NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED
NESPAK HOUSE: 1-C, Block-N, Model Town Extension, Lahore - 54700, Pakistan
Established in 1973

Ref: P-42017/024/MJZ/01/1375

Date: February 19, 2025

ESTABLISHMENT OF NEW STATE OF THE ART PORT TERMINALS (TWO MULTIPURPOSE AND ONE INTEGRATED CONTAINER TERMINAL) AT PORT QASIM, KARACHI, PAKISTAN

Invitation of Bids for Geotechnical Investigations (Field and Laboratory Works)

Dear Sir,

Sealed bids (**Technical and Financial in separate sealed envelopes**) are invited in accordance with the attached **BOQ** and **qualification criteria** from drilling Contractors/Companies for carrying out the geotechnical investigations for the subject project.

The companies capable of carrying out subject work are requested to provide their Company's Profile and the following documents along with their sealed bids:

1. PEC Registration Certificate
2. FBR & PRA Registration Certificates
3. List of Similar Projects completed during last five years
4. Financial Capability
5. Equipment Capability
6. Personnel Capability
7. Litigation History
8. HSE Policies

The work comprises; execution of boreholes up to maximum 30 m depth below natural surface level (NSL) in overburden soils by Straight Rotary/heavy percussion drilling rig, execution of boreholes up to maximum 50 m depth below sea bed level on pontoon/barge assembly by straight rotary/percussion drilling rig, core drilling, excavation of test pits, performance of SPTs in boreholes, performance of field density tests in test pits, collection of disturbed/undisturbed soil/rock samples, collection of water samples and laboratory testing of selected soil/rock/water samples. The field and laboratory work shall have to be completed according to the following time schedule:

Sr. No.	Minimum No. of Straight Rotary Rig Required	Minimum No. of pontoon/barge assembly mounted with straight rotary rig Required	Time for Completion of Field Investigations	Time for Completion of Laboratory Testing	Total Time for Completion of Field & Laboratory Investigations
1	01	01	8 weeks	4 weeks	12 weeks

Your bids shall be valid for a time period of ninety (90) days after the bid opening. **The work shall be executed under the instructions and full-time supervision of NESPAK engineers/geologists and the successful bidder shall mobilize to the site on three (03) days' notice after issuance of Letter of Award/Acceptance.**

Telephone : +92-42-99090000
E-mail : info@nespak.com.pk
Website: www.nespak.com.pk
Fax : +92-42-99231950
P.O.Box: 1351, Lahore, Pakistan

The coordinates and ground elevations of all the investigation points by total station shall have to be provided to NESPAK before completion of investigation at site by the Contractor. The approved laboratory, where testing is to be carried out, shall be pursued by the successful bidder for timely completion of the assigned laboratory testing.

The successful bidder shall be responsible for providing the field borehole & test pit logs, summary of laboratory test results and detailed laboratory test results to NESPAK, within the contract period. **A premium of up to 25 % will be admissible on the official rates of the soil laboratory, selected for testing of samples. This premium has been allowed as compensation to the Contractor for making advance payment to the laboratory and later following-up for obtaining test results in time. The name of the laboratory should be provided on page 2 of 2 (Annexure-I).**

Please note that the work is of sensitive nature and shall be executed by using appropriate equipment of high quality with utmost care. The Engineer holds the right to inspect the equipment before mobilization and to obtain assurance from Contractor regarding the quality of work.

The bidders shall submit a bid security amounting to PKR 250,000/- at the time of submission of bids in the form of pay order or bank draft in favor of M/s NESPAK.

Your **most competitive** sealed bids (**inclusive of all taxes**) in accordance with the BOQ and qualification criteria, should reach the office of the undersigned by 1100 hours on or before **March 10, 2025.** Technical bids would be opened on the same day at 1130 hours after their receipt in the presence of those bidders who wish to be present.

Financial bids would be opened after evaluation of Technical bids, at a time, date and venue announced and communicated to the technically responsive bidders in advance. However, the final decision to accept/reject any or all the bids as per PPRA rules solely lies with the undersigned. The entire work shall be carried out in accordance with the requirements of the General Bidding Documents for Geotechnical Investigations available at NESPAK website (www.nespak.com.pk).

for National Engineering Services Pakistan (Pvt.) Limited

(MUHAMMAD JAHAN ZEB)
General Manager/Acting Head
Geotechnical & Geoenvironmental Engineering Division

ESTABLISHMENT OF NEW STATE OF THE ART PORT TERMINALS (TWO MULTIPURPOSE AND ONE INTEGRATED CONTAINER TERMINAL) AT PORT QASIM, KARACHI, PAKISTAN

1. Qualification Criteria

Qualification will be based on the criteria given in the following paras regarding the Applicant's experience, personnel and equipment capabilities, financial position and litigation history, as demonstrated by the Applicant's responses in the Forms attached as Annex-A to this Document. The Employer reserves the right to waive minor deviations, if these do not materially affect the capability of an Applicant to perform the contract by the Applicant.

