



Request for Proposals (RFP)

TEMPSC and Life Raft Towing and Recovery – Phase I

January 4th, 2013

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1 Definitions and Project Introduction

1.1 Definitions

For the purposes of this RFP, the following definitions are provided:

“Addendum” means the document issued by Petroleum Research to all Service Providers during the open period of the RFP, containing additional information or corrections, made by Petroleum Research, to the RFP already issued.

“Budget” shall mean the budget for the Project as set forth in the Proposal.

“Contract” means the legal written agreement to be negotiated and entered into between the Service Provider and Petroleum Research to provide the research and development services and deliverables as stated in the Scope of Work under any specified negotiated conditions.

“Deliverable(s)” mean the deliverables as described in Section 4.1 of this RFP.

“JIP” means a Joint Industry Project.

“May” shall indicate something that is not mandatory but permissible.

“Project” means TEMPSC and Life Raft Towing and Recovery, as more particularly described in the Scope of Work.

“Proposal(s)” means the document(s) submitted by the Service Providers in response to the RFP.

“Request for Proposal (RFP)” means the documents issued to the Service Providers by Petroleum Research in connection with the preparation of the Proposal, including all Addendums.

“Scope of Work (SOW)” means a formal written description that captures and defines the work activities, deliverables and timeline a Service Provider will execute against in performance of the specified work for Petroleum Research, as more particularly described in Section 3 of this RFP.

“Service Provider(s)” means any person(s), corporation(s), partnership(s), joint venture(s), company(s) or other organization(s) which may submit a Proposal to Petroleum Research in response to the RFP.

“Shall/Must” shall indicate a mandatory requirement. Failure to meet a mandatory requirement may result in the rejection of a Proposal.

“Should” shall indicate something that is recommended but not mandatory. If the Service Provider fails to provide recommended information, Petroleum Research may, at its sole option, ask the Service Provider to provide the information or evaluate the Proposal without the information.

“Steering Committee (SC)” means a committee composed of representatives as identified to the Service Provider by Petroleum Research to address project execution and governance decisions.

“Successful Service Provider” means the Service Provider whose Proposal has been accepted by Petroleum Research and with whom Contract negotiations will be undertaken.

1.2 Introduction and Background

Petroleum Research Newfoundland & Labrador (Petroleum Research) is a federally-incorporated, not-for-profit corporation that identifies opportunities, develops proposals, funds, and manages the execution of research and technology development projects on behalf of the Newfoundland and Labrador offshore oil and gas industry. Research and technology development projects funded must be strategically and commercially relevant, create value for members, be compliant with Canada-Newfoundland and Labrador Offshore Petroleum Board (“C-NLOPB”) research and development (“R&D”) guidelines, enhance local R&D capacity and capability in strategic research areas and enable broader application of technologies developed through Petroleum Research.

It is required that all work and expenditures will take place in Newfoundland and Labrador. The Successful Service Provider (and any consultant(s)/sub-contractor(s)/vendor(s) where used) will be required to have a base of operations in Newfoundland and Labrador from which the Scope of Work (SOW) will be executed and where the Contract will be administered.

The rescue of personnel to a place of safety and the recovery of evacuation lifecraft are critical aspects of offshore Escape, Evacuation and Rescue processes. Transfers of personnel from Totally Enclosed Motor Propelled Survival Craft (“TEMPSC”) or life rafts to fast rescue craft (“FRC”) or support vessels can be carried out safely in calm conditions. Harsh weather conditions in the North Atlantic, however, can make transfer operations more difficult due to the vessels’ motions in response to wind and waves. In certain conditions, it may be prudent for lifecraft to: make way under tow and/or in the lee of a support vessel, wait until weather conditions permit personnel to be transferred to a rescue vessel, or be wholly recovered to a rescue vessel. The aim of the project is to determine whether offshore evacuation safety risks can be reduced by developing new and/or improving existing methods and processes associated with the towing, sheltering and wholesale recovery of TEMPSC lifeboats and life rafts.

