

RFP# 23-24
REQUEST FOR PROPOSALS

CITY OF PORTSMOUTH, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS

ENGINEERING SERVICES
PFAS TREATMENT FACILITY DESIGN FOR THE GREENLAND WELL

INVITATION

Sealed Proposals, plainly marked with “RFP# 23-24, PFAS Treatment Facility Design for the Greenland Well” on the outside of the mailing envelope addressed to the Finance/Purchasing Department, 3rd floor, City Hall, 1 Junkins Ave., Portsmouth NH 03801 will be accepted until **2:00 pm on Thursday January 18, 2024**. Proposals shall include a separate sealed envelope with three (3) hard copies and one (1) electronic copy (in .pdf format on USB thumb drive) are required. Submissions will not be accepted via fax or email. Submissions received at the above address after this time will not be considered.

The City of Portsmouth, New Hampshire (City) issues this Request for Proposals (RFP) for engineering services to design a drinking water treatment facility for the removal of Per- and Poly-Alkyl Substances (PFAS) from the Greenland Well water supply source that meets all specifications detailed in this RFP.

Proposals shall be submitted by qualified firms that are capable of performing and have a demonstrable background in the aspects of work described in the Scope of Services of this RFP.

There will be a non-mandatory pre-proposal site walk on **December 20, 2023 at 10:00 am**, at the Greenland Well site, off Post Road in Greenland. All proposers will have an opportunity to ask questions at this meeting.

Any questions regarding this RFP may be emailed to purchasing@cityofportsmouth.com. All questions shall be received by 4:30 pm on **Wednesday January 10, 2024**, and their corresponding responses will be issued as an addendum to this RFP on the City’s website.

Prospective consultants shall be solely responsible for obtaining all questions and answers related to this RFP. Addenda to this RFP, if any, including written answers to questions, will be posted on the City of Portsmouth purchasing website under the project heading at <https://www.cityofportsmouth.com/finance/purchasing-bids-and-proposals>. Addenda and updates will NOT be sent directly to proposers, written acknowledgment of the receipt of all addenda must be included in the cover letter of each proposer.

FUNDING

Funds for this project are provided solely through City water accounts. No state or federal funds are intended for use in the design of this project.

PROJECT BACKGROUND/PURPOSE

The Greenland Well is one of seven groundwater sources in the Portsmouth Water System. It is located off Post Road in Greenland NH and provides approximately 10% of the water for the system. PFAS concentrations in the Greenland Well have been consistent since monitoring began in 2014 (see Attachment 1: Table 1 – PFAS Monitoring Data). The design and construction of a PFAS treatment facility for the Greenland Well will ensure this important water source will meet the PFAS limits as proposed by the US EPA.

General water quality data from the Greenland Well are provided in Attachment 2. The Greenland Well is permitted by the New Hampshire Department of Environmental Services (NH DES) for 450 gpm (648,000 gpd). The existing Greenland Well building layout is provided in Attachment 3 along with a conceptual sketch of the area for consideration of an addition for the PFAS treatment system.

SCOPE OF SERVICES

The scope of services consists of site investigation, preliminary treatment system designs, final treatment system and building design, state and local permitting, preparation of final bid specifications and construction plans, bidding assistance, and team meetings.

The scope of services for the PFAS treatment facility design shall at a minimum include:

1. Meetings
 - a. Portsmouth Team (assume bi-weekly for four months)
 - b. Greenland Selectboard (assume two meetings)
 - i. Property use and ownership discussions
2. Site Investigation
 - a. Geotechnical Testing
 - b. Test Pitting and Infiltration Testing
 - c. Site Topographic and Boundary Survey
 - d. Hydraulic flow testing to ensure sufficient supply capacity to meet filter backwash requirements.
3. Process Layout
 - a. Granular activated carbon (GAC) filter vessel(s) sized appropriately for PFAS removal rates and well permitted capacity.
 - b. Process piping retrofit from existing pump head through filter/addition and return to existing piping (chemical injection and outlet to system).
 - c. Piping layout shall include:
 - i. Easy access for media load-in and load-out
 - ii. Filter bypass
 - iii. Provisions for potential additional ion-exchange polishing filter.

