

**Process No. P/51-2019**

**Request for Information (RFI)**

**Drilling and Rehabilitation of Boreholes and Conducting Pumping Tests in  
Drinking Water and Brackish Water Wells**

**1. General**

1.1 Mekorot Water Company Ltd. (“**Mekorot**”) is planning, in the coming decade, to perform hundreds of new drillings and for this purpose seeks to expand the number of companies it engages with, who specialize in drilling water wells to depths of up to 1,600 meters in various geological and hydrological environments, in different diameters, with equipment at their disposal or who are representatives of foreign companies with such specialization. At present, Mekorot executes water drilling via a Mekorot subsidiary, EMS Mekorot Projects Ltd. and via Lapidoth Capital Ltd.

In addition, Mekorot performs rehabilitation work on active boreholes as the result of sand infiltration, clogging of the screen section and perforated pipes and casing corrosion and holes in the pipes. For this purpose, Mekorot seeks to expand the number of companies with which it is engaging, who specialize in the rehabilitation of water boreholes to depths of up to 1,600 meters and in different diameters, with their own equipment or who are representatives of foreign companies with such specialization. At present, Mekorot is rehabilitating water boreholes through Mekorot’s subsidiary, EMS Mekorot Projects Ltd.

1.2 The purpose of this request for information (the “**Request**”) is to receive information for the purpose of studying, comparing and evaluating capabilities and potential existing possibilities of companies whose area of expertise is as stated above. It is Mekorot’s intention to consider, inter alia, according to the information received as part of this Request, alternatives for engaging with companies for the purpose of carrying out the aforesaid activities, including examining the possibility of establishing a pool of companies and/or one-time engagements and/or framework engagements for clusters of boreholes.

1.3 It is hereby clarified that this Request does not constitute a tender and/or a request for bids, but rather a preliminary request for information according to the provisions of Regulation 14A of the Israeli Mandatory Tenders Regulations, 5753-1993.

1.4 It is hereby clarified that this Request should not be regarded as an obligation by Mekorot to carry out any follow-up activity to this proceeding and/or undertake to conduct a competitive process or tenders with any person or body, including any of the respondents to this Request and/or undertaking to enter into an engagement of any kind or type with any of the respondents to this Request, or to prevent Mekorot from acting or from taking any decision it deems appropriate or in accordance with its authority under any law. Mekorot is only interested in receiving information in order to assist it in making decisions and to examine the available options.

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- 1.5 Responding to this Request will not constitute a threshold condition for participating in any resulting tender that will be held, if and insofar as it is conducted, will not grant the respondent to this Request any advantage in any tender solely because it complies with this Request and any such response does not obligate Mekorot to let the respondent participate in any tender, process or engagement in any other way, to the extent that such may follow this Request.
- 1.6 Mekorot may, at any stage, reach any decision regarding the matters that are the subject of this Request at its sole discretion, including deciding to terminate the proceeding and/or postpone it and/or cancel it.
- 1.7 Mekorot does not represent or warrant that the information contained in this Request or any other information which it or anyone on its behalf provided to respondents is either complete, accurate or underwent any independent verification by Mekorot. Any reliance of the respondents or anyone on their behalf on any such information and the making of any deductions, interpretations or conclusions from information which is provided by Mekorot or anyone on its behalf, is at the respondents' sole responsibility.
- 1.8 Mekorot shall not be responsible or liable towards any respondent or anyone on its behalf in connection with the Request, including for any loss or damage whatsoever suffered by any respondent by the reason of any reliance on or use of information contained in this Request or provided in connection therewith.

## **2. Information Required from the Respondents**

- 2.1 Details regarding the respondent interested in engaging on the topic of this Request:
  - 2.1.1 type of incorporation;
  - 2.1.2 registration number;
  - 2.1.3 country of incorporation;
  - 2.1.4 area of business and period of activity;
  - 2.1.5 full address; and
  - 2.1.6 details of the ultimate controlling shareholders (name, identification number and address).

In case the respondent is a joint venture, all details above should be provided with respect to each of its members.

- 2.2 Details regarding the respondent's experience in planning and/or performing water drilling in Israel and abroad, scope of activity, etc.
- 2.3 Drilling Boreholes:
  - 2.3.1 Details regarding the respondent's previous experience and proven ability to perform drilling, boring and reaming in all types of rock (basalt, dolomite, marl, limestone, shale, gravels, sand and others). In addition, the respondent is

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required to address its ability to change the drilling method and the design according to the updated geology and hydrology conditions and the requirements of the supervisor on Mekorot's behalf.

