

TECHNICAL REVIEWER'S RATING

G-013-D

Innovative Practices for Managing Oilfield Wastes in the Williston Basin of North Dakota

ALL Consulting and PetroComp

Principal Investigator: J. Daniel Arthur

Request for \$100,000; Total Project Costs \$250,000

Rating Category	Weighting Factor	Technical Reviewer 13D-07 Rating	Average Weighted Score
Objective	9	3	27.0
Availability	9	5	45.0
Methodology	7	5	35.0
Contribution	7	3	21.0
Awareness	5	3	15.0
Background	5	5	25.0
Project Management	2	5	10.0
Equipment Purchase	2	5	10.0
Facilities	2	5	10.0
Budget	2	4	8.0
Average Weighted Score		206	206.0
Maximum Weighted Score			250

OVERALL RECOMMENDATION

FUND

X

FUNDING TO BE CONSIDERED

DO NOT FUND

1. The objectives or goals of the proposed project with respect to clarity and consistency with North Dakota Industrial Commission/Oil and Gas Research Council goals are: 1 – very unclear; 2 – unclear; 3 – clear; 4 – very clear; or 5 – exceptionally clear.

Reviewer 13D-07 (Rating: 3)

Goals and objectives are well defined in the project description and are consistent with the OGRC goal of promoting projects that will have a positive economic and environmental impact on oil and gas exploration, development and production in North Dakota. Publication of a waste management “Tool box” defining waste classification, management options and determining practical clean-up levels for the various technologies may aid in development of new or improved practices to help reduce the footprint of oil and gas activities.

2. With the approach suggested and time and budget available, the objectives are: 1 – not achievable; 2 – possibly achievable; 3 – likely achievable; 4 – most likely achievable; or 5 – certainly achievable.

Reviewer 13D-07 (Rating: 5)

The tasks, timetable and budget estimate detailed in the proposal, and the credentials and experience of the investigators indicate the objectives and goals are achievable.

3. The quality of the methodology displayed in the proposal is: 1 – well below average; 2 – below average; 3 – average; 4 – above average; or 5 – well above average.

Reviewer 13D-07 (Rating: 5)

The New Project Budget Request Estimate contained in the proposal describes a clear and logical process for achieving the project goals.

4. The scientific and/or technical contribution of the proposed work to specifically address North Dakota Industrial Commission/Oil and Gas Research Council goals will likely be: 1 – extremely small; 2 – small; 3 – significant; 4 – very significant; or 5 – extremely significant.

Reviewer 13D-07 (Rating: 3)

The project proposes to sample actual field derived wastes in North Dakota for classification purposes, although it was not clear what analysis will be done on the samples. Proprietary experience gained by PetroComp on achievable clean-up levels, as well as a literature review of other published data and state regulatory levels may contribute to the OGRC goal of reducing the footprint and ultimately promoting efficient, economic and environmentally sound oil and gas exploration.

5. The principal investigator’s awareness of current research activity and published literature as evidenced by literature referenced and its interpretation and by the reference to unpublished research related to the proposal is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

Reviewer 13D-07 (Rating: 3)

Specific reference to literature and interpretation is somewhat limited in the proposal, but adequate for purposes of the proposal. Reference is made to the Resource Conservation and Recovery Act and unpublished research and results from PetroComp. General reference is made to published data from other sites in North America regulatory limits for other oil and gas producing states. However, the wide experience in oil and gas exploration and production waste

issues included in the background information of the investigators would indicate awareness of current research activity.

6. The background of the investigator(s) as related to the proposed work is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

Reviewer 13D-07 (Rating: 5)

The investigators have extensive oil and gas industry experience and waste management issues.

7. The project management plan, including a well-defined milestone chart, schedule, financial plan, and plan for communications among the investigators and subcontractors, if any, is: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – very good; or 5 – exceptionally good.

Reviewer 13D-07 (Rating: 5)

The project management, task duration and budget are defined clearly in the proposal.

8. The proposed purchase of equipment is: 1 – extremely poorly justified; 2 – poorly justified; 3 – justified; 4 – well justified; or 5 – extremely well justified. (Circle 5 if no equipment is to be purchased.)

Reviewer 13D-07 (Rating: 5)

No equipment is to be purchased.

9. The facilities and equipment available and to be purchased for the proposed research are: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – notably good; or 5 – exceptionally good.

Reviewer 13D-07 (Rating: 5)

The project does not require special facilities or equipment. The facilities and resources available to the investigators appear to be more than adequate to accomplish the objectives.

10. The proposed budget “value”¹ relative to the outlined work and the financial commitment from other sources is of: 1 – very low value; 2 – low value; 3 – average value; 4 – high value; or 5 – very high value. (See below)

Reviewer 13D-07 (Rating: 4)

The project may have economic as well as environmental and educational benefits to oil and gas operators, waste management facilities, regulators and the public. Project funding is approximately 60% industry/40% OGRC.

Section C. Overall Comments and Recommendations:

Please comment in a general way about the merits and flaws of the proposed project and make a recommendation whether or not to fund.

Reviewer 13D-07 (FUND)

The project’s goals and objectives are worthy and achievable, meet stated goals of the OGRC, and may aid in efficient, economic and environmentally sound development of oil and gas resources. The capabilities of the investigators are adequate to the task and the cost benefit ratio is favorable to the State of North Dakota.

A review of the experience and results from other oilfield waste composting and disposal facilities currently operating in ND would be an enhancement of the project.

¹ “Value” – The value of the projected work and technical outcome for the budgeted amount of the project, based on your estimate of what the work might cost in research settings with which you are familiar.

Financial commitment from other sources – A minimum of 50% of the total project must come from other sources to meet the program guidelines. Support less than 50% from Industrial Commission sources should be evaluated as favorable to the application.