1.3 Objective of the Request for Proposal

Petroleum Research, by means of this RFP, is seeking Proposals from qualified Service Providers to form the basis for the negotiation of a Contract to conduct project work as detailed in the SOW. The objectives of this project are to:

- Determine whether offshore evacuation safety risks can be reduced by developing and/or improving methods, processes and technologies associated with the towing, sheltering and wholesale recovery of TEMPSC lifeboats and life rafts; and,
- Advance the state of knowledge of the operating performance capabilities and limitations of TEMPSCs and life rafts under different environmental and rescue/recovery scenarios.

2 Administrative

2.1 Technical and Contractual Contact

Any questions regarding this RFP should be submitted by e-mail to the contact stated below with the project name written in the email subject line.

Petroleum Research Contact:

Name	Susan Hunt
Phone	(709) 738-7904
E-mail	susan.hunt@petroleumresearch.ca

2.2 General Instruction for Preparing Proposal

Service Provider shall prepare and submit the Proposal according to the instructions of this RFP.

Service Provider shall not be reimbursed for any costs, expenses or charges which the Service Provider incurs or is required to expend in its preparation of a Proposal, including travel and attendance at any clarification or pre-award meetings. Petroleum Research shall not be under any liability whatsoever for or in respect of payment of any said costs, expenses or charges.

This Request for Proposals is not a tender call. The lowest cost Proposal will not necessarily be accepted. Petroleum Research reserves the right to accept the Proposal which it deems most advantageous to accomplish the SOW, and also reserves the right to reject any or all Proposals, in each case without notice, and to not complete the Project.

Petroleum Research reserves the right, at its sole discretion, to negotiate with any Service Provider it believes has the most advantageous Proposal or with any other Service Provider or Service Providers concurrently. In no event will Petroleum Research be required to offer any modified terms to any Service Provider prior to entering into a Contract with the Successful Service Provider. Notwithstanding the evaluation contained herein, Petroleum Research reserves the right to evaluate Proposals, negotiate the Contract and/or to execute the Project, in whatever fashion is, at Petroleum Research's sole discretion, most advantageous to Petroleum Research.

2.3 Proposal Requirements

2.3.1 Location and Regulatory Requirements

- The work must be compliant with C-NLOPB R&D guidelines; and,
- The Service Provider must carry out all work in Newfoundland and Labrador.

2.3.2 Proposal Submission Requirements

The Proposal must demonstrate how the Service Provider will fulfill the SOW and meet all proposal requirements as described herein. Petroleum Research will evaluate the Proposal based on the guidance provided in Section 5, herein. The Proposal shall include:

- The official registered name and contact information (title, telephone number, fax numbers and e-mail address) of the Service Provider and other parties who will be involved in the Project;

- An Executive Summary presenting a high-level synopsis of the Service Provider’s response to the RFP. The summary should be a brief overview of the proposal and should identify the main features and benefits of the proposed efforts to be undertaken;
- A Preliminary Project Execution Plan, including:
 - Description of the technical approach that will be taken to complete the SOW;
 - A description of the project management approach; including third party subcontractors that will be used, the specific tasks for which they will be responsible and a description of how the Project will proceed from beginning to end;
 - A Project Schedule showing the duration of major tasks, timing of milestones and completion date of project deliverables;
 - A Project Budget that provides a detailed breakdown of all estimated costs for the work proposed and an overall project cost. The Project Budget breakdown shall:
 - Be in Canadian dollars;
 - Include all costs associated with project management, administration, professional services, personnel, materials, and travel, incidental costs and contingency costs; and,
 - Identify hours worked and cost per hour for all resources, including contractors, subcontractors or technical experts;
- Listing and description of the identified risks and constraints of the project;
- Listing and description of any assumptions; and,
- A listing of all key project team personnel, including a description of the roles and responsibilities of each team member, demonstrating their ability to complete the project and the qualifications of the key management and technical staff (e.g. resumes, references, qualifications and experiences).