2.3.2 Details regarding the respondent's previous experience and specific drilling capabilities, boring, reaming and lowering casing, screen and or perforated pipes similar to (but not only) the examples included in Figure 1 and explanations in Section 2.3.3 below, which are intended to enable the respondent to form impressions of the structure of the deep drilling accepted in Israel and reach conclusions regarding the type of the drilling rig and tools and all accessories required for him in order to carry out the drilling according to the technical profile that will provide by Mekorot.

2.3.3 Clarifications and highlights in relation to the technical structure of the water drilling:

2.3.3.1 Each of the casing pipe must be cemented.

2.3.3.2 To prevent a "hydrological connection" between aquifers, the spacing between two casing lines must be sealed using a seal bore packer.

2.3.3.3 For wells where the aquifer is at depth deeper than 200 m, the screen of L-316 stainless steel type will be hung on a ring or with bayonet pipe connection in case of using perforated steel pipe.

2.3.3.4 For wells where the aquifer is at a shallow depth (less than 200 m) it is customary to install the casing with the screen in one line and diameter.

#### 2.4 Borehole Rehabilitation:

2.4.1 Mekorot has hundreds of active boreholes. Based on past experience, it is estimated that approximately 15 to 20 boreholes will require rehabilitation each year.

2.4.2 During the operation of the wells, holes and corrosion may appear in the casing and screens. Via those holes, sand enter inside the hole, and contamination and poor-quality water leak into the borehole. One way to return the borehole to proper working condition is by rehabilitation works.

2.4.3 The work includes mechanical method (brushes, sonar jets, etc.) and chemical method (injection of acids).

2.4.4 The respondent is required to present practical experience in rehabilitation work specified in this Section 2.4.

#### 2.5 Acidation in the Boreholes:

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- 2.5.1 Well developing: After completion the well it is customary to perform a series of operations to develop the aquifer. There are three types of acidation methods:
- 2.5.1.1 Injection of polyphosphate and sonar jet : The performing contractor must be equipped with all the necessary equipment and accessories for injection the chemical and running sonar jet along the screen section according to the instructions of the supervisor.
  - 2.5.1.2 Pumping using compressed air (Air Lift): The performing contractor will need to have an air lift system. The system shall include a steel pipeline between 6 5/8" and 7 5/8" diameter with screw threads and drilling stem with a diameter of 2 7/8" for the air insertion. The pipeline and drilling stem system shall be of a length not less than 500 meters. Also, the performing contractor must have an air booster for cases that large volume of air is needed to lift the water. The performing contractor can bring the booster by itself or rent on the basis of the technical parameters to be provided.
  - 2.5.1.3 Injection of Acid: The performing contractor will be required to inject hydrochloric acid (HCL) or other chemicals approved by the Israeli Ministry of Health to several depths determined by the supervisor. The injection will be done using the pipelines of the compressed air pumping system.
- 2.5.2 Performing contractor capabilities: The respondent is requested to present detailed information about its experience in borehole development operations (including providing examples) which would potentially comply with the expected requirements from the performing contractor as set out in Section 2.5.1 above. Among other things, such information should demonstrate its ability to be responsible for the supply of the pipes, for the work of installing and removing the pipes before and after the operations, its capability to inject acid inside a borehole and in several depths, and experience in flushing, sonar jet and any other known rehabilitation method required.
- 2.6 Borehole Development and Pumping Tests:
- 2.6.1 Details regarding the respondent's experience in borehole development by using a temporary pump: Mekorot desires that the drilling and rehabilitation contractor will also perform the development and pumping tests using a temporary pump (vertical water lubrication pump) suitable for a depth of up to 250 meters. The pump will be operated by a generator with a gear suitable for gradual change of the hourly flow according to the supervisor's requirements. The performing contractor shall prepare all the necessary arrangements when

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necessary for the injection of acids and/or other chemicals approved by the Israeli Ministry of Health.

