

JOINT INVESTIGATION REPORT

INCIDENT NO: 1571105 JIV report S/N: No 0000131

(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: 1571105 2. Type of incident* OIL SPILL
3. Name of Location 6" MININGIA - AHA BULLIC LINE
4. Name of nearest community AKYABU 5. State: RIVERS 6. LGA EMOLGA
7. Type of Production facility/Installation BULLIC LINE
8. Asset owner/District SPDC / LAND 2.

B. INCIDENT INFORMATION:

9. Details of incident
a. Date of incident: 7TH FEBRUARY, 2016
b. Start date/time of investigation: 9TH FEBRUARY, 2016 / 12:50pm
c. Investigation End date: 9TH FEBRUARY 2016 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"/> Drill Rig | |

Additional observations around the spill point: ON ARRIVAL AT SITE, THE JOINT INVESTIGATION TEAM OBSERVED OIL AND WATER BUBBLING AT SPILL POINT. FARMLAND PREPARATION (PLOUGHING) WAS ALSO NOTICED.

- 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 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 checked="" 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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g. Spill point coordinates

h. Measuring unit

WGS 84

Northings	Eastings
LATITUDE	LONGITUDE
5.12918	6.73789

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 [,m]
- Drinking water source [,m]
- Built up area [< 20,m]
- Farmlands [15 ,m]
- Fish Farm/Pond [,m]
- Fishing net [,m]
- Others (specify). [,m]

12. Containment measures put in place;

- Booms
 Trench
 Dyke
 Natural depression
 Pit
 None
- Others: _____

13. Any pictures or video coverage? [N]

14. Further response/repair initiated as at the time of JIV? [N]

If yes to item 14, give brief description:

RECOVERY ACTIVITIES ONGOING
 REPAIR WORKS PLANNED

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

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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 TREE	✓	—	—	40 MOS	IMPACTED BY SPILL.

18. Fishing Nets/Fish Ponds

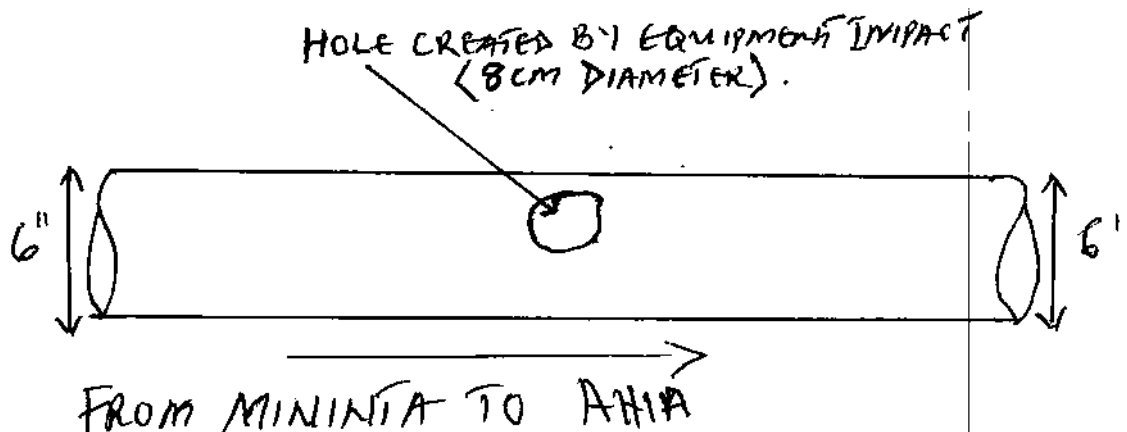
S/N	Nets/Ponds	Description	Quantity/Size	Comments
NONE WITHIN AREA OF IMPACT				

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 1)

SECTION OF 6" MININTIA - AHA BULK LINE AT AKPABU SHOWING POSITION OF ACCIDENTAL 3RD PARTY EQUIPMENT IMPACT AT 9 TO 10 O'CLOCK POSITION.



