

JOINT INVESTIGATION REPORT

INCIDENT NO: 2730748 JV report SN: 0583

(Note: In general, it is possible for the JIR report to be signed on the third by all the participating parties)

A. GENERAL INFORMATION

1. Facility Incident Number 2730748 & Type of Incident FIRE / OIL SPILL
2. Name of Location 8th ISIMIRI - IMO RIVER GAZ DELIVERAYLINE
3. Name of nearest community UNDELECHI near ABIA & LGA UKWA-NWEST
4. Production Facility Name OIL PIPELINE
5. Asset Owner Name THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED / PIPELINE

B. INCIDENT INFORMATION

1. Date Reported 11th SEPTEMBER 2020
2. Start Date/Time of Investigation 13th SEPTEMBER 2020
3. Investigation End date 13th SEPTEMBER 2020 Dwell on site ONE (1) DAY
4. Description of soil post environment

<input type="checkbox"/> Open soil	<input type="checkbox"/> Loose soil	<input checked="" type="checkbox"/> Recently excavated area
<input type="checkbox"/> Under water	<input type="checkbox"/> Driveway	<input type="checkbox"/> Exposed pipe surface
<input type="checkbox"/> Soil (Flatten top water)	<input type="checkbox"/> On a log	<input type="checkbox"/> Sand (log)

Additional observations around the soil post

NOT APPLICABLE:

C. Description of leak post (tick as applicable)

- | | | |
|--|---|---|
| <input type="checkbox"/> Unwelded butt-joint leak | <input type="checkbox"/> Rough-edge hole | <input type="checkbox"/> Hot's raw cut |
| <input type="checkbox"/> Complete fracture | <input type="checkbox"/> Inward dent | <input type="checkbox"/> Well head tampering |
| <input checked="" type="checkbox"/> Weld failure (crack) hot tap valve | <input type="checkbox"/> Flare Clang | <input type="checkbox"/> Moving Pipeline/flow line |
| <input type="checkbox"/> Flare oil leak (illegal burner ring) post | <input type="checkbox"/> Severe or 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 Seal |
| <input type="checkbox"/> Flare System Burn in all 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"/> Unintentional 3 rd party equipment impact |
| <input type="checkbox"/> Fire (_____) | | |
| <input type="checkbox"/> Other (specify) _____ | | |

D. Incident caused by

- Third party interference (Sabotage) credit theft Law theft Accidental 3rd party damage
- Operational Others (including Mystery spill) _____

*Please do not fill in this section unless you are a member of the Shell or a member of the JV (including the asset owner)

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Distribution of copies: White (Asset Owner) Pink (OPN) Green (NOC/OPA) Yellow (Shell Ministry of Environment) Blue (Shell Community)

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1. Spill Point Coordinates (*Indicate 5/10th part as in appropriate use use Joint Investigation Report)

2. Mapping ref: NGS 84

Number	LATITUDE	Easting	LONGITUDE
4	82337	7	20688

C. RISK ASSESSMENT

10. Details of Environment

i. Type of environment where spill occurred (select one)

Land Swamp Water Riparian swamp Shoreline/Waterfront

ii. Type of environment in which oil has spread

Land Swamp Waterbody (specify) _____

iii. Weather conditions

Dry Wet Windy Hot

11. Distance to sensitive habitat within 100m radius

Government owned and designated protected area

Drinking water source

Surface water Wetlands

Shell up Area

Residential Area Commercial/Industrial Area

Farmlands

Fish Farms/Pond

Fishing net

Other (specify) _____

[m]

[m]

[m]

[m]

[m]

[m]

[m]

NONE SEEN

WITHIN

VICINITY.

12. Containment measures put in place

Barricade Truck Dike Pile Natural depression None

Other _____

13. Any pollution or water coverage? Y N

[Y] [N]

14. Further response/report initiated as a result of JIV? Y N

[Y] [N]

What is item 14, give brief description:

Remedial Work Ongoing!