- iv. Filter-to-waste piping to exterior for frac-tank or infiltration basin discharge.
 - v. Provisions for connecting the Greenland backup well into the treatment system.
4. Site Plans
- a. Investigate options for managing backwash and filter-to-waste water during the GAC load-in/conditioning process.
 - b. The option of an infiltration basin shall be considered as this location does not have sewer and is near a wetland and stream.
 - c. Facility access and access road improvements shall be considered and included in the final plans if so directed by the City.
5. Building layout shall include:
- a. Sufficient space for accessing and working around GAC filter.
 - b. Sufficient space for the potential addition of ion-exchange vessel(s) capable of removing PFAS at the permitted well capacity.
 - c. Optimize use of existing building to minimize footprint of addition.
 - d. Shall meet requirements of all applicable building codes.
6. Plan Review, Certification and Approval
- a. All plans shall be reviewed and certified by NH licensed Professional Engineers qualified in associated practice areas.
 - b. Plans shall be submitted to and approved by the NH DES Drinking Water And Groundwater Bureau in accordance with NH Code of Administrative Rules Chapter Env-Dw 404.

DELIVERABLES

The following deliverables are required for this project:

1. **Basis of Design Report:** Include GAC sizing justification, PFAS removal objectives, estimated filter media capacity (bed life), site feasibility assessment, details of permit requirements, filter-to-waste management options, site plans, floor plans, process flow diagram, architectural rendering, building material options, stormwater management options, and estimated construction cost opinion.
2. **In-Progress Design Submittals** (Plans and Specifications) at 60% and 90%. Provide opinion of construction cost at 90% completion.
3. **Final, Bid-Ready Construction Plans and Specifications.** Reviewed and stamped by a NH licensed Professional Engineer. Drawings provided as 2 full size printed plans, 3 half-size printed plans, and digital in Adobe PDF format.

SCHEDULE

RFP's will be reviewed within two weeks of their submittal, and it is anticipated that a consultant will be selected within four weeks of the RFP submittal deadline. The City may request interviews with consultants prior to final selection. Contract signing is anticipated to take place within three weeks of the selection of the firm.

The City would like to bid the construction of this project before July 2024, for construction in late-2024/early 2025. Proposals shall include a schedule that reflects firm milestone dates for the deliverables.

CITY ROLE

City staff will be responsible for administering the project. Representatives of the City's Water Division will provide input during routine project meetings and assistance with fieldwork. The City will review all deliverables in a timely manner and provide on-going input to the process.

SUBMITTAL REQUIREMENTS

Proposals shall include the following and shall be organized using each of the required elements listed below as section headings:

1. **Cover Letter:** Signed by a representative of the consultant firm authorized to enter into contracts and commit the staff and corporate resources to complete the scope of work as expeditiously as possible.
2. **Firm Profile:** Provide a general outline of the firm, including brief history, areas of practice/service, place(s) of business of the firm, and the office from which the services of this proposal will be provided. If the firm is proposing the use of sub-consultants to perform any aspects of the project, similar information on each additional firm shall be included.
3. **Project Team:** Provide names and resumes of key professionals who would be assigned to the project. Each team member's education and experience shall be provided along with their role in the project and billing rate. The Project Manager shall be clearly identified, and a description of his/her relevant previous projects listed. A list of past relevant projects, which the proposed project staff have played a central role in developing, shall also be provided.
4. **Firm's Related Experience:** Provide a description of the experience of the firm and project team, including specific examples of similar projects. Provide other pertinent information that may clearly and effectively identify the prospective consultant as a qualified firm. *General promotional materials are not needed or wanted.*