- 2.6.2 Details regarding the respondent's experience in lowering and pulling out the temporary pump with all its accessories to and from a depth of up to 250 meters, its knowledge and ability to perform pumping tests according to the supervisor's instructions. The performing contractor should demonstrate that it has the required know-how and equipment to measure the water levels (static and dynamic) at least once an hour, measuring the hourly discharge (at least once an hour), pumping at intervals and continuously and injecting chemicals approved by the Israeli Ministry of Health.
- 2.7 The drilling yard: The contractor shall specify the minimum working yard dimensions required for the drilling machines, tools and its accessories, in writing and in a diagram (it should be noted that the dimensions of the drilling yard, including the contractor organization area customary for Mekorot, are 40 m x 60 m).
- 2.8 The respondent shall provide details regarding the professional manpower available to the performing contractor that may be used for operating the drilling rig and the accompanying equipment, including tool pusher, the machine manager and professional workers; and detailed CVs of all such individuals.
- 2.9 Details regarding the respondent's experience in working with chemicals, including licenses and permits for hazardous materials required for drilling.
- 2.10 Existing Equipment at the Respondent's Disposal:
- 2.10.1 A detailed list of the drilling rigs (including the height of the drilling tower) and additional equipment: drilling rig, blocks, rotor, handling equipment, etc.
- 2.10.2 A list of equipment and drilling tools: drill collars, bits types, drill pipes, hole openers, reamers, etc.
- 2.10.3 A list of equipment for injecting acids approved for use in drilling for drinking water as stated in Section 2.5 above.
- 2.10.4 A list of equipment for performing pumping tests as stated in Section 2.6 above.
- 2.10.5 A list of equipment for managing electrical logs (resistance, gamma, acoustics, SP, and calipers), cementation machine, television camera, alignment measurement equipment, temperature log and experience in interpreting the logging results or, alternatively, a contract with a subcontractor that has all such necessary equipments.
- 2.10.6 It should be noted that on completion of drilling, the performing contractor will be asked to conduct development and pumping tests with a temporary pump (vertical water lubrication pump) suitable for a depth of up to 250 meters.

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Development stages will also include injection of chemicals according to the needs.

- 2.11 A customer list that includes details of the customer and a contact person on behalf of the customer, including contact details for the contact person (full name, job description, phone number and e-mail address).
- 2.12 Licenses, approvals, permits, authority and agreements required for drilling that the respondent holds.
- 2.13 Details regarding the limitations applying to the respondent in performing drilling work for Mekorot and special requirements of the respondent from Mekorot, such as organization time from receiving a work order, the ability (or inability) to perform several drillings simultaneously (from the point of view of machinery, equipment, personnel, etc. availability), demand for cluster drilling orders (minimum quantity of drillings, back-to-back performance conditions) (as opposed to a single drilling order), minimal engagement volumes, etc.

2.14 Proprietary Rights

The respondent must elaborate about the owner of the proprietary rights related to the response to this Request, including intellectual property, patents, trademarks, copyrights, etc. (henceforth: "**Proprietary Rights**"). In submitting the response, the respondent declares that there is nothing to prevent or restrict him from providing details regarding the proprietary rights. In the event that all or part of the aforementioned proprietary rights belong to a third party, this shall be stated in the reply, indicating the source of the right of the respondent to submit the response that includes information about proprietary rights belonging to said third party.

- 2.15 Any additional information that can attest to the respondent's ability to drill boreholes for drinking water and brackish water at depths of up to 1,600 meters and in different diameters.

**3. Figures**

Figure A – Typical cross-section examples of boreholes in Israel for illustration purposes.

**4. Administrative Information**

- 4.1 Information will be provided by all interested parties on a voluntary basis and with the understanding that this Request is for the purpose of information gathering only.
- 4.2 All expenses related to submitting the response to this Request shall be solely at the expense of the respondent. In no event shall the respondents be entitled to any consideration for their participation and/or any refund and/or compensation and/or indemnification for expenses and/or damages caused to them in connection with the reply and/or preparation and submission of the response.

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- 4.3 Mekorot maintains the right to insert corrections and/or changes in this Request, including the date of submission and the right to cancel this Request, all at any time and at Mekorot's sole and absolute discretion.
- 4.4 Without derogating from the contents of this document, Mekorot reserves the right to request clarifications or requests to receive additional information and/or data from the respondents, in whole or in part, as well as from any other party.
- 4.5 It is hereby clarified that by submitting a response to this Request, the respondent confirms that he agrees to all the terms of the Request, including but not limited to the terms of Section 7 below (use of information received).

