

Etebu, Pius M SPDC-PTP/O/NS

From: Ajala, Olufemi O SPDC-FUP/CGP
Sent: Friday, October 14, 2022 9:02 AM
To: Etebu, Pius M SPDC-PTP/O/NS
Cc: Frank, Faustina N SPDC-PTP/O/NS; Ezeocha, Chisomaga I SPDC-PTP/O/NS; Onwah, Nimi O SPDC-PTC/U/GL; Garus-Kogi, Oghenedoro F SPDC-UPC/G/T
Subject: RE: Success Story of the EODR Tank Calibration in BOGT

“Delivers calibration cost savings of over \$400k/tank , totaling a cost savings of \$3.2Mln from the 8 tanks” Supported.

From: Ajala, Olufemi O SPDC-FUP/CGP
Sent: Wednesday, October 12, 2022 12:05 PM
To: Etebu, Pius M SPDC-PTP/O/NS <Pius.Etebu@shell.com>
Cc: Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>; Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>; Onwah, Nimi O SPDC-PTC/U/GL <nimi.onwah@shell.com>; Garus-Kogi, Oghenedoro F SPDC-UPC/G/T <O.F.Garus-Kogi@shell.com>
Subject: RE: Success Story of the EODR Tank Calibration in BOGT

Hi Pius,
I might be reading it wrongly, but my views below;
Paying fines is not our normal business activity, it could even be argued that NOT paying fines is our normal business activity, not paying the \$5m fine might not cut it as cost avoidance (we can discuss).
There is no attachment for the calculation of the “calibration cost savings”. Please send and lets discuss.
Best regards
Femi.

From: Etebu, Pius M SPDC-PTP/O/NS <Pius.Etebu@shell.com>
Sent: Wednesday, October 12, 2022 9:59 AM
To: Ajala, Olufemi O SPDC-FUP/CGP <olufemi.ajala@shell.com>
Cc: Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>; Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>; Onwah, Nimi O SPDC-PTC/U/GL <nimi.onwah@shell.com>; Garus-Kogi, Oghenedoro F SPDC-UPC/G/T <O.F.Garus-Kogi@shell.com>
Subject: FW: Success Story of the EODR Tank Calibration in BOGT

Hello Femi,

Please find below mail trail on the cost avoidance of EODR Tank Calibration in BOGT initiative in FIT-4.

Your support is required to progress this initiative and bank in FIT-4.

Thank you for your usual support.

Regards

Pius Miebi Etebu
Lead Planning Engineer

DomGas, FYIP & Terminals Projects
IA, Walkway B3-B4, 2nd Floor.
Port Harcourt.
Ext: 20472.

From: Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>
Sent: Wednesday, September 28, 2022 3:44 PM
To: Etebu, Pius M SPDC-PTP/O/NS <Pius.Etebu@shell.com>
Subject: FW: Success Story of the EODR Tank Calibration in BOGT

From: Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>
Sent: Monday, September 26, 2022 10:31 AM
To: Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>
Subject: FW: Success Story of the EODR Tank Calibration in BOGT

FYI

From: Garus-Kogi, Oghenedoro F SPDC-UPC/G/T <O.F.Garus-Kogi@shell.com>
Sent: Monday, April 25, 2022 1:35 PM
To: Daddie, Augustus SPDC-PTP/O/NS <Augustus.Daddie@shell.com>
Cc: Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>; Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>
Subject: RE: Success Story of the EODR Tank Calibration in BOGT

Hello Augustus,
The details in the trail from BOGT folks are sufficient to create the opportunity in Fit4 and progress to L4 for banking.
You can also refer to the initiative from 2021 that progressed to L5 without banking.

Online Tank Calibration Services Opportunity

https://dln.g.lightning.force.com/lightning/r/CI_Initiative_c/a1O4W00000EaOmpUAF/view

Warm regards,
Doro

From: Daddie, Augustus SPDC-PTP/O/NS <Augustus.Daddie@shell.com>
Sent: Monday, April 25, 2022 1:14 PM
To: Onyeagba, Charles M SPDC-PTP/O/NS <charles.onyeagba@shell.com>
Cc: Garus-Kogi, Oghenedoro F SPDC-UPC/G/T <O.F.Garus-Kogi@shell.com>; Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>; Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>
Subject: RE: Success Story of the EODR Tank Calibration in BOGT

Good afternoon sir,

Please send me details for closeout.

Regards,

Augustus

From: Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>
Sent: Monday, April 25, 2022 10:11 AM
To: Daddie, Augustus SPDC-PTP/O/NS <Augustus.Daddie@shell.com>; Onyeagba, Charles M SPDC-PTP/O/NS <charles.onyeagba@shell.com>
Cc: Garus-Kogi, Oghenedoro F SPDC-UPC/G/T <O.F.Garus-Kogi@shell.com>; Frank, Faustina N SPDC-PTP/O/NS <faustina.frank@shell.com>
Subject: FW: Success Story of the EODR Tank Calibration in BOGT
Importance: High

Augustus,
Please work with Charles to bank **this F\$8.3mln cost avoidance.**

Thanks and stay blessed,
Chisom.