5. **Scope of Services:** Describe in narrative form, the firm’s approach, and plan for accomplishing the work listed herein. The firm is encouraged to elaborate and improve on the tasks listed in the RFP; however, the consultant shall not delete any requested scope tasks unless explicitly noted. The firm shall submit a schedule and level of effort in hours by respective team staff for completing each task identified in the scope of work.
6. **References:** Provide three (3) references for relevant projects completed and/or in process. Include names of contact persons with email addresses and telephone numbers to facilitate contacting references. Identify the team members proposed for this project that participated in the reference projects.
7. **Firm Performance:** Provide a statement describing what procedures your firm proposes to implement and follow to ensure quality end products and a successful project.
8. **Proposal Submittal:** In a separate envelope labeled “**Price Proposal RFP# 23-24**”, provide the firm’s proposed budget itemized by task and a total project cost stated as a firm fixed fee. Hourly rates for project staff shall also be provided. The three highest ranked proposers shall have the price proposal opened.

Sealed Proposals, plainly marked with “RFP# 23-24, PFAS Treatment Facility Design for the Greenland Well” on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, 3rd floor, City Hall, 1 Junkins Avenue, Portsmouth NH 03801 will be accepted until 2:00 pm on **January 18, 2024**.

Three (3) hard copies and one (1) electronic copy (in .pdf format on USB thumb drive) are required. Submissions will not be accepted via fax or email. Submissions received at the above address after this time will not be considered.

EVALUATION CRITERIA

Each proposal will be evaluated initially according to the following criteria:

- | | |
|--|----------------------|
| a. Responsiveness to submission requirements. | Maximum of 15 points |
| b. Qualifications of firm and project team members. Particular attention will be given to the experience and demonstrated ability of the project manager and lead project engineer to successfully conduct similar projects. | Maximum of 30 points |
| c. Project understanding, approach, and methodology to perform scope of work in a timely manner. | Maximum of 30 points |
| d. Previous related projects. | Maximum of 25 points |

SELECTION AND CONTRACT DOCUMENT

The City, at its discretion, may select a firm outright or select a finalist(s) for in-person and/or virtual interviews. Upon identification of the three most qualified/highest ranking firms, the price proposals for those firms only will be opened. The Price Proposal may result in re-ranking and affect final selection.

When the contract is executed by both parties, the Consultant will be instructed to commence providing the work outlined in the contract. All information, data, documents, photos, computer records, and other materials of any kind acquired or developed by the consultant pursuant to this project shall be the property of the City of Portsmouth. If the City is unable to reach agreement with the highest-ranking firm, the City will enter into negotiations with the next highest-ranking firm.

RESERVATION OF RIGHTS

The City reserves the right to undertake such investigation as it deems necessary to evaluate the qualifications of the firm and to evaluate the qualifications submitted. Firms may be requested to execute releases for information. Failure to provide a release upon request will result in disqualification.

The City of Portsmouth reserves the right to reject any or all proposals, to waive technical or legal deficiencies, and to accept any proposal that it may deem to be in the best interest of the City and to negotiate the terms and conditions of any proposal leading to execution of a contract.

The City reserves the right to negotiate directly with the firm(s) selected for additional project work related to this project at the hourly rates presented in the proposal submitted in response to this RFP.

The City reserves the right to undertake such investigation as it deems necessary to evaluate the qualifications of the Consultant and to evaluate its submittal. Firms may be asked to submit releases as part of the investigation and review of qualifications. Failure to provide a release if requested will result in disqualification. All concepts, designs, information, and cost-savings ideas that may be generated during the selection process shall become the property of the City of Portsmouth

CONTRACT REQUIREMENTS:

Upon selection, the highest-ranking firm will be invited to enter into contract negotiations with the City. Any contract entered into by and between the City and the Consultant shall be subject to the following terms and conditions, in addition to other conditions to be negotiated at the time of agreement. If the City and the highest ranked consultant fail to negotiate a mutually agreeable contract, the City reserves the right to progress to the next highest ranked proposal.

