

JOINT INVESTIGATION REPORT

INCIDENT NO: 215 8723 JIV report S/N: 0040

(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: 215 8723 2. Type of incident*: OIL SPILL
3. Name of Location: 4" DIEBU CREEK CLOSED DRAIN VESSEL FLANGE
4. Name of nearest community: PEREMABIRI S. State: BAYELSA G. LGA: SOUTHERN LGA: JAW
7. Type of Production facility/Installation: FLOW STATION
8. Asset owner/District: THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA
LTA (SPDC)/CENTRAL HUB EAST

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 7TH SEPTEMBER 2018
- b. Start date/time of investigation: 25TH SEPTEMBER 2018 / 1430HRS
- c. Investigation End date: 25TH SEPTEMBER 2018 Actual investigation duration, days: ONE (1) DAY
- 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: THE JIV DID NOT SEE OIL OR IMPACT AS AT THE TIME OF JOINT INVESTIGATION VISIT.

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 Saver-pit over flow Third party tampering with Clamp
- Third party tampering with valve setting Bulging Outward Third party tampering with flange
- Flare System/Bund wall failure Cold vent Surge vessel overflow
- Valve Failure Relief valve failure Accidental 3rd party equipment impact
- Corrosion. Others(specify) FLANGE FAILURE

f. Incident caused by:

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

*This can be: a) Oil Spill b) Drilling fluid/Chemical c) Stillation d) construction e) Encroachment f) Fire. Version: 2018/01
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JOINT INVESTIGATION REPORT

INCIDENT NO: 2158.723 JIV-report S/N: 0040

g. Spill point coordinates

Measuring unit

WGS 84

Northing:	Easting:
<u>4.65988°</u>	<u>6.07871°</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): _____

}

NON SEEN
WITHIN VICINITY

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:

NOT APPLICABLE

15. Was there any disruption to the investigation?

[Y] [N]

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JOINT INVESTIGATION REPORT

INCIDENT NO: 215 8 7 2 3 JIV report S/N: 0040

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>						

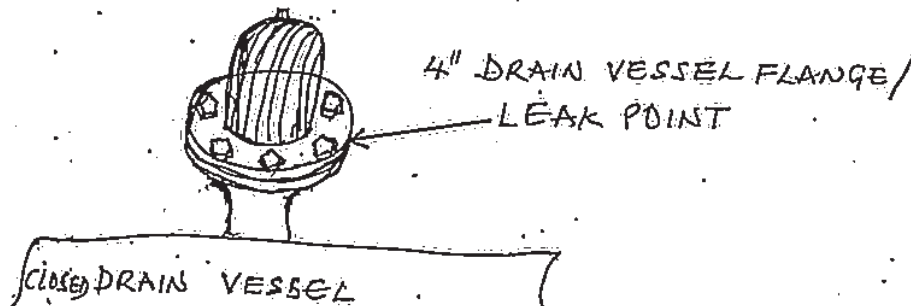
18. Fishing Nets/Fish Ponds

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 detailed 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 DIEBU CREEK FLOW STATION CLOSED DRAIN VESSEL SHOWING 4" FLANGE AT 12 O'CLOCK POSITION ON CLOSED DRAW VESSEL.



JOINT INVESTIGATION REPORT

INCIDENT NO: 2158723 JIV report S/N: 0040

G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact NIL
- Impact within R.O.W NIL
- Impact outside R.O.W NIL

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)* =

2 litres = 0.0126 BARRELS

Estimated Reported Volume** V_{rn} (bbls) =

0.013 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 volume in the box below:

THE SPILLED VOLUME ESTIMATION WAS DONE BY THE ASSET OWNER.

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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JOINT INVESTIGATION REPORT

INCIDENT NO: 215 8 723 JIV report S/N: 0040

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

JOINT INVESTIGATION REPORT

INCIDENT NO: 2158723 JIV report S/N: 0040

f. Appendix 1: Overview sketch of the site

