



MERRIMACK VILLAGE DISTRICT

June 22, 2016

Mr. Edward Canning, Director
Environment, Health and Safety
Saint-Gobain Performance Plastics
One Sealants Park
Granville, NY 12832

Re: *General Services Agreement*
Wells #4 and #5 PFC Treatment Prelim. Design Phase
Merrimack Village District
Merrimack, New Hampshire

Dear Mr. Canning:

We have enclosed, for signature by Saint-Gobain, a General Services Agreement relating to the above-referenced project. The agreement has been prepared as a 3-party agreement with MVD as the client, but Saint-Gobain is responsible for payment. Once executed, please return two copies of the Agreement to this office.

Also attached is Engineering Service Request #1 (ESR #1), which authorizes our consultant, Underwood Engineers, to proceed with the Preliminary Design Phase for treatment at Wells #4 and #5 as well as engineering assistance for the interim emergency connection with Pennichuck Water Works. ESR #1 also requires signature by Saint-Gobain. Following receipt of the executed Agreement and ESR, we will contact you to review the work and coordinate the project tasks.

We are looking for Saint Gobain authorization by June 27th. Please contact us if you have any questions.

Very truly yours,
MERRIMACK VILLAGE DISTRICT


Ron Miner, Jr.
Superintendent

Encl.

Cc: Thomas S. Burack, Commissioner, NHDES
 Michael Wimsatt, Hazardous Waste Division, NHDES
 Greg Michael, Counsel, MVD
 Keith A. Pratt, PE, Underwood Engineers, Inc.
 Edwin L. Vopelak, Jr., P.E., CT Male Associates (w/ enc)

2021

June 22, 2016

Mr. Ronald Miner Jr.
Superintendent
Merrimack Village District
2 Greens Pond Road
PO Box 1949
Merrimack, NH 03054

Re: **General Services Agreement**
Professional Engineering Services (Wells #4 and #5 PFC Treatment Prelim. Design
Phase)
Merrimack, New Hampshire

Dear Mr. Miner:

We are pleased to submit this Agreement whereby Underwood Engineers, Inc., hereinafter called the **Engineer**, would provide general professional engineering services as a consulting engineer for Merrimack Village District, hereinafter called the **Owner**. This Agreement is in response to Treatment of PFC's. It is understood that the services to be rendered will be defined through separately issued requests defining a specific scope and budget. This General Services Agreement defines the General Provisions and billing rates.

This agreement is a 3-party agreement in which the MVD is the **Owner** but, Saint-Gobain Performance Plastics (**Industry**) will be responsible for payment.

REQUEST FOR SERVICES

The **Engineer** will furnish services only at the specific request of the **Owner** and only for the specific purpose contained in each request. Whenever possible, the **Owner** will transmit such requests to the **Engineer** in writing. The attached sample form (Attachment A) for an Engineering Service Request (ESR) may be used for this purpose. The ESR includes a description of the work (scope of work), budget and schedule.

ENGINEERING FEES AND CHARGES

Unless stated otherwise in the ESR, fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the **Engineer's** standard technical payroll plus an allowance to cover overhead and profit. Expenses will be billed at cost, unless noted otherwise. Specialty subconsultants utilized by the

Engineer will be charged to the **Owner** without mark-up unless noted otherwise in the ESR.

The current hourly rates are attached (Attachment B). Hourly rates will be in effect for one-year from the date of this Agreement. Adjustments to the rates will be as issued by the **Engineer** annually.

OTHER ENGINEERING SERVICES

On construction projects where federal or state funds are anticipated, the **Engineer** would prepare a separate Agreement utilizing the required contract documents to maintain eligibility. The scope and fee would cover only the particular project in question, outlining the work to be done, and specifying the fee applicable to each phase of the work.

If any legal proceedings are required by the **Engineer**, the fee for appearance in a court of law or quasi-judicial hearing shall be on a per diem basis. The per diem rate is computed on the basis of each half day at a court or hearing regardless if active testimony is given. The per diem rate is based on 1.5 x the hourly rate of the employee involved (4-hour minimum). An ESR would be prepared and authorized in advance of any legal work.

AGREEMENT

This letter Agreement and the attached General Provisions will represent the entire agreement between the **Owner** and the **Engineer**, with respect to the Project(s), and may only be modified in writing, signed by both parties. (**Note: Limitation of Liability, G.P., Section 5.7**)

BILLINGS AND PAYMENT

Invoices will be submitted monthly to the **Owner** with a copy submitted to the **Industry**. The **Industry** shall submit payment directly to the **Engineer**. Payment will be due the **Engineer** within 30 days of the billing date.

RENEWAL AND CANCELLATION

This Agreement shall extend for three (3) years from its effective date, but shall be automatically renewed on an annual basis on each anniversary of its effective date, unless canceled by the **Engineer** or the **Owner** by written notice as prescribed in the General Provisions. If the **Engineer** and the **Owner** mutually consent, this agreement or any



Page 3 of 3
Mr. Ronald Miner Jr.
June 22, 2016

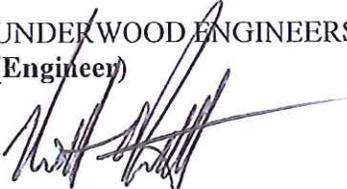
renewal thereof may also be canceled, amended or superseded by a new agreement at times other than the anniversary date.

EFFECTIVE DATE OF AGREEMENT

This letter Agreement and General Provisions, if accepted by the **Owner**, shall become an Agreement effective on the date of acceptance by the **Owner**. The return of one signed and dated copy shall be interpreted by the **Engineer** as authorization to proceed with engineering services when requested.