1. Indemnification and Insurance Requirements

The Contract will require the Consultant to agree to pay on behalf of and hold harmless the City of Portsmouth for all claims arising in whole or in part from its work on behalf of the City. Consultant will be required to maintain insurance in such form as will protect the Consultant from claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract. Consultant shall also be required to maintain professional liability insurance. Amounts and coverages shall be subject to contract negotiations.

2. Non-Discrimination

Pursuant to State and Federal laws, any entity or individual that enters into a contract for goods or services with the City of Portsmouth or any of its boards, agencies, and departments and any recipient of City funds shall:

- a) Implement an employment nondiscrimination policy prohibiting discrimination in hiring, discharging, promoting or demoting, matters of compensation, or any other employment-related decision or benefit on account of actual or perceived race, ethnicity, color, religion, national origin, gender, disability, age, military status, sexual orientation, gender identity, gender expression, or marital or familial status.
- b) Not discriminate in the performance of the contract on account of actual or perceived race, ethnicity, color, religion, national origin, gender, disability, age, military status, sexual orientation, gender identity, gender expression, or marital or familial status.
- c) Incorporate the foregoing requirements in all subcontracts related to its contract with the City.

The foregoing terms shall have the meaning prescribed to them in N.H. RSA Chapter 354-A or in the Uniformed Services Employment & Reemployment Rights Act, as applicable.

3. Ownership of Information

All information, data, documents, photos, computer records and other materials of any kind acquired or developed by the Consultant pursuant to this agreement shall be the property of the City.

4. Indemnification

Consultant shall indemnify and hold harmless the City from any and all losses, claims, costs, expenses, actions, causes of action, damages and obligations caused by negligent

acts or omissions and/or any violations of applicable law or regulations by Consultant, its officers, employees, agents, applicants or beneficiaries.

5. Choice of Law

This Agreement shall be governed by the laws of the State of New Hampshire, and jurisdiction over any dispute arising from this agreement shall exist solely in Rockingham County, New Hampshire.

ADDITIONAL INFORMATION

Addenda to this request for qualifications, if any, including written answers to questions, will be posted on the City of Portsmouth website at the City's web site at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Firms submitting qualifications should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the Qualifications Statement. Failure to do so may result in disqualification.