Experience and resources of the Company intended to be employed as sub-contractor shall not be taken into account in determining the Applicant's compliance with the qualifying criteria. However, for joint venture, collective experience, resources and financial soundness of all partners shall be considered.

1.1 General Information

Application Form A-1 attached in Annex-A.

1.2 Experience of the Firm

The Applicant shall meet the following minimum criteria:

1) Successful experience as contractor in the execution of at least five (5) projects involving bulk of geotechnical investigations within the last five (05) years. This experience should specifically be of geotechnical investigations of similar nature (at least 02 projects should be of offshore drilling works). The Applicant will supply information as per the format specified in the Application Form A-2 attached in Annex-A.

1.3 Personnel Capabilities

The Applicant must have in his employment, suitably qualified and experience personnel to fulfill the positions tabulated below. The Applicant will supply information as per the format specified in the Application Form A-3 attached in Annex-A.

Sr. No.	Position	Qualification*	Minimum Numbers Required	Minimum Experience (Years)
1	Technical Manager	B.Sc. Civil Engg.	1	10
2	Site Geologist/ Supervisor/ Engineer	M.Sc. Geology/B.Sc. Geological Engg/ B.Sc Geology (4 years)	2	5
3	HSE Supervisor	HSE certification course	1	1
4	Driller	Literate	2	5
5	Skilled Labour	-	As required	-

1.4 Equipment Capabilities

The Applicant should own, or have assured access to the following key items of equipment in full working order, and must demonstrate that, based on known commitments, these will be available for deployment on the proposed works.

Sr. No.	Equipment Type & Characteristics	Minimum Number Required
1	Straight Rotary Drilling rig complete in all respects including drilling rods, bits, mud pumps etc. along with at least one stand-by rig. The equipment shall be capable to obtain core recovery more than 80 percent and to complete the investigations within the time schedule.	1
2	Percussion Boring Set (>250 mm diameter), complete in all respects including tripod, chisel / bit etc.	1
3	Pontoon / barge assembly alongwith straight rotary rig assembly, complete in all respects.	1
4	Casing sets having various diameters for all types of boring at least 50 m in length with casing bits.	2
5	Standard penetration test equipment complete in all respects including all rods, split spoon sampler, hammer and containers etc.	2
6	Core barrels (single and double tube) including coring and casing bits.	2 each
7	Shelby/Denison/Pitcher samplers	2 each
8	UDS tubes & Split Spoon Samplers	As Required
9	Hydraulic jacks with all accessories for the extraction of casings	1
10	Electrically operated sounder for groundwater level measurement	1
11	Testpit excavation equipment/hand tools complete in all respect	As required
12	Field density test apparatus (with 6 and 12 inches dia. cone) complete in all respect	1
13	Wooden box for the preservation of undisturbed soil/rock samples	As required
14	Transport for mobilization of equipment	As required

The Applicant will supply information as per the format specified in the Application Form A-4 attached in Annex-A.

1.5 Financial Capabilities

The Applicant shall meet the following minimum criteria:

1) Average annual turnover which is also termed as income from contracting for procurement of geotechnical investigations and is defined as billing for works completed during the last five (5) years of at least Rs. 30.0 million. Documentary proofs of the same should be submitted in the form of letter of awards, completion certificates etc.

The Applicant shall also provide evidence of financial health such as bank account statements, available line of credits, etc., to show the soundness of the Applicant's financial position for procurement of geotechnical investigations works. The Applicant will provide annual turnover of the geotechnical investigation works carried out by him during the last five years. The Applicant

will supply annual turnover information as per the format specified in the Application Form A-5 attached in Annex-A.

1.6 Litigation History

The Applicant should provide accurate information on any litigation or arbitration resulting from Contracts completed or under execution over the last five (05) years. The Applicant will supply information as per the format specified in the Application Form A-6 attached in Annex-A. A consistent/ overwhelming history of litigation against the Applicant may result in rejection of the application. In case an Applicant claims Nil litigation, he shall submit the same statement on the letter head of his company.

