

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

(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: 2081062 2. Type of incident\* OIL SPILL  
3. Name of Location 24" TRANS - RAMOS PIPELINE  
4. Name of nearest community AGHORO 2 5. State: BAYELSA 6. LGA EKEREMOR  
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: 18<sup>TH</sup> MAY 2018  
b. Start date/time of investigation: 24<sup>TH</sup> MAY 2018 AT 12:24 HRS  
c. Investigation End date: 25<sup>TH</sup> JUNE 2018 Actual investigation duration, days: 6 DAYS  
d. Description of spill point environment

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Firm soil                | <input type="checkbox"/> Loose soil        | <input type="checkbox"/> Recently excavated area |
| <input type="checkbox"/> Under water              | <input checked="" 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: AFTER THE AFFECTED PIPE LINE WAS LIFTED AND UNWRAPPED, A CORRODED LEAK POINT WAS OBSERVED BETWEEN TWO WELDED JOINTS AT 6 O'CLOCK POSITION.

### 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 type="checkbox"/> Accidental 3 <sup>rd</sup> party equipment impact |
| <input checked="" type="checkbox"/> Corrosion                       | <input type="checkbox"/> Others(specify) _____ |  |

### f. Incident caused by:

- Third party interference (Sabotage ; crude theft ; Line theft ; Accidental 3<sup>rd</sup> 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

02/20/02

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

g. Spill point coordinates

h. Measuring unit

NGS 84

Northing: <u>LATITUDE</u>	Easting: <u>LONGITUDE</u>
<u>5.12787</u>	<u>5.41591</u>
<u>/</u>	<u>/</u>
<u>/</u>	<u>/</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 [ ,m]  
 Drinking water source [ ,m] → IMPACTED BY SPILL  
 Built up area [ :2 ,m]  
 Farmlands [ ,m]  
 Fish Farm/pond [ ,m]  
 Fishing net [ ,m] → IMPACTED BY SPILL  
 Others (specify): MANGROVES, FISH TRAPS AND FISH CAGES → IMPACTED BY SPILL

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? [Y]  [N]

if yes to item 14, give brief description:

NOT APPLICABLE

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

Doc

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

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
	SHRINE	/	/	1	IMPACTED BY SPILL
	/	/	/	/	/

#### 17. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
	BULK ASSESSMENT ADOPTED RECOMMENDED					Qd. BY

#### 18. Fishing Nets/Fish Ponds

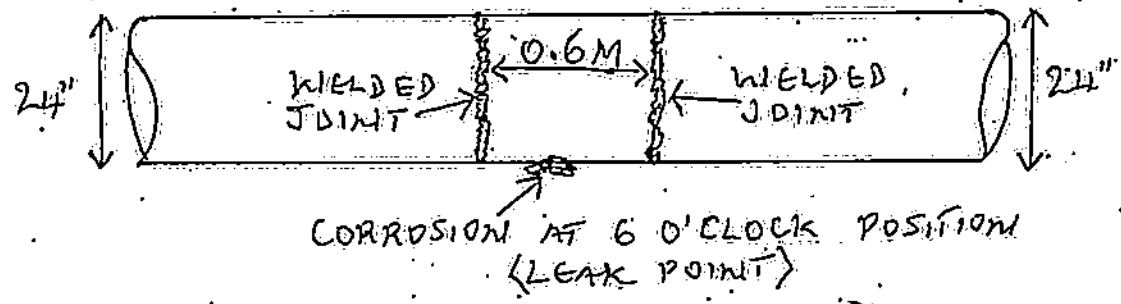
S/N	Nets/Ponds	Description	Quantity/Size	Comments
	BULK ASSESSMENT ADOPTED RECOMMENDED			

#### 19. Others (Specify) i.e. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
	/	/	/	/

### 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)

SECTION OF 24" TRANS - RAMOS PIPELINE AT ALVARO 2 SHOWING CORROSION AT 6 O'CLOCK POSITION



FROM BRASS CREEK TO FORCADOS TERMINAL

*Handwritten initials*

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

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)