2.4 Submission Instruction and Deadline

The Proposal should be signed on the Service Provider’s behalf by a duly authorized signing officer of the Service Provider and submitted in a manner consistent with the requirements of this RFP. One (1) electronic copy of the Proposal should be submitted as a single package by email in PDF format and received by Petroleum Research on or before the closing date; **Friday, February 8th, 2013, 2:00PM (Newfoundland Time).**

Proposals are to be identified in the subject line as follows:

Identification	Proposal: TEMPSC and Life Raft Towing and Recovery- Phase 1 Attention: Susan Hunt
E-mail	susan.hunt@petroleumresearch.ca

2.5 Discrepancies, Omissions or Clarifications

The Service Provider is required to study the RFP and to obtain all information they may require to enable submission of the Proposal. In responding to the RFP, the Service Provider shall be deemed to have

satisfied itself as to the correctness and sufficiency of its Proposal as submitted. No Proposal shall be conditional upon the availability of labor, staff, equipment, materials, permits, authorizations or anything whatsoever which the Service Provider is required to provide.

Should Service Provider find discrepancies in or omissions from the RFP, or have any doubts as to the meaning or intent of any part thereof, Service Provider shall notify Petroleum Research by e-mail to the contact as specified in Section 2.1, herein. Questions and comments that are deemed to materially affect the RFP SOW, time line, etc. or that may be of interest to all prospective Service Providers will be handled as an Addendum while the RFP is open and will be made available to all Service Providers on Petroleum Research's website and by email to the same persons as who were emailed the initial RFP information if the RFP was initially disseminated by email.

2.6 Rejection of Proposal

Any Proposal or part thereof which is incomplete, conditional or obscure, contains additions not called for, contains irregularities of any kind or does not fulfill the mandatory requirements listed in this RFP or does not offer sufficient information and opportunities to complete the SOW may be rejected by Petroleum Research in its sole discretion.

2.7 Preparation and Submission of Proposal

In order to address the needs of this RFP, Service Providers may work cooperatively. Service Provider team arrangements may be desirable to enable the parties involved to complement each other's capabilities and expertise, while offering the best combination of performance, cost and deliverables to be provided under the RFP. Petroleum Research will recognize the integrity and validity of Service Provider team arrangements provided that:

- The arrangements are identified and relationships are fully disclosed; and,
- A prime Service Provider is designated that will be fully responsible for all Contract performance and requirements.

If a partnership or joint venture submits a Proposal, a one member of the partnership or joint venture shall be identified in the Proposal as the lead Service Provider for the project and shall be responsible for all duties and obligations assumed by the Service Providers under the Proposal and Contract, if negotiated and entered into.

2.8 Contract

Any Contract resulting from this RFP shall be governed by the laws of the Province of Newfoundland and Labrador and shall be issued in the legal entity name of the Successful Service Provider(s) exactly as that Service Provider's legal name is stated in the response document.

Any provision in the Proposal may be included in the Contract as a direct provision thereof. Petroleum Research has no liability unless and until a Contract is negotiated and signed. Petroleum Research does not guarantee or warrant that it and the Successful Service Provider will successfully negotiate and execute a Contract. Petroleum Research will not be responsible for any of the Successful Service Provider's legal costs associated with Contract development, negotiation or execution.

The Contract will provide for the following minimum terms and condition:

- Petroleum Research’s standard payment terms which are net 30 days from receipt of the invoice. All applicable taxes must be shown separately on all invoices. All invoices will be subject to a 10% holdback, which will be released upon satisfactory completion of the Deliverables;
- The Contract shall be reimbursement based and all progress payments requested by the Successful Service Provider must be supported by sufficient detail regarding the work completed, resources used, costs incurred, and hours worked and must be approved by Petroleum Research before payment;
- Throughout the Project period the Successful Service Provider will be accountable to Petroleum Research for all deliverables;
- It will be the responsibility of the Successful Service Provider to sub-contract all consultant(s) that will be used for the duration of the project;
- The Successful Service Provider and consultant(s) may be expected to meet periodically with Petroleum Research and the SC to review the Project progress; and,
- No payment will be made for the cost of work incurred to remedy errors or omissions for which the Successful Service Provider is responsible.

