

Formstack Submission For: [CRIN Matchmaking support](#)

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Are you a member of CRIN?: Yes

1. What type of organization are you looking to be matched with?: Oil and gas producer

2. Please provide a brief description of your organization:

Vitas Consulting Services Inc. is a Calgary-based engineering and consulting firm that is developing computational fluid dynamics (CFD) software solutions for various problems in oil and gas industry. Main focus is on modelling of fluid behavior in Oil and Gas (including LNG) storage tanks and pipelines.

3. Please provide a brief description of your proposed project:

Crude oil sludge is a recurrent problem leading to corrosive effects, alteration in oil quality and a reduction in oil storing capacity. Oil storage tanks can accumulate a considerable amount of sludge deposition after continuous operation, causing a seriously negative impact on both the storage capacity and the safe operation of the oil tank. VCS (in collaboration with SAIT and ST Global Resources) is developing a software application that will model and calculate the sludge deposition in oil tanks. The project objective is to develop a reliable prediction method and compare the results with data measured from the physical experiments in order to establish their application efficacy. The new application will be used directly by on-site engineers to anticipate real sludge height before measuring the oil level inside the tank. VCS will also propose a method to

reduce sludge deposition by inducing a thermal convection into the tank. VCS is looking for an oil and gas producer that would like to partner up in this project. Specifically, they would provide their tank to try out the VCS predictive tool for estimating oil sludge thickness and distribution profile in it.

5. Which focus area(s) are you looking to address or collaborate on?:

Environmental monitoring
Operational excellence and efficiency

6. Briefly describe what type of support you need from a producer partner (e.g. field test site, technical expertise, resources etc.):

VCS is looking to partner up with an Oil Gas producer that can provide a field test site (oil tank) for estimating sludge layer thickness in it by utilizing VCS predictive software tool

7. Briefly describe the skills and services you are able to offer as a partner/collaborator :

VCS (in collaboration with SAIT and ST Global Resources) is developing a software application that will model and calculate the sludge deposition in oil tanks. The project objective is to develop a reliable prediction method and compare the results with data measured from the physical experiments in order to establish their application efficacy. The new application will be used directly by on-site engineers to anticipate real sludge height before measuring the oil level inside the tank. VCS will also propose a method to reduce sludge deposition by inducing a thermal convection into the tank .

8. What test or research is required to most cost effectively reduce technical or economic uncertainty and/or prove important features/benefits of your technology?:

Sediment deposition on an oil tank bottom will need to be physically measured and the results will be compared to the estimated data.

9. Have you already connected with, pitched to, or been introduced to

No

any oil land gas producer partners regarding this project?:

10. Is there any additional information you would like to share to assist us in matchmaking?:

This pro-active VCS tank management strategy, with the VCS predictive sludge deposition tool would be beneficial for the tank operators to reduce the amount of oil sludge and prevent accumulation over time. Additionally, in the business of tank cleaning, the implementation of high-efficiency thermal convection cleaning methods, focused on reducing tank downtime, will benefit the operating crew significantly. The VCS application solution will assist the health and safety of the tank sludge operators by minimizing permit-required confined space work, and by maximizing the hydrocarbons recovery

By registering my interest, I accept that the information submitted in this form will be used by the Clean Resource Innovation Network, and MaRS for the purpose of the CRIN Digital Oil and Gas Technology Competition, including the posting a project summary on the CRIN website for producers to view.:

Yes, I am interested in matchmaking support