Attachment 1
Table 1 – PFAS Monitoring Data

NHDES MCL		-	-	-	18	-	15	12	-
SAMPLE LOCATION	COLLECTION DATE	PFBS	PFBA	PFHpA	PFHxS	PFHxA	PFOS	PFOA	PFPeA
Greenland Well	5/16/2014	ND	NA	ND	ND	NA	ND	ND	NA
Greenland Well	7/21/2014	ND	NA	ND	ND	NA	ND	ND	NA
Greenland Well	2/10/2015	ND	NA	ND	ND	NA	ND	ND	NA
Greenland Well	8/1/2016	3.3 J	ND	ND	ND	ND	7.0 J	ND	7.1 J
Greenland Well	11/17/2016	ND	ND	ND	6.1 J	ND	14 J	ND	4.6 J
Greenland Well	11/17/2016	3.5 J	ND	ND	5.8 J	ND	6.5 J	ND	ND
Greenland Well	4/27/2017	6.2 J	ND	ND	6.0 J	3.3 J	3.7 J	ND	ND
Greenland Well	10/31/2017	ND	ND	ND	ND	ND	5.2 J	ND	ND
Greenland Well	4/26/2018	ND	ND	ND	ND	ND	ND	ND	ND
Greenland Well	10/24/2018	ND	ND	ND	ND	8.5 J	8.6 J	9.1 J	ND
Greenland Well	11/28/2018	ND	ND	ND	ND	5.8 J	ND	ND	ND
Greenland Well	4/29/2019	2.3	2.8	3.1	2.1	5.6	3.3	4.2	5.8
Greenland Well	4/29/2019	2.3	2.7	3.0	1.9 J	5.3	3.1	4.2	5.5
Greenland Well	7/31/2019	1.6 J	1.5 J	1.3 J	1.8 J	3.2	2.8	3.0	3.5
Greenland Well	10/25/2019	1.7 J	1.4 J	1.2 J	1.7 J	2.7	3.0	2.4	1.4 J
Greenland Well	1/23/2020	2.8	2.0 J	1.6 J	2.5	3.5	4.2	3.8	3.0
Greenland Well	4/29/2020	1.3 J	1.7 J	1.6	0.9 J	2.5	1.2 J	2.2	3.3
Greenland Well	7/22/2020	1.6 J	1.5 J	1.2 J	1.5 J	2.3	2.4	2.4	2.4
Greenland Well	10/30/2020	2.7	1.7 J	1.6 J	2.5	3.9	4.4	3.8	3.7
Greenland Well	1/28/2021	2.6	1.7 J	1.6 J	2.1	4.0	4.2	4.2	3.8
Greenland Well	4/20/2021	3.2	1.9 J	1.6 J	2.4	4.3	4.2	4.3	3.7
Greenland Well	8/3/2021	2.6	2.0 J	1.7 J	2.2	4.3	4.7	4.3	4.3
Greenland Well	11/12/2021	3.6	2.4	1.9 J	2.6	5.2	5.7	4.9	4.9
Greenland Well	3/1/2022	ND	2.7	3.1	ND	5.2	3.0	4.2	6.4
Greenland Well	6/10/2022	3.1	2.1	2.3	1.9 J	4.5	3.7	4.6	4.8
Greenland Well	9/1/2022	2.8	2.3	ND	2.5	4.4	4.8	4.7	4.2
Greenland Well	11/10/2022	2.5	ND	ND	ND	3.7	2.7	4.0	3.1
Greenland Well	3/9/2023	2.3	2.2	2.2	ND	4.6	2.5	3.6	5.1
Greenland Well	4/17/2023	2.6	2.2	2.4	ND	4.8	2.9	3.9	5.7
Greenland Well	8/9/2023	2.6	ND	ND	ND	4.3	3.2	3.8	4.1
Greenland Well	10/12/2023	2.5	ND	ND	ND	4.1	3.2	3.9	4.0

* PFAS measured with EPA Methods 533 and 537.1. Non-detected PFAS are not listed in this table

Attachment 2

Table 2 General Water Quality

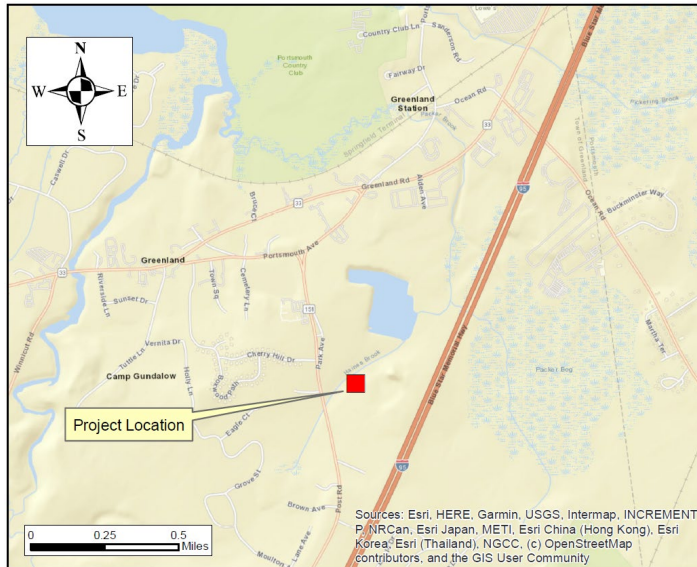
GREENLAND WELL

General Water Quality

Calcium	mg/L	47
Sulfate	mg/L	15
Sodium	mg/L	50
Chloride	mg/L	90
Fluoride	mg/L	<0.2
Potassium	mg/L	2.2
Magnesium	mg/L	7.4
Nitrate (as N)	mg/L	2.5
Iron	mg/L	0.02
Manganese	mg/L	0.02
Hardness (as CaCO ₃)	mg/L	150
Alkalinity (as CaCO ₃)	mg/L	116
Specific Conductivity	µS/cm	600
Total Dissolved Solids	mg/L	294
Dissolved Organic Carbon	mg/L	<0.5
Total Organic Carbon	mg/L	<0.5
Arsenic	mg/L	<0.001
Uranium	µg/L	<1
pH	S.U.	7.2