In the event of a decision by Petroleum Research to terminate the Project at any point after entering into a Contract with the Successful Service Provider, liability to the Successful Service Provider will extend only to those costs actually and properly incurred up to the time of such termination.

2.8.1 Additional Future Work

Petroleum Research may amend or replace any Contract that may emerge from this RFP to complete future work related to this Project. Petroleum Research may also issue a subsequent Expression of Interest (EOI) and/or RFP to address any future work related to this Project or subject matter area, without awarding such work to the Successful Service Provider. The decision to amend or replace an existing Contract and/or to issue a subsequent EOI and/or RFP is at the sole discretion of Petroleum Research.

3 Scope of Work

3.1 Scope of Work Description

The project objectives will be accomplished by evaluating the performance and feasibility of three concepts for two types of lifecraft: TEMPSC lifeboats and life rafts. The concepts to be investigated are: the safe harbor concept, the deployable stern ramp concept and the modified alongside crane concept. These concepts will be evaluated when employed in the following rescue/recovery methods:

1. Open-ocean towing of TEMPSC via ship;
2. Open-ocean towing of life raft via ship;
3. Open-ocean towing of life raft via FRC (this method will not be investigated for TEMPSCs);

4. Sheltered towing of TEMPSC via the use of the 'safe harbor' concept;
5. Sheltered towing of life raft via the use of the 'safe harbor' concept;
6. Wholesale recovery of TEMPSC via the use of the 'deployable stern ramp' concept;
7. Wholesale recovery of life raft via the use of the 'deployable stern ramp' concept;
8. Wholesale recovery of TEMPSC via the use of the 'deployable stern ramp' concept in conjunction with the 'safe harbor' concept;
9. Wholesale recovery of life raft via the use of the 'deployable stern ramp' concept in conjunction with the 'safe harbor' concept; and,
10. Wholesale recovery of TEMPSC to a support vessel via the 'modified alongside crane' concept (this method will not be investigated for life rafts).

Phase I of this project aims to advance one or more of these concepts/methods to a validated proof of concept by completing initial design development and performance validation, as well as to provide recommendations for advancement of one or more concepts/methods to full scale prototype. The Preliminary Project Execution Plan should discretely address, schedule and budget for each of the ten concepts/methods as proposed in this SOW. The Proposal should be prepared in such a manner that will enable concepts/methods which are not selected for advancement at major project milestones to be easily removed from the project plan, schedule and budget. Cost savings may result from complementary/common work tasks. Any proposed streamlining should be identified and justified in the Proposal.

The assessment of the concepts as employed in the proposed methods will involve, but will not be limited to the following tasks:

- Review previous research and testing relevant to the proposed work;
- Based on the current state of knowledge, perform a preliminary analysis of the potential of each concept/method to improve performance and reduce operational risks that considers the practical challenges of implementation. Determine if there is value in performing a detailed feasibility assessment of all the identified concepts/methods. In consultation with the project steering committee (SC), finalize the list of concepts/methods to be investigated;
- Determine the most efficient and cost-effective approach to develop each concept and evaluate the feasibility of each concept/method (scale experiments, desktop modeling, etc.);
- Define the criteria that will be used to validate the functional performance of each concept/method (i.e. reduction in lifecraft motion, reduction in sea state, maximum safe towing/lifting speed, time to complete operation, etc.);
- Define initial performance scenarios:
 - Establish the range of environmental and operational conditions to be included in the evaluation of each concept/method; and,
 - Specify which rescue/recovery operations are to be included in the evaluation of each rescue/recovery method;
- Complete modeling and/or development of design concepts and develop a testing plan;
- Evaluate the performance of each concept/method:
 - Determine the design parameters that affect and limit concept functional performance;