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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)

was by

S/N	Northing LATITUDE	Easting LONGITUDE
1		

SEE ATTACHED
APPENDIX A
IMPACTED AREA COORDINATES

APPENDIX A, INCIDENT NUMBER:1571105		
IMPACTED AREA COORDINATES		
6"MININTA-AHIA BULK LINE AT AKPABU		
WGS 84		
POINT	LATITUDE	LONGITUDE
74	5.13	6.73795
75	5.13007	6.73802
76	5.13026	6.73806
77	5.13029	6.73822
78	5.13038	6.73829
79	5.13029	6.7385
80	5.13001	6.73842
81	5.12978	6.7384
82	5.12974	6.73854
83	5.12962	6.73843
84	5.12941	6.73836
85	5.12899	6.73837
86	5.12877	6.73834
87	5.12889	6.73815
88	5.1289	6.73809
89	5.12859	6.7381
90	5.12867	6.73786
91	5.12846	6.73768
92	5.12788	6.73774
93	5.12781	6.73765
94	5.12788	6.7376
95	5.12791	6.73764
96	5.1281	6.73751
97	5.12819	6.73743
98	5.12831	6.73741
99	5.12853	6.73747
100	5.12884	6.7377
101	5.12886	6.7376
102	5.12883	6.73752
103	5.12875	6.7375
104	5.12881	6.73733
105	5.12865	6.73724
106	5.12845	6.73726
107	5.12832	6.73718
108	5.12833	6.73706
109	5.12843	6.73708
110	5.12854	6.73708
111	5.12866	6.73711
112	5.12862	6.73705
113	5.12847	6.73696
114	5.12849	6.73694
115	5.12838	6.73688
116	5.12841	6.73684
117	5.12868	6.73689
118	5.12877	6.73691
119	5.12958	6.73759
120	5.12957	6.73767
121	5.12957	6.73785
122	5.1292	6.73799

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G. INCIDENT INFORMATION:

a. Impacted Area Details

- Total calculated area of impact 1.9 Ha
- 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} :	<u>72</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)* =

1,134.73 BARRELS

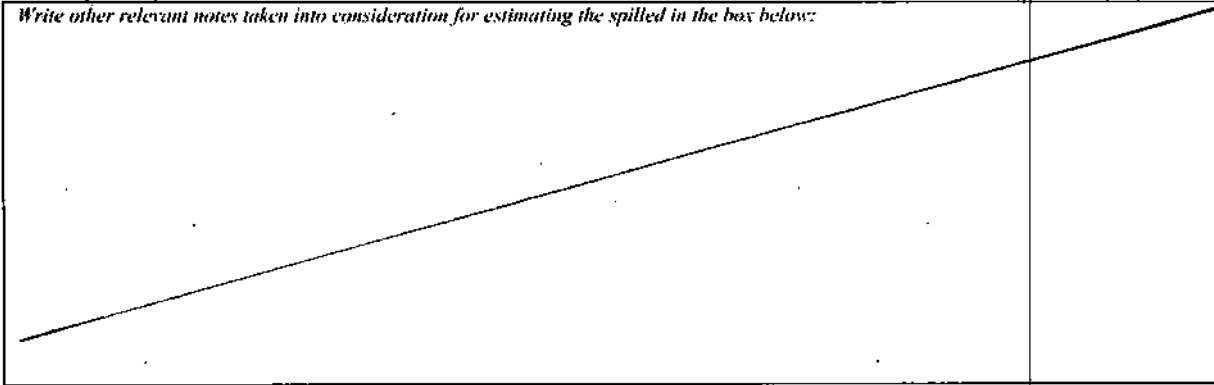
Estimated Reported Volume V_{rep} (bbls) =**

1,135 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:



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

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

<p>This report was filled, agreed and signed by the following joint investigation team representatives:</p> <ul style="list-style-type: none">• Host Community: <input checked="" type="checkbox"/>• Department of Petroleum Resources [DPR]: <input checked="" type="checkbox"/>• National Oil Spill Detection and Response Agency [NOSDRA]: <input checked="" type="checkbox"/>• State Ministry of Environment [SME]: <input checked="" type="checkbox"/>• Asset Owner: <input checked="" type="checkbox"/>• Signatories agree with reported findings: <input checked="" type="checkbox"/>• Separate DPR form has been filled out with same findings: <input checked="" type="checkbox"/> <p style="text-align: right;"><i>Tick as applicable</i></p>
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f. Appendix 1: Overview sketch of the site