From: Ezeocha, Chisomaga I SPDC-PTP/O/NS
Sent: Sunday, April 24, 2022 1:26 PM
To: Ubuane, Chris O SPDC-PTP/O/N <Chris.O.Ubuane@shell.com>
Cc: Onyeagba, Charles M SPDC-PTP/O/NS <charles.onyeagba@shell.com>
Subject: FW: Success Story of the EODR Tank Calibration in BOGT
Importance: High

Sir,
FYI.....
Charles brought in the EODR idea from his external network last year.

We saw the potential and put same on the with Asset as a possible solution to the massive compliance gap/challenge w.r.t statutory calibration of tanks at BOGT. We pushed it through with the Asset LT and supported E2E implementation, and we are here today.

3 tanks are scheduled to be calibrated at FOT this quarter using same technology and leveraging lessons from BOGT.

Stay blessed,
Chisom.

From: Uchejim, Ezemmor E SPDC-UPC/G/UCT <Ezemmor.Uchejim@shell.com>
Sent: Sunday, April 24, 2022 8:59 AM
To: Nnajifor, Osita G SPDC-UPC/G/UC <Osita.Nnajifor@shell.com>
Cc: Brossa, Isaac SPDC-UPC/G/UC <isaac.brossa@shell.com>; Ezeocha, Chisomaga I SPDC-PTP/O/NS <Chisomaga.Ezeocha@shell.com>; Bob-Manuel, Iroloye D SPDC-UPC/G/UCT <iroloye.bob-manuel@shell.com>; Yisa, Tairu M SPDC-UPC/G/UCT <Tairu.Yisa@shell.com>; Opel, Joel O SPDC-UPC/G/UCT <Joel.Opel@shell.com>; Amaewhule, Ikechi RA SPDC-UPC/G/UCT <Ikechi.Amaewhule@shell.com>; Onyeagba, Charles M SPDC-PTP/O/NS <charles.onyeagba@shell.com>; Okoro, Bernard N SPDC-UPC/G/UCT <bernard.okoro@shell.com>; Akpala, Ude E SPDC-UPC/G/UCI <ude.akpala@shell.com>; Yemi-Shodimu, Tolu T SPDC-UPC/G/NGG <tolu.yemi-shodimu@shell.com>; Muhammad, Shamsuddeen D SPDC-UPC/G/UCT <Shamsuddeen.Muhammad@shell.com>
Subject: Success Story of the EODR Tank Calibration in BOGT

Dear Osita,
Good day sir. Please find our EODR deployment success story in BOGT:

Background

Bonny Oil and Gas Terminal has a total of 20 floating roof tanks for crude oil storage with 12 currently in operation. According to regulatory requirements, all crude oil storage tanks are to be mandatorily calibrated after five (5) years of its operational life.

With 7 out of the 12 operational tanks in BOGT already overdue for calibration, NUPRC issued a Potential Incidence of Non-Conformity to SPDC in October 2020 and gave a short timeline for the Business to achieve full compliance. Potential exposure for non-compliance is over 5 million USD plus other penalties that may be imposed by the Regulator. Traditional method of calibration involves tank cleaning and man-entry, which would require a lot time, huge cost outlay, plus the HSE risks associated with tank entry. With this method, SPDC would not be able to meet the strict timeline given by NUPRC to achieve compliance. Putting so many tanks out of service for several months within the short timeframe would also lead to a drastic reduction of terminal storage capacity and increased vulnerability of SPDC East and Third-Party Injector crude oil production.

Solution Delivered

Following a collaborative engagement with NUPRC, and with Terminal Engineering powerful support, the team carried out extensive research and came up with an alternative solution called Electro-Optical Distance Ranging (EODR) Method to perform the calibration while the tanks are in service. The team went further to engage and secure the necessary Regulatory and other approvals, secured required budget and contract, and conducted a pilot test-which culminated in a successful calibration of two (2) crude storage tanks. Based on the outcome of the pilot test, the team secured regulator's support and approval to go ahead and calibrate six (6) additional crude storage tanks.

Consequently, the team has successfully calibrated eight (8) Crude Oil Storage Tanks in BOGT to the satisfaction and approval of the Regulatory Authorities.

This breakthrough achievement has paved way for further deployment of this technology for future calibration of Crude Oil Storage Tanks across the Business.

Benefits

- i. Delivers calibration cost savings of over **\$400k/tank** , totaling a cost savings of **\$3.2Mln** from the 8 tanks,
- ii. Prevents potential fines of over **\$5Mln** (plus other penalties that may be imposed by the Regulator) for non-compliance
- iii. Quick turnaround time (circa 3days/tank vs 3months/tank for traditional method)
- iv. Eliminates the need for tank cleaning before calibration
- v. Eliminates the deferment risks to SPDC East and Third-Party Injector crude oil production
- vi. Eliminates the HSE exposure associated with tank entry

Team members

1. Nnajiofor Osita
2. Brossa Isaac
3. Bob-Manual Iroloye
4. Tairu Yisa
5. Opel Joel
6. Amaewhule Ikechi
7. Okoro Bernard
8. Uchejim Ezemmor
9. Muhammad Shamsuddeen
10. Ezeocha Chisomaga
11. Onyeagba Charles
12. Onwa Nimi
13. Yemi-Shodimu Tolu
14. Ude Akpala

15. Amechi Obinna

Kind Regards,

Uchejim E.E.

SPDC-UPO/G/PET

Field Supervisor

Process Automation, Control and Optimisation

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