- Determine which environmental and operational aspects of the established performance scenarios have the greatest impact on functional performance; and,
- Specify the performance envelope of the concept in terms of the environmental and operational limits of each rescue/recovery method;
- Specify how the concept's performance limits or extends the operating envelope of the rescue/recovery method relative to other scenarios investigated as part of this work;
- In cases where practical lessons have been learned through project activities, provide recommendations to inform operating procedures and competence requirements.
- Determine whether, and if so to what extent, each concept/method potentially reduces safety risks as compared to existing alternatives currently in use. Some ways by which safety risks could be reduced include, but are not limited to:
 - Extended operational utility;
 - Provision of additional rescue/recovery alternatives;
 - Expedited personnel rescue or lifecraft recovery;
 - Improved evacuee living conditions (reduction in hazards, illness or injury); and,
 - Reduction of environmental effects in the vicinity of the lifecraft;
- Based on work outcomes and in consultation with the project SC, select concepts/method that have demonstrated high potential to reduce safety risks;
- For each concept/method that was determined to have high potential to reduce safety risks:
 - Identify technology development costs and lifeboat/vessel/procedural modifications required for full scale implementation;
 - Complete a hazards identification assessment and risk mitigation plan for full-scale concept development and testing;
 - Identify potential commercialization paths;
 - Complete a cost/risk-benefit analysis to assess the overall potential of each concept/method;
- In consultation with the Project SC, finalize the concepts/methods for advancement to Phase II; and,
- Develop a Phase II execution plan for selected concepts/methods.

3.2 Overview of Concepts and Methods

Open-ocean Towing

Open-ocean towing of lifecraft is a potential means to help control the position of a lifecraft and may be a useful operation in some scenarios, including: re-location into a sheltered area, preventing the lifecraft from drifting into danger or for maneuvering it into a better position for recovery. Important parameters associated with this operation include: tow line loads, connection loads, snap loads, tow thrust, tow line configuration, vessel speed and craft position with respect to the vessel. The limits of open-ocean towing operations for TEMPSC and life rafts are to be investigated via a range of performance scenarios.

Safe Harbor Concept

The safe harbor concept is envisioned to be a portable boom-like system that is attached to and extends from the aft of a vessel, encircling a lifecraft in tow. The booms are intended to deflect and suppress waves that induce lifecraft roll and pitch motions. The safe harbor concept is envisioned to improve sea conditions within the immediate vicinity of the lifecraft. Its ability to provide local sheltering will be investigated.

Deployable Stern Ramp Concept

In some scenarios, it may be preferable to recover the entire occupied lifecraft to a support vessel versus performing intermediate transfer and transport operations. The stern ramp concept is envisioned to be deployable from the stern of a vessel, and would support/guide a lifecraft that is in tow during its transition from the water to the back deck of the vessel. The performance of the deployable stern ramp concept for lifecraft recovery is to be investigated both with and without the presence of the “safe harbor” concept.

Alongside Crane Concept

Using a crane to lift a TEMPSC from alongside the support vessel is a potential alternative for lifecraft recovery operations. In practice, weather limitations in recovery correspond to limitations imposed by the winch and davit system. Winching capabilities (including speed of lift, constant tension, and maximum tension) of the lifting appliance, the accelerations and motions of the lifeboat while alongside and during the lifting procedure, and the tension in the cable(s) are among factors to be investigated.

3.3 Overview of Potential Follow-on Activities

If Phase I work shows that one or more of the concepts have the potential to reduce risks associated with offshore evacuation by lifecraft, the concept(s) may be further advanced through additional follow-on work. Any follow-on work will be preceded by a Phase I decision gate whereby the project SC will review Phase I recommendations and finalize selection of concepts for advancement. Follow-on work would potentially include:

- Additional concept development and model scale validation (if required);
- Engineering and fabrication of full-scale prototypes and other equipment required for testing;
- Development of operating procedures and competencies for full scale trials; and,
- Field trials and field trial evaluation.