1.7 Application of Health, Safety and Environmental Standards

The Applicant should provide the HSE Policies and supporting documentary evidence for the following:

i) First Aid Box
ii) Personnel Protective Equipments (PPEs)
iii) Standard Operating Procedures (SOPs)
iv) Health, Safety and Environmental (HSE) Policies
v) HSE staff

The Applicant will supply information as per the format specified in the Application Form A-7 attached in Annex-A.

Application Form A-1 **Page___ of ____Pages**

General Information

All individual Applicants applying for qualification are requested to complete the information in this form. Nationality information (if applicable) is also to be provided for foreign owners as required under the PEC Bye-Laws as a Partnership.

1.	Name of Firm	
2.	Head Office Address	
3.	Telephone	Contact Person: Name: Title: Cell No.
4.	Fax	E-mail
5.	Place of Incorporation/Registration Certificates of the firm*	Year of incorporation/registration

*** Registration certificates must include:**

- Valid registration with Pakistan Engineering Council (PEC)
- Valid registration with Federal Board of Revenue (FBR)
- Valid registration with Provincial Revenue Authority (PRA)
- Proof of active taxpayer of FBR & PRA

Application Form A-2 **Page___ of ____Pages**

Experience of the Firm

Name of Applicant: _____

Sr. No.	Name of Project	Value of Geotech Contract* (Pak Rs.)	Contract Duration

Attach copy of Letter of Awards / Project Completion Certificates for any three (3) latest projects involving bulk of geotechnical investigations of similar nature (offshore and onshore drilling works) within the last five (05) years.

Application Form A-3 **Page___ of ____Pages**

Personnel Capabilities

Name of Applicant: _____

Sr. No.	Name of Person	Qualification	Designation/ Position*	Total Experience

**Attach CVs of the Key Staff Members.*

Application Form A-4 **Page___ of ____Pages**

Equipment Capabilities

Name of Applicant: _____

Sr. No.	Equipment Description	Capacity	Number of Equipment	Working Condition a) Very good b) Good c) Satisfactory	Current Location

Application Form A-5 **Page___ of ____Pages**

Financial Capabilities

Name of Applicant: _____

Year	Annual Turnover (in PKR)
2023 – 2024	
2022 – 2023	
2021 – 2022	
2020 - 2021	
2019 - 2020	

Note: Financial soundness certificate from the bank(s) as specified in section 1.5 must be provided by the Applicant

Litigation History

Name of Applicant: _____

Year	Award for or against Applicant	Name of Client, cause of litigation, and matter in dispute	Disputed amount (current value Pak Rs. or equivalent)

Application Form A-7 **Page___ of ____Pages**

Health, Safety and Environmental (HSE) Policies Personal Protective Equipment (PPE) and Standard Operating Procedures (SOP) of the Contractor

Name of Applicant: _____

The Applicant should provide the following policies/supporting documentary evidence as required in Para 1.7.

A. HSE Policies

Please attach HSE Policies

B. Details of PPE Available with the Contractor

Sr. No.	Type of PPE	Total Number

C. Details of SOPs of the Contractor

Please attach the copies of SOPs

CONSULTANCY SERVICES FOR ESTABLISHMENT OF NEW STATE OF THE ART PORT TERMINALS (TWO MULTIPURPOSE AND ONE INTEGRATED CONTAINER TERMINAL) AT PORT QASIM, KARACHI, PAKISTAN

