



CAIRN INDIA LIMITED
GLOBAL EXPRESSION OF INTEREST (EOI) UNDER INTERNATIONAL
COMPETITIVE BIDDING (ICB) BASIS FOR SUPPLY-APPLY
OF
ACROLEIN CHEMICAL FOR WATER FIELD MICRO-BACTERIA CONTROL

Cairn India Ltd (“CIL”) is the Operator of the Onshore RJ-ON-90/1 block, on behalf of itself and its Joint Venture (JV) partners Cairn Energy Hydrocarbons Limited (CEHL) and Oil and Natural Gas Corporation Limited (ONGC), located in Barmer district, in the state of Rajasthan, India. The Block contains number of major oil discoveries, including the Mangala, Bhagyam and Aishwariya Fields.

CIL seeks specific Expression of Interest (EOI) for prequalification from suitable parties for “supply & apply” (i.e field application with all necessary related technical & HSE support services with skilled & knowledgable manpower) of Acrolein Chemical for control & mitigation of micro-bacteria (especially Sulfate Reducing Bacteria/SRB) through an International Competitive Bidding Process. To this effect CIL seeks Expressions of Interest (EOI) for Short Term (2-3 years) supply –apply of acrolein chemicals and it’s field technical services.

The Block contains number of major oil discoveries, including the Mangala, Bhagyam and Aishwariya Fields.

Water for sub-surface injection and other use is being extracted from an aquifer called NR1/Thumbli aquifer wells. Water contains micro-bacterias (especially SRB) to a significant extent.

CIL intends to award a contract for the supply and apply of acrolein chemicals thro’ an International Competitive Bidding Process. This implies supply chain management of acroline and field application of acrolein with all necessary technical support services and HSE management with the bidder’s skilled & knowledgable technical manpowers.

To this effect CIL seeks Expressions of Interest (EOI) for supply-apply of acrolein chemical as per the below Technical Specification as minimum :-

1. Technical Purchase Specification of ACROLEIN Biocide Product with complete operating skids and skilled operators in a supply-apply basis

Acrolein is the common trade name for 2-propenal. It is a simple three carbon unsaturated aldehyde having a β -conjugated carbon-carbon double bond. It is a water soluble liquid and a stable product. It is to be used as Micro-biocide principally in water streams from aquifer and can be used in process oil vessels if required to kill the bugs (especially SRB)

The following should be the minimum technical performance spec. of acrolein and it's services :

- It shall have minimum 95% (weight%) acrolein as active ingredient
- It shall be non-oxidizing type
- It should be both water and oil soluble
- It should have specific characteristics to penetrate and kill oil wetted biofilms and sessile microbe colonies
- It shall not get influenced by other oil field biocides, corrosion inhibitors etc..
- Product shall be non-corrosive to iron and steel and it shall not lower the pH of raw water
- It shall be able to control the gross bug count (especially SRB) with a KPI of < 10 counts/ml i.e. max 1 bottle black
- Vendor has to propose the minimum dose requirement per batch with minimum durations to meet the above KPI
- The dosing shall be weekly once or every 5th day whichever is fit-for-purpose to meet the above KPI
- Dosing system service will be in vendor's scope
- The dosing skid shall be able for surface dose and squeeze downhole. The dosing skid shall be intrinsically safe and completely leak/ spill proof always during operation or when idle. The skid must have provision for leak testing on receipt and at any time when idle.
- The skid shall be accompanied with all necessary flow control and assurance instrumentations like turbine meters, rotameters, pumps, valves, sight glasses, timer etc as required for un-interrupted and safe operations
- The operator must be well trained and certified to handle the chemical and skid in a safe and shall have knowledge to troubleshoot and forecast for any upcoming problems
- Vendor must have well defined vapor & fire, spill control and associated emergency preparedness procedures and competencies.
- Vendors must have road safety logistics policy for transportation of acrolein containers with well-trained driver and safe vehicles.
- All logistics, import, handling and disposal management will be in vendor's scope
- Adequate inventory of minimum 40 days will be in vendor's scope
- In case of any extreme exigencies vendor can outsource acrolein without any commercial implications but before any action the vendor must set a technical dialogue with cairn authorities and subjected to cairn technical approval.
- As it is a proprietary product, cairn will not involve to resolve any technical or safety issues and all these to be managed and ensured by the vendor solely
- All HSE precautions and management will be in Vendor scope related to safe storage, movement and usage of acrolein.
- Fooding, lodging, boarding, inter-field transportations, medical, insurance issues etc of operator will be under vendor's scope

2. **Supply Timelines:**

The vendor has to keep an uninterrupted supply chain of acrolein . A minimum 45 days inventory w.r.t. 200,000 BWPD basis shall always be there at any point of time. The safe storage and safety of all the skid from port of origin till reach at site and thereafter is the sole responsibility of the vendor.

3. **Performance Specifications:**

Acrolein and it's service shall be able to control the gross bug count (especially SRB) with a KPI of < 10 counts/ml i.e. max 1 bottle black

The Companies are requested, as a minimum, to submit the following documents and details which will serve as techno-commercial pre-bid qualification criteria:

1. Letter of interest with detailed company information as follows:
 - a. State the name of the parent Company
 - b. State the name/address/phone/e-mail of the company that would execute the Contract
 - c. If a Joint Venture to be proposed, state the name/address/phone/e-mail of all Joint Venture partners
 - d. Organization structure
 - e. Size of Departments
 - f. Procurement system & procedure
 - g. Material Control System
 - h. Supply Chain Management System & procedures
2. Company's financial performance documents (including JV partner's financials, if proposed) i.e, Audited Balance Sheets, Profit and Loss Account & Cash Flow Statement for the last 3 years & following details separately;
 - a. Company Turnover based on last 3 audited/Financial statement
 - b. Company's Net Worth based on last 3 audited/Financial statement
 - c. Working Capital based on last 3 audited/Financial statement
 - d. State the banker's name, address and Solvency certificate from the bank indicating the credibility limit in financial terms
3. Experience
 - a. Lists of similar projects successfully executed with detail facility in the last five years in India or abroad with completion certificate and those of currency under execution.

- b. No of years in similar business
 - c. Detail of orders (minimum 3) executed for more than USD 2 Million
 - d. Details of current commitments
4. HSE Systems:
- a. For all projects executed in last 5 years
 - b. HSE Manual/Policy
 - c. Project specific HSE Plan for similar project
5. Quality Systems:
- a. Copy of current ISO Certificate provided
 - b. Certification of the companies QA system by an accredited certification body
 - c. QMS of the Company

The envelope should be subscribed with “Reference No. **CIL/PSCM/EOI/ACROLEIN - 1000031979**”. All information and documentation shall be provided at address below within 14 working days of publication of this EOI by e-mail as attached PDF file and via courier to:

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