4 Deliverables and Reporting

4.1 Project Deliverables

Project deliverables are defined as follows:

- Detailed Project Execution Plan;
- Monthly status reports;
- Preliminary concept design review, including:
 - Preliminary assessment of the potential of each concept/method to improve performance and reduce operational risks;

- Identification of potential challenges, including potential lifeboat/vessel modifications, needed to realize full scale implementation; and,
- Recommendation of concepts to be further investigated as part of Phase I work;
- Concept performance validation plan and concept/method testing plan;
- Concept validation and concept/method testing results report, including:
 - Functional performance evaluation of each concept;
 - Feasibility evaluation of each rescue/recovery method;
 - Recommendations to inform operational procedures and competence requirements; and,
 - Recommendations of concepts/method that have high potential to reduce safety risks;
- Full scale development cost-benefit analysis of concepts/methods selected for detailed analysis, including:
 - Hazard identification assessment and risk mitigation plan;
 - Concept development costs;
 - Lifeboat/vessel /procedural modifications needed to successfully implement concepts;
 - Recommendations to advance one or more concepts to Phase II; and,
 - Preliminary Phase II Execution Plan, including testing overview, timeline and resources;
- Phase II Execution Plan (if required, to be determined after Phase I decision-making), including:
 - Detailed Scope of Work for prototype design development and full-scale validation plan of selected concepts, including performance requirements, drawings, specifications, materials, equipment and testing; and,
 - Phase II Project Budget.

4.2 Meetings

Regular meetings will be scheduled between the Successful Service Provider and Petroleum Research and/or the Steering Committee. These meetings will cover progress completed, discuss future work, evaluate project outcomes and update on any risks to Project schedule or Project Budget. The frequency of these meetings will be determined by Petroleum Research.

5 Proposal Selection

Petroleum Research may consider the following criteria in the selection of the Successful Service Provider:

- The approach that will be used to conduct the work;
- Project management experience and technical knowledge and experience of the proposed investigators, consultants and/or others assigned to the project;
- The number of person hours required to complete the work, the allocation of hours among tasks and the overall time to complete the work;

- The reasonableness and accuracy of the estimated costs to conduct the proposed project and the effort applied by the Service Provider relative to the time and resources used;
- Contribution to the development of Newfoundland and Labrador research and development capacity; and,
- Such other matter as Petroleum Research considers appropriate in respect of the Scope of Work.

6 Project Timeline

The following is the estimated timeline for the project procurement process:

Submission deadline	2:00 p.m. NST, Friday, February 8 th , 2013
Project start	March, 2013

7 No Liability

No claim whatsoever shall be entertained arising out of a Service Provider's failure to study the RFP or to submit the required information as stated in Section 2.3.

Service Provider shall not hold Petroleum Research or any of its officers, employees, assigns, independent contractors, subcontractors, agents or representatives liable for any error or omission in any part of this RFP. While considerable effort has been made to ensure that all information contained in the RFP is accurate, Petroleum Research does not represent or warrant that the information contained in this RFP or any supplemental documents is accurate, comprehensive or exhaustive. Nothing contained in this RFP is intended to relieve the Service Provider from forming its own opinions and conclusions with respect to the matters addressed in this RFP.

Petroleum Research and any of its officers, employees, assigns, independent contractors, subcontractors, agents or representatives shall not be liable to the Service Provider or any of its officers, employees, assigns, independent contractors, subcontractors, agents or representatives for any losses (including damage for loss of anticipated profit), expenses, costs, claims, damages, including incidental, indirect, special or consequential damages, or liabilities arising out of or by reason of or attributable to this RFP or arising out of, submitting a Proposal, requesting clarification, the communication of any information contained in the Proposal to any party, or due to Petroleum Research's selection or non-selection of any Proposal received, or as a result of the termination of this RFP or the cancellation of the Project.