GEOTECHNICAL INVESTIGATIONS
BILL OF QUANTITIES

Sr. No.	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
A.	**FIELD INVESTIGATIONS**				
A1	*A1-1:* Mobilization and demobilization of at least *One (01)* straight rotary drilling rig / heavy percussion boring equipment at site including setting-up & shifting from one investigation point to another. The equipment should be sufficient to meet the time schedule. Minimum permissible diameter of borehole is 250 mm for percussion method and 101 mm for straight rotary method.	L.S.	Job		
	A-1-2: Mobilization and demobilization of at least *One (01)* pontoon / barge assembly alongwith straight rotary rig setup, complete in all respects, including setting-up and shifting from one investigation point to another.	L.S.	Job		
Offshore Drilling					
A2	Execution of three (03) boreholes using pontoon / barge assembly up to the maximum depth of 50 m below Sea Bed Level in overburden soils/rock, by straight rotary drilling method including backfilling of boreholes to their original position by cement-sand-bentonite slurry.	L.M.	150		
Onshore Drilling					
A3	Execution of two (02) boreholes up to a maximum depth of 30 m at terminal locations in overburden soils below NSL or up to rock strike level, whichever is met earlier, by straight rotary/heavy percussion drilling method including backfilling of boreholes to their original position by cement-sand-bentonite mix.	L.M.	40		
A4	Continuous core drilling (NX size in general) in sound bedrock up to a depth of 10 m below rock strike level or as directed by the Engineer, including preservation of core samples in core boxes, waxing of core samples, photography of rock cores and transportation of core samples to the laboratory.	L.M.	20		
A5	Performance of Standard Penetration Tests (SPTs) in boreholes along with collection of SPT samples at 1 m interval in general, or as necessary, including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	90		
A6	Collection of undistrubed soil samples from boreholes through Shelby/Denison/Pitcher samplers, including their waxing, labelling, packing, storage & transportation to an approved testing laboratory.	No.	10		
A7	Excavation of four (04) testpits up to a maximum depth of 3.0 m in overburden soils or rock strike level whichever is met earlier, including backfilling of pits to their original condition.	L.M.	12		
A8	Performance of field density tests by sand replacement method in test pits generally @ 2 tests/pit at selected horizons, including determination of in-situ bulk and dry density and collection of small disturbed samples in moisture tins for moisture content determination in laboratory by oven drying method as well as labelling, packing, storage & transportation to an approved testing laboratory.	No.	8		
A9	Collection of bulk composite soil samples (60 kg for sandy/clayey soils) from onsite testpits including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	4		
A10	Collection of hand cut undisturbed block soil samples (30 cm x 30 cm x 30 cm) from onsite testpits including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	2		
A11	Collection of water samples (if encountered) from boreholes/testpits including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	5		
	Sub-Total A	**Rs.**			

Establishment of coordinates and ground elevations of all the investigation points using **TOTAL STATION** are included in the scope of work. The coordinates should be provided with reference to a permanent local bench mark.

All soil / rock / water samples shall be stored and tranported as per ASTM standards. The area and clearance ratio of the sampling tubes should be as per ASTM requirements.

Contractor will be responsible for arrangement of Personnel Protective Equipments (PPEs) such as safety helmets and jackets for NESPAK site supervisory / visiting staff.

Straight rotary drilling method will be used for execution of borehole in sandy / clayey soil and in bedrock. However, percussion method of boring will be required if gravelly strata encountered

Geotechnical Investigation Plan is attached for reference

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GEOTECHNICAL INVESTIGATIONS
BILL OF QUANTITIES

Sr. No.	Description	Unit	Qty.	Rate	Amount
B.	LABORATORY TESTING			(Rs.)	(Rs.)
B1	Sieve analysis	No.	40		
B2	Hydrometer analysis	No.	10		
B3	Liquid & plastic limits	No.	15		
B4	Bulk & Dry density	No.	10		
B5	Natural Moisture Content (NMC)	No.	10		
B6	Consolidation with Swell Potential Measurements	No.	6		
B7	Direct Shear (Soil Sample)	No.	10		
B8	Unconfined Compression (Soil Sample)	No.	6		
B9	Uniaxial Compression (Rock Sample)	No.	30		
B10	Point Load Index	No.	10		
B11	Modified AASHTO Compaction	No.	4		
B12	3-Point Soaked CBR	No.	4		
B13	Sulphate content of soil/rock	No.	8		
B14	Chloride content of soil/rock	No.	8		
B15	Organic matter content of soil	No.	8		
B16	Complete chemical analysis of water samples i/c TDS, Cl, SO4 & pH	No.	5		
	Sub-Total B	**Rs.**			

Name of Laboratory:

Total (A+B)=	**Rs.**	

CLIENT: PORT QASIM AUTHORITY	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. 13th Floor, NIC Building, Abbasi Shaheed Road Karachi-Pakistan				DRAWN	M.A		PROJECT: TWO MULTIPURPOSE CARGO TERMINALS AND ONE INTREGATED CONTAINER TERMINAL AT PORT QASIM ON BOT BASIS	Title: LOCATION OF BORE HOLES	SCALE
					DESIGN	M.S				
					CHECKED	T.M.K			DATE: JAN.2025	DRAWING No.: SKETCH NO. 030225
		0	JAN.2025		APPROVED	N.U.H				REV.: 0
		REV.	DATE	DESCRIPTION						