

JOINT INVESTIGATION REPORT

INCIDENT NO: 1938178 JIV report S/N: 0929

(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: 1938178 2. Type of incident* OIL SPILL
3. Name of Location 16" EGBEMA - ASSA (TRUNKLINE) PIPELINE
4. Name of nearest community OBILE 5. State: IMO 6. LGA OHAJI/ EGBEMA
7. Type of Production facility/Installation OIL PIPELINE
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED.

B. INCIDENT INFORMATION:

9. Details of incident

- a. Date of incident: 29TH SEPTEMBER, 2017
b. Start date/time of investigation: 11TH OCTOBER, 2017
c. Investigation End date: 12TH OCTOBER 2017 Total investigation duration, days: TWO 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: THE JOINT INVESTIGATION TEAM SAW SAND BAGS USED TO CONCEAL THE ILLEGAL THEFT POINT.

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Drilled hole | <input 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 checked="" type="checkbox"/> Failed Weld-on illegal hot tap valve | <input type="checkbox"/> Failed Clamp, | <input type="checkbox"/> Missing Pipeline/Flowline |
| <input checked="" 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 rd 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 3rd 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:
LATITUDE	LONGITUDE
5.39580	6.78966
5.39580	6.78966
5.39580	6.78966

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] } NONE SEEN
 [,m] }
 [,m] } WITHIN
 [,m] } VICINITY.
 [,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 BY CLAMPING AND OIL SPILL RECOVERY
WORK ONGOING.

15. Was there any disruption to the investigation?

[Y] [N]

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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
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

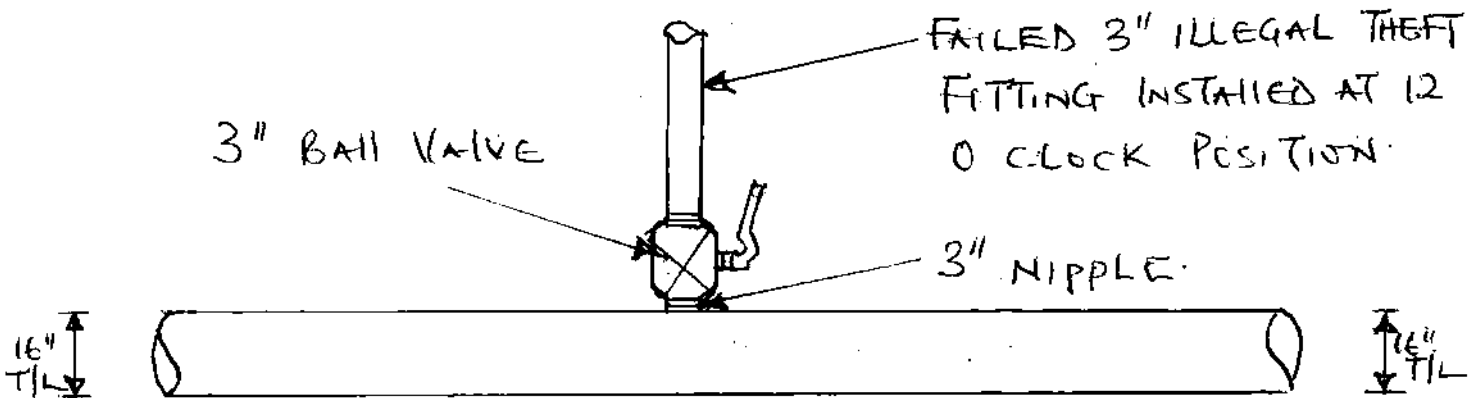
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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 I)*

SECTIONAL VIEW OF 16" EGBEMA - ASSA (TRUNKLINE) PIPELINE AT OBILE
SHOWING A FAILED 3" WELD-ON ILLEGAL HOT TAP VALVE.



EGBEMA - ASSA PIPELINE.
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PT_ID	LAT_Y	LONG_X
SP	5.3958	6.78966
378	5.39521	6.78929
379	5.39518	6.7893
380	5.39523	6.78938
381	5.39536	6.78962
382	5.39533	6.78974
383	5.39539	6.78977
384	5.39539	6.78983
385	5.39534	6.7898
386	5.39519	6.78987
387	5.3952	6.7899
388	5.3953	6.78986
389	5.39504	6.78997
390	5.39506	6.79
391	5.39529	6.7899
392	5.39532	6.78989
393	5.3954	6.78988
394	5.39543	6.78985
395	5.39544	6.78992
396	5.39547	6.78992
397	5.39546	6.78985
398	5.39545	6.78981
399	5.39551	6.78981
400	5.39552	6.78985
401	5.39558	6.78983
402	5.39551	6.78978
403	5.3956	6.78975
404	5.39563	6.78978
405	5.39569	6.78977
406	5.39569	6.78973
407	5.39577	6.78969
409	5.39574	6.78961
410	5.39579	6.78959
411	5.39584	6.78959
412	5.39585	6.78962
413	5.39586	6.78963
414	5.39585	6.78965
415	5.39582	6.78963
416	5.39584	6.78976
417	5.39589	6.78969
418	5.3959	6.78961
419	5.39596	6.78957
420	5.396	6.78959
421	5.39619	6.78948
422	5.39615	6.78958

PT_ID	LAT_Y	LONG_X
423	5.39619	6.78957
424	5.39627	6.78955
425	5.39632	6.78968
426	5.39624	6.78972
427	5.39626	6.78983
428	5.39626	6.78994
429	5.39628	6.79
430	5.39631	6.79004
431	5.39635	6.79013
432	5.39643	6.79021
433	5.39637	6.78992
434	5.39647	6.79014
435	5.39661	6.79031
436	5.39659	6.79033
453	5.39539	6.789713
437	5.39815	6.79135
438	5.39818	6.79134
439	5.39832	6.79143
440	5.39841	6.79152
441	5.39841	6.7916
442	5.39854	6.7916
443	5.39855	6.79167
444	5.39863	6.79169
445	5.39862	6.79172
446	5.39866	6.79173
447	5.39871	6.79173
448	5.39878	6.79178
449	5.39878	6.79186
450	5.39875	6.79187
451	5.3987	6.79185
452	5.39842	6.7916
454	5.39863	6.79188
455	5.39852	6.79176

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 0.31 HA
- Impact within R.O.W YES
- Impact outside R.O.W YES

b. Volume of oil recovered before completion of JIV (V_{recd}):

Recovered oil V_{recd} :	15	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)* =

35.62 BARRELS

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

36 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:

NOT APPLICABLE

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: (m3) 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