## 5. How to Submit a Response to this Request

- 5.1 Respondents are requested to submit a response to this Request that will include the information required in this Request, as well as any other information that the respondents wish to provide to Mekorot, solely through the online "Sourcing Vision" system, until the deadline specified below.
- 5.2 In addition, respondents are requested to register and receive a link to the system by e-mail, contact [enuriel@mekorot.co.il](mailto:enuriel@mekorot.co.il) with the following details: respondent's name, first and last name of the contact person, address, postal code, telephone, mobile phone, email address and company/authorized dealer number. Upon registration, an e-mail will be sent to you, containing a user name and password and a link to access the system, including a copy of the RFI documents and for submitting a response via the system. Receipt of the RFI documents must be confirmed by clicking on the text "Click to confirm receipt of e-mail" appearing at the beginning of the e-mail. Messages and clarifications, if any, will be sent to the e-mail defined in the system.

The documents of this Request can be viewed at the Mekorot Tenders Unit at 9 Lincoln Street, Tel Aviv, 7th floor, Sunday through Thursday, 09:00 - 15:00. Submission of a copy of the Request documents is subject to submission of the details noted above for registration in the system.

- 5.3 **The deadline for submitting a response is August 25, 2019, at 12:00 noon (Israel time).**
- 5.4 No respondent may submit a response other than in the manner above described.
- 5.5 Each respondent registered as above will receive an instruction manual and explanations for using the system which will be sent to the e-mail address submitted in the system. The Mekorot representative may be contacted for individual telephone guidance regarding the submission of a response through the system, as specified in Section 6 below. It is hereby clarified that Mekorot does not undertake to provide technical support during the three business days prior to the deadline for submission of a response and that support will be provided only during the normal Mekorot working hours.

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- 5.6 The documents of this Request must be signed by the respondent at the bottom of each page, scanned and uploaded into the system (including letters of clarification published by mekorot, if any).
- 5.7 Mekorot reserves the right to request additional clarifications regarding the information it receives during this process from the respondents to this request and its right to meet with any of them in order to receive explanations and clarifications.
- 5.8 If the information provided to Mekorot contains trade secrets, this should be stated clearly and prominently in every relevant place in the response document. See also Section 7 below (use of information received).

## **6. Inquiries and Clarifications**

- 6.1 For inquiries, questions and clarifications, please contact Ms. Emmy Nuriel by writing a message in the "Sourcing Vision" system and/or by uploading a file to the system. When uploading a file, choose the file category: Question/Clarifications. The respondent is responsible for verifying receipt of the notification via telephone at the following number: +972-3-6230450. It is hereby clarified that the aforesaid representative of Mekorot should not be contacted in connection with this RFI by telephone, fax or e-mail (except for the purpose of verifying the receipt of such notice), but only through the aforementioned "Sourcing Vision" system.
- 6.2 Mekorot may or may not address inquiries, questions or clarifications, at its sole discretion.

## **7. Use of the Information Received**

- 7.1 The requested information is required as part of Mekorot's activity, to evaluate the possibilities of contracts and transactions regarding the drilling works described above and this request does not create any obligation whatsoever on the part of Mekorot or any of its representatives towards any of the respondents.
- 7.2 Mekorot shall be entitled to make use of the information received for its purposes and at its discretion, without consideration, but in any event, Mekorot undertakes that the information provided will be used solely for the purpose of evaluating its activity in connection with this request. Information defined as a trade secret under the provisions of SECTION 5.8 above will not be disclosed to third parties other than: (i) the persons engaged in this proceeding within Mekorot; (ii) Mekorot's consultants, subject to their obligation to maintain confidentiality; and (iii) to any person authorized by law or by an order from a competent authority to review the aforesaid information.
- 7.3 The list of respondents that will be made as a result of this Request does not constitute, by virtue of the submission of a response, a list of closed bidders for the purpose of carrying out any competitive process, insofar as such a procedure is indeed conducted, and the respondents will not have any special status in such proceedings solely by virtue of their participation in this proceeding.

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7.4 It is hereby clarified that subject to the provisions of Section 7.2 above, Mekorot will be entitled to make use of the information that will be given in response to the Request, and the respondent will not have any claim and/or demand and/or cause for this, including in respect of the proprietary rights inherent in the information.

**8. Contradiction between Versions**

For the convenience of the respondents, the documents of this Request have been translated into English. It is hereby clarified that the Hebrew version is the binding version, any reliance on or the use of the English version is the user's responsibility and that in any case of contradiction between the Hebrew version of this Request and the English version of this Request, the Hebrew version shall prevail.