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11. Were there any disruptions to the investigation? (Y) (N) (N)

12. If yes to Q11, give brief description:

NOT APPLICABLE

13. Was JIV delayed? (Y) (N) (N)

- Reason(s):
- Delayed Community Access Approval
 - Security Challenges
 - Access constraints due to terrain
 - Other (specify): _____

B. TYPES/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL

17. Structures / Properties

SN	Type of Structure	Description	Size	Number	Comments
<u>NONE WITHIN AREA OF IMPACT</u>					

18. Open Seasonal Trees

SN	Type of tree	Species	Height	Matured	Quantity	Comments
<u>NONE WITHIN AREA OF IMPACT</u>						

19. Palm Trees

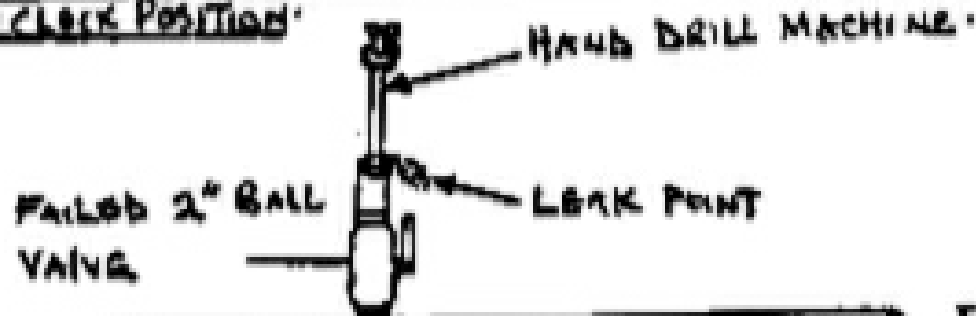
SN	Type of tree	Description	Quantity	Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>					

20. Other (specify) e.g. Animal Traps

SN	Other	Description	Quantity	Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>					

A GRAPHIC DESCRIPTION OF LEAK POINT (with detailed description of the leak point should be contained in the leak report, a general sketch of the site should be added as appendix 1)

SECTIONAL VIEW OF 8" ISIMIRI - IND RIVER GATE DRIVEWAY LINE AT UMUELECHI SHOWING: A 2" FAILED BALL VALVE INSTALLED AT 12' O'CLOCK POSITION.



ISIMIRI - IND RIVER PIPELINE

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INCIDENT INFORMATION

a. Impacted Area Details *

- Total excavated area of impact (m²) 0.04 Ha
- Impact within SPOC A/G W Yes
- Impact outside SPOC A/G W Yes

* Based off 0.2 distance across of area is ≥ 100 m² or to 1 distance across of area is ≥ 100 m² (e.g. 10 x 10, 50 x 2, 0.5 x 100)
 * Legend in Manual (14)

b. Systems of oil recovered before completion of JIV (Y_{oil})

Recovered oil Yield	NIL	Barrels
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Controlled recovery/evaporation from source with no impact to environment.

NIL	Barrels
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c. Net Estimated Spilled Volume Y_{oil}(oil) -

36.77 BARRELS

Estimated Recovered Volume Y_{oil}(oil) **37 BARRELS**

Notes

- 1. Further collection was done using an oil/water based test (see attached for details on the calculation)
- 2. Reported spilled volume is an estimate
- 3. Other other storage tank failure was considered for volume calculation at time of spill.

NOT APPLICABLE

Calculations of the respective estimated volume is to be done on site or as soon as possible using the site spill volume collection software or use Calculators of oil in barrels in Volume in L or m³. **Round up estimated volume to next whole number using the following rules:

- Up spill volume is more than 1 m³ is rounded up to the next whole number
- Up spill volume is less than 1 m³ is rounded up to the next 0.1 m³

Example: Calculated volume = 11.3 m³ — Reported volume = 12 m³
 Calculated volume = 0.11 m³ — Reported volume = 0.1 m³
 Calculated volume = 0.91 m³ — Reported volume = 0.9 m³

Whenever this information that is not applicable please refer to paragraph 6. (Structure) 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

1. Joint investigators of the incident did conclude that there is no residual impact after the initial response and JIC therefore recommended that the site be closed out
2. Investigations of the incident did conclude that there is residual impact on site requiring further works

e. Representatives

This report was (EBC), (DPR) and (SME) 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):
- The Shell Petroleum Development Company (SPDC):
- Separate DPR form has been filled out with same findings
- Separate NOSDRA form has been filled out with same findings
- Separate SME form has been filled out with same findings

To, & as applicable

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1. Appendix 1. Overview sketch of the site

