

JOINT INVESTIGATION REPORT

INCIDENT NO: 1426074 JIV report S/N: N^o 000005

(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: 1426074 2. Type of incident* OIL SPILL
3. Name of Location 18" ASSA - RUMUEKPE PIPELINE
4. Name of nearest community ELELE-ALIMINI/ IHUABA 5. State: RIVERS 6. LGA EMOHUA/AHOADA-EAST
7. Type of Production facility/Installation OIL PIPELINE
8. Asset owner/District THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED / PIPELINE

B. INCIDENT INFORMATION:

9. Details of incident
a. Date of incident: 22ND JUNE, 2015
b. Start date/time of investigation: 26TH JUNE, 2015 / 13:34 HOURS
c. Investigation End date: 26TH JUNE, 2015 Actual investigation duration, days: ONE (1) DAY
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"/> DrillRig | |

Additional observations around the spill point: ON ARRIVAL AT SITE, THE JOINT INVESTIGATION TEAM OBSERVED FIVE (5) NO. MATTRESS FOAMS AT AND AROUND THE SPILL POINT. ON REMOVAL OF THE MATTRESS FOAMS AND EXCAVATION AROUND THE SPILL POINT, IN THE COURSE OF JIV TO REVEAL SPILL CAUSE, A SECTION OF THE PIPELINE POLYETHYLENE COATING AROUND THE SPILL POINT WAS OBSERVED REMOVED BY UNKNOWN PERSON(S). IMPACTED SOIL ON SITE IS LIGHT BROWN SILTY CLAY.

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

- | | | |
|---|---|--|
| <input checked="" 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 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 rd party equipment impact |
| <input type="checkbox"/> 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) Situation d) construction e) Encroachment f) Fire.

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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
1.	PALM TREES			✓	WITHIN AN IMPACTED REGION OF 1-16 Ha.	WITHIN SEASONAL SWAMP (FOREST)

18. Fishing Nets/Fish Ponds

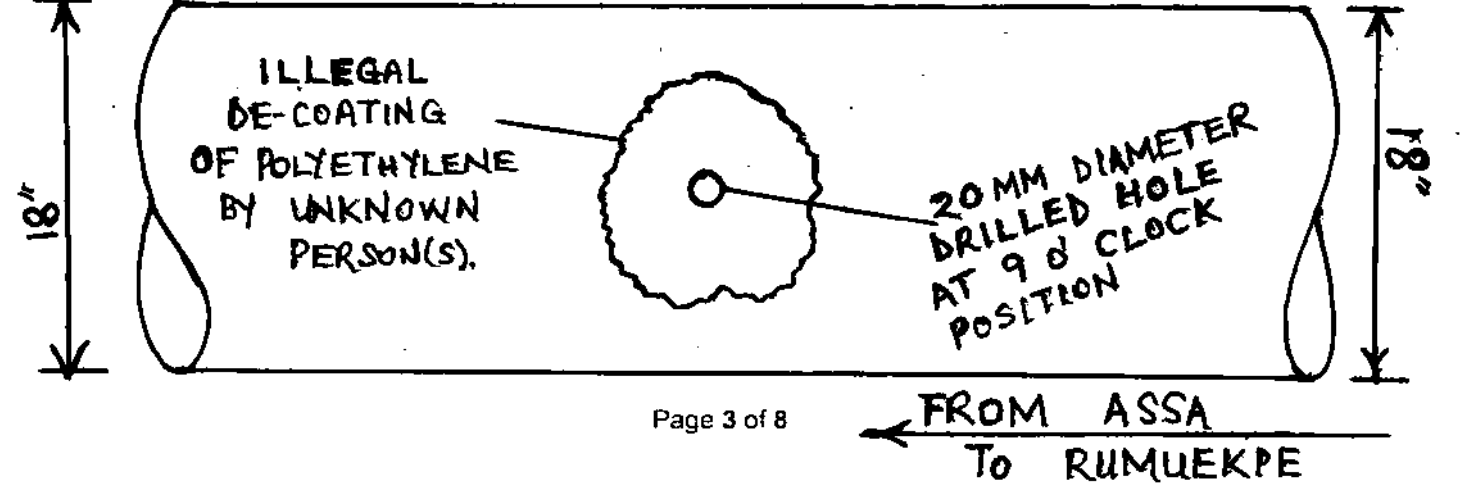
S/N	Nets/Ponds	Description	Quantity/Size	Comments
1.	PONDS	FISH PONDS	2 NO.	WITHIN SPILL-IMPACTED SEASONAL SWAMPY TERRAIN (FOREST)

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)

SECTION OF 18" ASSA - RUMUEKPE PIPELINE AT ELELE-ALIMINI/IHUABA SHOWING DRILLED HOLE (LEAK POINT) AT 9 O' CLOCK POSITION.



APPENDIX A

18" ASSA - RUMUEKPE TRUNK LINE AT ELELE - ALIMINI / IHUABA

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IMPACTED AREA COORDINATES (WGS 84)

PTS	X	Y
545	6.70294	5.05285
546	6.70294	5.05274
547	6.70297	5.05271
548	6.70283	5.0529
549	6.70307	5.05287
550	6.70315	5.05289
551	6.70308	5.05271
552	6.70314	5.05262
553	6.70281	5.05271
554	6.70281	5.05256
555	6.70286	5.05242
556	6.70286	5.05229
557	6.7029	5.05227
558	6.703	5.05236
559	6.70312	5.05225
560	6.70286	5.05219
561	6.70285	5.05208
562	6.70281	5.05194
563	6.70288	5.05191
564	6.7029	5.05219
566	6.70301	5.05189
567	6.70301	5.05165
568	6.70302	5.05137
569	6.70295	5.0511
570	6.70304	5.05127
571	6.70294	5.05073
572	6.70286	5.05061
573	6.70272	5.05044
574	6.70281	5.05014
575	6.70285	5.05008
576	6.70299	5.05008
577	6.70309	5.05027
578	6.70324	5.05042
579	6.7033	5.0503
580	6.70355	5.05047
581	6.70349	5.05071
582	6.70327	5.05289
583	6.70337	5.05294
584	6.70335	5.05313
585	6.70346	5.05315
586	6.7035	5.05293
5590	6.703351	5.052239
5660	6.703244	5.051892
5680	6.703256	5.051368
5690	6.703186	5.051088
5520	6.70337	5.052663

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 1.39HA
- 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 $V_{rec.}$:	NIL	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)* = 686.85

Estimated Reported Volume V_{rep} (bbls) = 687 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 m³ 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*

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

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

