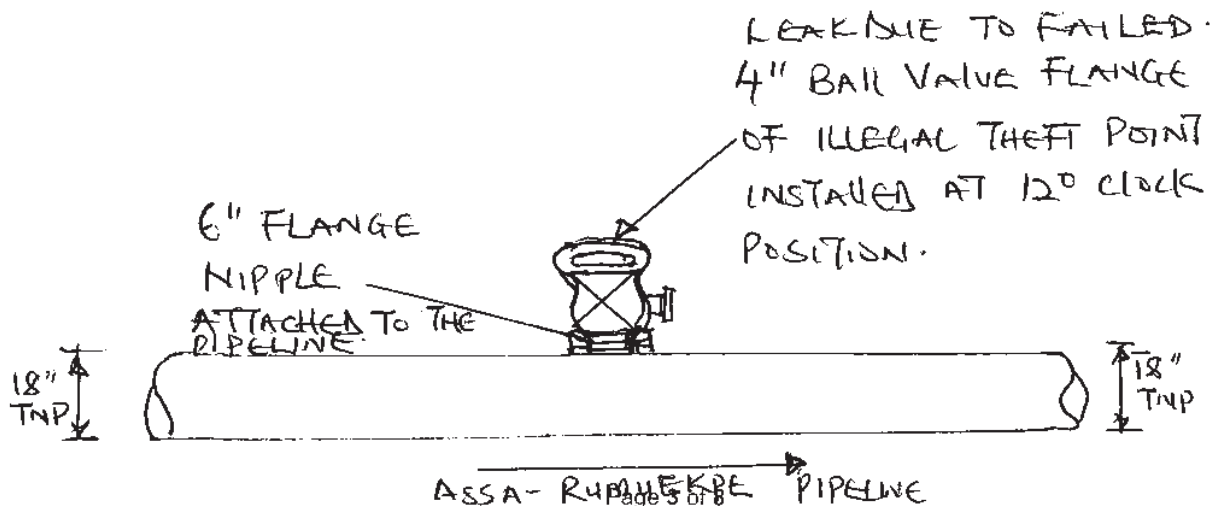
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
	NONE WITHIN AREA OF IMPACT			

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)

SECTIONAL VIEW OF 18" ASSA - RUMUOKPE TRANS NIGER PIPELINE AT EGBEDA SHOWING ILLEGAL THEFT POINT



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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)

MINNA MUD BELT

S/N	Northing (m)	Easting (m)
209	137319.17	478877.39
210	137322.25	478871.24
211	137325.34	478868.17
212	137313.06	478865.06
214	137313.03	478874.30
220	137270.05	478855.70
221	137273.13	478852.63
222	137285.40	478861.90
223	137285.41	478858.82

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G. INCIDENT INFORMATION:

20. Impacted Area Details

- Total calculated area of impact 0.014Ha
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W NO

21. Volume of oil recovered before completion of JIV (V_{rec}):

Recovered oil V_{rec} :	<u>75</u>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
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22. Net Estimated Spilled Volume $V_{Est}(bbls)^* =$

84.39 BARRELS

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

85 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:

DURING THE REPAIR IT WAS MAINLY WATER WITH CRUDE OIL THAT WAS COMING OUT, AND RECOVERY OF THE OIL WAS ONGOING.

THE REPAIR AND RECOVERY WORK WERE COMPLETED.

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.

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23. GENERAL STATUS OF THE SITE

A. 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"/>
B. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/>

24. REPRESENTATIVES

This report was filled, agreed and signed by the following joint investigation representatives:

- Host Community:
- Department of Petroleum Resources [DPR]:
- National Oil Spill Detection and Response Agency [NOSDRA]:
- State Ministry of Environment [SME]:
- Nigeria Police Force [NPF]:
- Shell Petroleum Development Company [SPDC]:
- Signatories agree with reported findings:
- Separate DPR form has been filled out with same findings

Tick as applicable

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25. Appendix 1: Overview sketch of the site