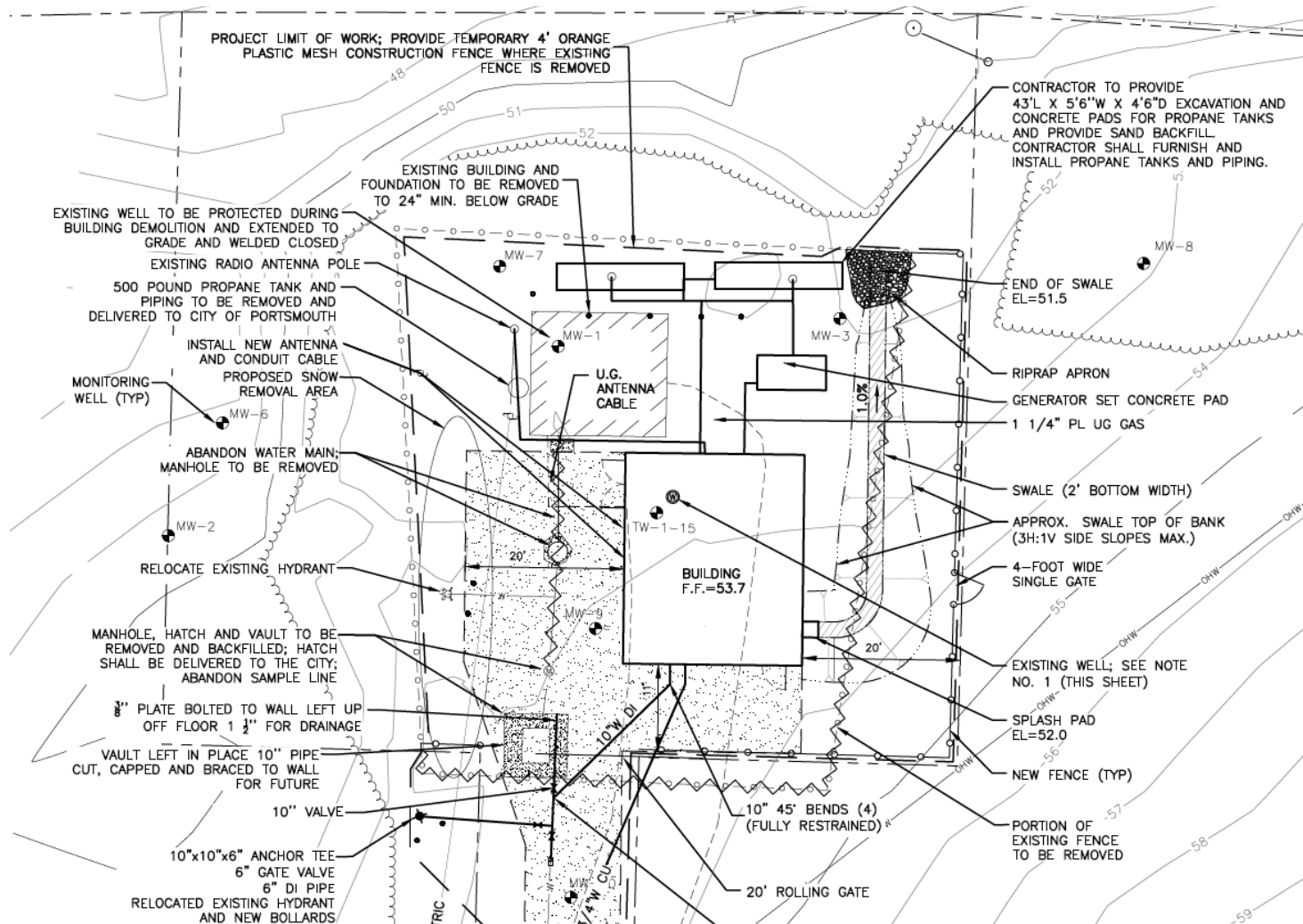
Attachment 3

Existing Site Location and Layout



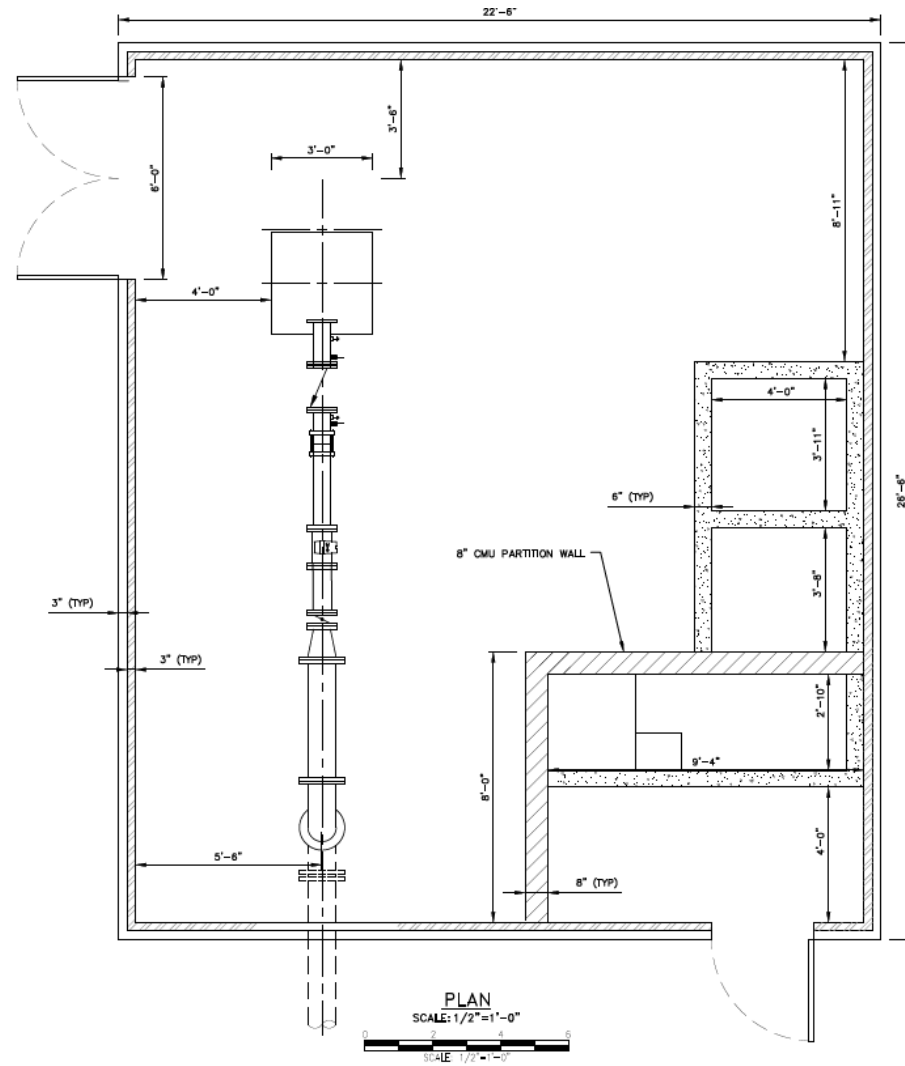
Attachment 3 (continued)

Existing Site Location and Layout



Existing Greenland Well Building – Design Drawing (WSE)

Attachment 3 (continued)
Existing Site Location and Layout



Existing Greenland Well Building – Design Drawing (WSE)