S/N	Northing	Easting

SEE ATTACHED FOR  
COORDINATE LISTING

*Handwritten signature*

JIV\_2081062\_AGHORO-2

PT_ID	LONG_X	LAT_Y
SP	5.41591	5.12787
1	5.414339	5.125205
2	5.414122	5.125101
3	5.414181	5.124592
4	5.413911	5.124554
5	5.414838	5.124189
6	5.41451	5.124113
7	5.413829	5.123028
8	5.414072	5.122759
9	5.41312	5.122742
10	-5.413039	5.123123
11	5.412506	5.122285
12	5.41223	5.122376
13	5.412141	5.120814
14	5.412027	5.121007
15	5.411488	5.119997
16	5.41132	5.120186
17	5.410605	5.11987
18	5.410599	5.120062
19	5.409453	5.119421
20	5.409183	5.119512
21	5.409171	5.118416
22	5.408889	5.118446
23	5.409141	5.117645
24	5.408867	5.117539
25	5.409521	5.117253
26	5.409221	5.11712
27	5.40991	5.116169
28	5.409571	5.116184
29	5.409719	5.115433
30	5.409472	5.115471
31	5.409324	5.114808
32	5.409152	5.1145
33	5.408981	5.11421
34	5.408794	5.114112
35	5.408551	5.114032
36	5.408429	5.112052
37	5.408212	5.111146
38	5.408528	5.112771
39	5.408874	5.112768
40	5.408692	5.112018
41	5.408429	5.11129
42	5.408334	5.110757
43	5.408497	5.110906

JIV\_2081062\_AGHORO-2

PT_ID	LONG_X	LAT_Y
44	5.410447	5.112204
45	5.411556	5.112502

PT_ID	LONG_X	LAT_Y
46	5.411556	5.112414
47	5.410989	5.112378
48	5.410982	5.112471
49	5.410792	5.112352
50	5.410713	5.112409
51	5.410252	5.111821
52	5.410088	5.111693
53	5.409507	5.111852
54	5.409476	5.11174
55	5.409367	5.111797
56	5.409214	5.111105
57	5.409257	5.11109
58	5.409609	5.111079
59	5.409469	5.110781
60	5.409724	5.110395
61	5.409659	5.110271
62	5.410038	5.110115
63	5.40994	5.110043
64	5.410414	5.109668
65	5.410416	5.109403
66	5.410357	5.10912
67	5.41024	5.109163
68	5.410228	5.108699
69	5.410342	5.108642
70	5.410223	5.108334
71	5.410119	5.108414
72	5.409933	5.108055
73	5.410104	5.108058
74	5.410012	5.107953
75	5.410228	5.10796
76	5.410111	5.107846
77	5.410314	5.107591
78	5.410164	5.107446
79	5.41018	5.107566
80	5.410226	5.107331
81	5.410485	5.107319
82	5.410352	5.107457
83	5.410621	5.107414
84	5.41063	5.107552
85	5.411082	5.1076
86	5.411013	5.107505
87	5.411218	5.107409
88	5.411139	5.107376
89	5.411608	5.106817

PT_ID	LONG_X	LAT_Y
90	5.411494	5.106784
91	5.411668	5.106563

*P. B.*  
08/08/2018

Q. 10/1

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

## G. INCIDENT INFORMATION:

### a. Impacted Area Details

- Total calculated area of impact 15.35867 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>NIL</u>	Barrels
---------------------------	------------	---------

Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
------------	---------

### c. Net Estimated Spilled Volume $V_{Est}$ (bbls)\* =

24.04 BARRELS

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

25 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<sup>3</sup> to barrels is Volume (m<sup>3</sup>) 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.

208

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

## 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: <input checked="" type="checkbox"/>	
• Department of Petroleum Resources [DPR]: <input 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 type="checkbox"/>	
	<i>Tick as applicable</i>

# JOINT INVESTIGATION REPORT

INCIDENT NO: 2081062 JIV report S/N: 1140

f. Appendix 1: Overview sketch of the site