**9. Mekorot Property in this Process Document**

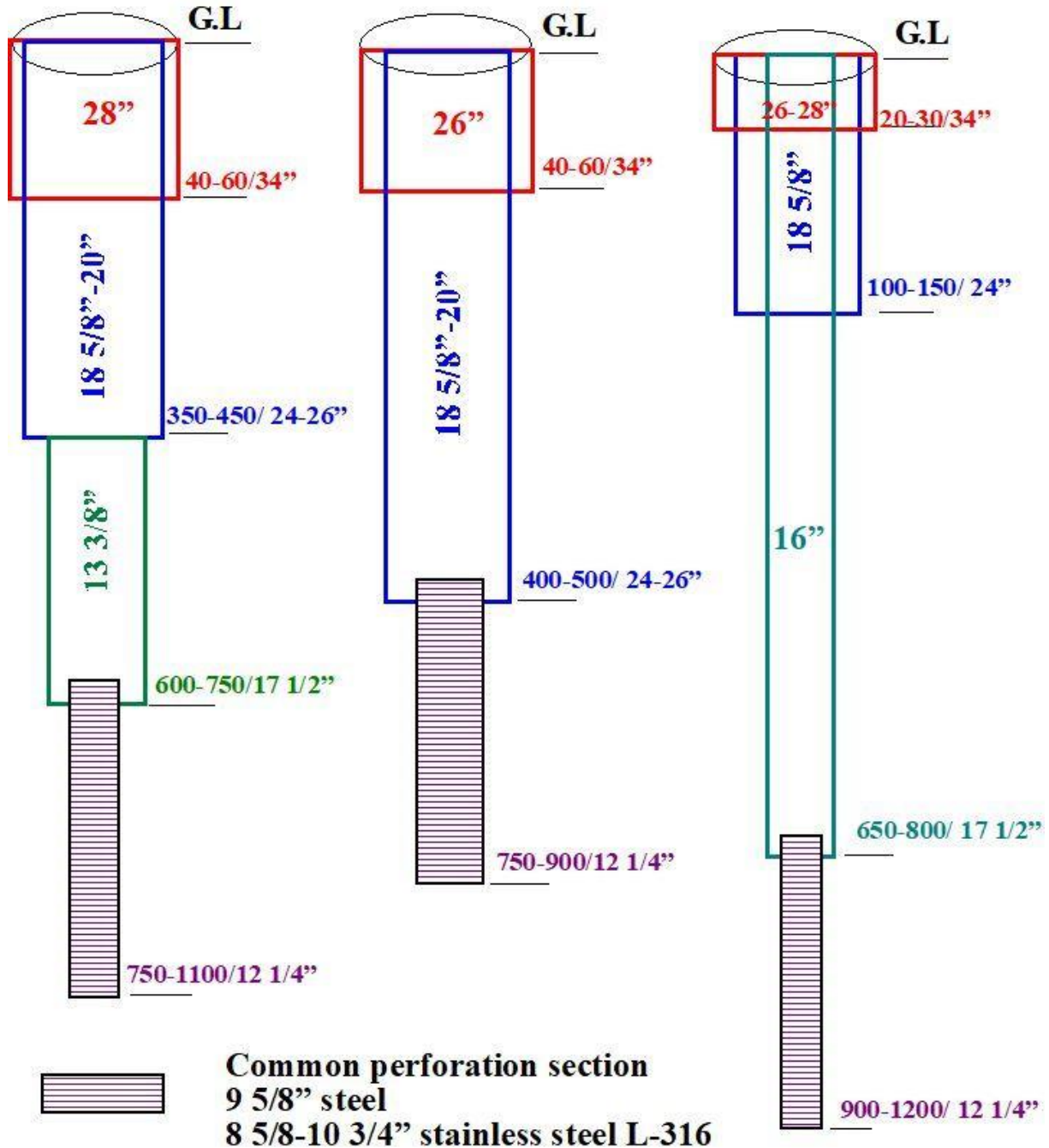
This document and any document from Mekorot that shall be transmitted, to the extent that it will be transmitted, to the respondents, is the property of Mekorot and may be used only for the purpose of responding to this request.

**10. Governing Law and Jurisdiction**

This request for information and all matters associated therewith shall be governed by and construed in accordance with the laws of the State of Israel, without regard to the conflict of law provisions thereof. The competent courts of Tel Aviv, Israel shall have exclusive jurisdiction over all matters arising out of or relating to this request for information or any obligation hereunder.

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**Figure A – Typical Cross-Section Examples of Boreholes Around the Country for Illustration**



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