



TANK CLEANING REPORT

FOR

**VANA ENERGY
LIMITED**

(Tank TK 102)

2nd Floor, Elvita Plaza, Dome

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Introduction

Bidi Group Ltd was contracted to undertake tank cleaning at VANA Energy. The Description of the tank is as described below;

Name of Client:	VANA ENERGY
Location:	Tema
Tank Assigned:	Tank 102 (Floating Roof Tank)
Tank Capacity:	6,425 m ³
Tank Height:	15 m
Tank Diameter:	25.5 m
Product:	PMS
No. of Bidi Group Personnel:	8
Duration:	7 Days (Thursday 28 th November – Thursday 5 th December, 2019)
Last Cleaning Date of Tank:	16 th May, 2008

List of Bidi Group Personnel Deployed

1. Nana K.A. Fosu-Gyeabour	-	HSE Officer & First Aider
2. Franklin Tuffour	-	Tank Cleaning Officer
3. Emmanuel Atuobi	-	Tank Cleaning Officer
4. Sumaila Agudah	-	Tank Cleaning Officer
5. Emmanuel Avowotor	-	Tank Cleaning Officer
6. Godsway Tsukudo	-	Tank Cleaning Officer
7. Eric Baah	-	Tank Cleaning Officer
8. Emmanuel Asonor`	-	Tank Cleaning Officer

Others

1. Ezra Mingle	-	Ghana National Fire Service
2. Ebenezer Narh	-	Ghana National Fire Service

Pre-Cleaning Inspection Observation:

There was the presence of sludge and water at the bottom plate and lower part of the tank walls. The walls and supporting braces and pistons had some rusted portions. Also there were hydrocarbon fumes in the tank.

Work Procedure

During the seven (7) day work duration, the following procedure were adopted;

Day One: Thursday 28/11/2019

- Arrival of Bidi Group personnel to cleaning site at VANA ENERGY.
- Safety Induction and inspection of PPE by client.
- Issuance of General Work Permit and Confined Space Entry Permit to begin work.
- Toolbox meeting with authorized personnel of VANA ENERGY and Bidi Group Team.
- Setting up of work place by offloading all needed equipment onto site. (Caution tapes and Cones, together with safety signage were appropriately placed)
- Gas testing was conducted by the HSEC Personnel for VANA ENERGY and witnessed by Bidi Group.
- The Tank Cleaning Technicians , entered the tank in 5 mins intervals to start work by spreading XP3 Multipurpose Degreaser onto tank floor (which was left overnight)
- The necessary paper work were signed and the team left work area awaiting continuation of work the next day.

Day 2: Friday 29/11/2019

- Collection of permit from VANA ENERGY HSEC Personnel.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service.
- Work commenced, with the first tank entry occurring at 9:57 am
- The team began the manual evacuation of water and sludge from tank. The teams entered the tank in 5 - 10 mins intervals.
- Work ended at 4:30 pm
- The necessary paper work were signed and the team left work area awaiting continuation of work the next day.

Day 3: Saturday 30/11/2019

- Collection of permit from VANA ENERGY HSE Officer.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service
- First tank entry was at 9:45am
- Manual scooping of sludge and water continued.
- Work ended at 12:30 pm
- The necessary paper work were signed and the team left work area awaiting continuation of work the next day.

Day 4: Monday 2/12/2019

- Collection of permit from VANA ENERGY HSE Officer.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service
- First tank entry was at 10:52 am
- The team continued with the collection of sludge and water from the tank.
- Scrubbing of the bottom plate, to further dislodge hardened material commenced, after most of the sludge and water had been scooped out.
- Work ended at 4:00 pm
- The necessary paper work were signed and the team left work area awaiting continuation of work the next day.

Day 5: Tuesday 3/12/2019

- Collection of permit from VANA ENERGY HSE Officer.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service
- The first tank entry was at 9:55am
- Scrubbing of the tank walls, the floating roof support, and the bottom plate continued. There was also the scooping of sludge and water from tank.
- Work ended at 3:53 pm
- All necessary paperwork were signed and copies made available to both parties (Bidi Group and VANA ENERGY).

Day 6: Wednesday 4/12/2019

- Collection of permit from VANA ENERGY HSE Officer.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service
- The first tank entry was at 9:45am
- Mopping of the tank walls, the floating roof support, and the bottom plate began, to rid tank of remaining sludge, water and degreaser.
- Work ended at 4 pm.
- All necessary paperwork were signed and copies made available to both parties (Bidi Group and VANA ENERGY).

Day 7: Thursday 5/12/2019

- Collection of permit from VANA ENERGY HSE Officer.
- Holding of tool box meeting among Bidi Group personnel, VANA ENERGY Personnel and an Officer from Ghana National Fire Service
- The first tank entry was at 9:46 am
- The final mopping of the tank walls, the floating roof support, and the bottom plate began, to rid tank of remaining sludge, water and degreaser.
- Officials from VANA ENERGY, together with the Fire Officers and personnel from Bidi Group were called to undertake an inspection of the tank cleaning done for T 102.
- Few spots of sludge were identified and was evacuated and mobbed by Bidi Group personnel, after the inspection.
- After final approval, Bidi Group personnel demobilized from site.
- Work ended at 2:30 pm
- All necessary paperwork were signed and copies made available to both parties (Bidi Group and VANA ENERGY).

Quantity of Sludge Collected for Treatment after entire cleaning - **Four IBCs (4,000 lts)**

General Observations and Challenges

During the tank cleaning operations, the following conditions were observed;

- The level of the floating roof and its supports were a major challenge to the cleaning operation (as it obstructed movement in the tank).
- The presence of harmful gases caused work to be temporarily halted on some occasions (as shown on the Confined Space Entry Log Sheet)
- Reduced visibility in tank because of the floating roof system.
- The drain points on the tank were elevated such that fluidized material at the tank floor cannot flow through.
- At the bottom plates, there were patches of flaky spots and signs of rust at some spots on the floating roof support

Recommendations

- It is recommended that cleaning be done more regularly to eliminate excessive build-up of sludge

PPE & Other Safety Items Used:

- Respirators
- Overall Uniforms
- Reflective Vests
- Safety Gloves
- Safety Goggles
- Gas Detectors
- Hard hat (Helmet)
- Wellington Boots
- Safety Boots
- Explosion Proof Lamps
- Caution tapes and cones
- Safety signage

Equipment Deployed:

- Plastic Buckets
- Scrubbing brushes
- Mops
- Squeegees
- Plastic Shovel
- Intermediate Bulk Containers
- Tools Box
- Xp3 Multi-Purpose Degreaser
- Tarpaulin

Safety Statistics

- Injuries Recorded - Zero (0)
- Fatalities Recorded - Zero (0)
- Near Misses - Zero (0)
- Spillage of Toxic Material to environment - Zero (0)

Prepared by:

Nana K.A. Fosu-Gyeabour

HSE Officer – Bidi Group