Respectfully submitted,

UNDERWOOD ENGINEERS, INC.
(Engineer)



Keith A. Pratt, P.E.
President



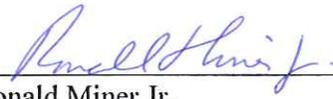
W. Steven Clifton, P.E.
Vice President

KAP/WSC
Enclosures

APPROVED AND ACCEPTED

MERRIMACK VILLAGE DISTRICT
MERRIMACK, NEW HAMPSHIRE
(Owner)

On This 22 Day of June, 2016

By 
Ronald Miner Jr.
Superintendent

SAINT-GOBAIN PERFORMANCE
PLASTICS
(Industry)
For payment

Edward J. Canning Date
Director
Environmental, Health and Safety
Saint-Gobain Performance Plastics
One Sealants Park
Granville, NY 12832



GENERAL PROVISIONS

Attached and made a part of a GENERAL SERVICES AGREEMENT dated June 22, 2016 between

Merrimack Village District, Merrimack, New Hampshire

(OWNER)

and

Underwood Engineers

(ENGINEER)

in respect to the project (Project) described herein.

SECTION 1 – MEANING OF TERMS

1.1. As used herein the term "this Agreement" refers to the General Services Agreement to which these General Provisions are attached, as if they were part of one and the same document.

SECTION 2 – SERVICES OF ENGINEER

2.1. ENGINEER shall not be obligated to perform any prospective work unless and until OWNER and ENGINEER agree in writing as to the particulars of the Specific Project, including the scope of ENGINEER's services, time for performance, ENGINEER's compensation, and all other appropriate matters.

2.2. Each duly executed Scope of Work or Engineering Service Request (ESR) shall be subject to the terms and conditions of this Agreement.

2.3. ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in ENGINEER having to certify, guarantee, or warrant the existence of conditions whose existence ENGINEER cannot ascertain within its services for that Specific Project. OWNER agrees not to make resolution of any dispute with ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon ENGINEER signing any such certification.

SECTION 3 - OWNER'S RESPONSIBILITIES

3.1. The OWNER will furnish or make available to ENGINEER any or all of its records, maps, or other data which, in the judgment of ENGINEER, are pertinent to his work. The OWNER will authorize and assist ENGINEER in obtaining any such pertinent information from other public and private sources. When requested by ENGINEER, the OWNER will furnish all reasonable manual assistance of OWNER's forces in performing investigations requiring such assistance.

Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

3.2. OWNER shall provide all criteria and full information as to OWNER's requirements for the Project; designate a person to act with authority on OWNER's behalf in respect of all aspects of the Project; examine and respond promptly to ENGINEER's submissions; and give prompt written notice to ENGINEER whenever he observes or otherwise becomes aware of any defect in the work.

3.3. OWNER shall also do the following and pay all costs incident thereto:

- Guarantee access to and make all provisions for ENGINEER to enter upon public and private property, when required.
- Provide such legal, accounting, independent cost estimating and insurance counseling services as may be required for the Project.
- Provide any auditing service required.

SECTION 4 – BUDGETS AND PAYMENTS

4.1. Suggested budgets, as used in this Agreement, are best estimates by ENGINEER. The budgets are based on available information and prior to any detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size.

4.2 Invoices for ENGINEER'S services shall be submitted on a monthly basis, mailed to OWNER at the address of OWNER indicated. All such invoices shall be payable within thirty (30) days after the date indicated on the invoice and shall, in the event that payment is not duly made, bear interest at 1% per month starting thirty (30) days from the date of original billing. It is further understood that if there be failure by OWNER to pay any invoice due to ENGINEER within ninety (90) days after the date of the invoice, ENGINEER may, without waiving any other claim or right against OWNER, and without liability whatsoever to OWNER, terminate its performance hereunder. After ninety (90) days from the date of invoice, the ENGINEER may also place unpaid balances in the hands of any agency or an attorney for collection. OWNER shall pay all costs and expenses of such collection, including reasonable attorney's fees and court costs, if any. Should it be necessary to institute legal proceedings for collection, it is understood and agreed that interest at the rate set forth above shall continue to accrue during the pendency of any such action and until such time as ENGINEER receives actual payment in full, whether by settlement, judgment, award or otherwise.

SECTION 5 – GENERAL CONSIDERATIONS

5.1. Standard of Care: The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or

otherwise, in connection with ENGINEER'S services.

5.2. Indemnification: The ENGINEER agrees, to the fullest extent permitted by law, to indemnify and hold harmless the OWNER, its officers, directors and employees (collectively, OWNER) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the ENGINEER's negligent performance of professional services under this Agreement and that of its subconsultants or anyone for whom the ENGINEER is legally liable. The OWNER agrees, to the fullest extent permitted by law, to indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, ENGINEER) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the OWNER's negligent acts in connection with the Project and the acts of its contractors, subcontractors or consultants or anyone for whom the OWNER is legally liable. Neither the OWNER nor the ENGINEER shall be obligated to indemnify the other party in any manner whatsoever for the other party's own negligence or for the negligence of others.

5.3. Construction Phase Engineering:

5.3.1. ENGINEER shall not at any time supervise, direct, control, or have authority over any contractor work, nor shall ENGINEER have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a contractor to comply with Laws and Regulations applicable to such contractor's furnishing and performing of its work.

5.3.2. ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to

furnish and perform the Work in accordance with the Contract Documents.

5.3.3. ENGINEER shall not provide or have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or for enforcement of construction insurance or surety bonding requirements.

5.3.4. ENGINEER shall not be responsible for the acts or omissions of any Contractor, Subcontractor, or Supplier, or of any of their agents or employees or of any other persons (except ENGINEER's own employees and its subconsultants) at a Site or otherwise furnishing or performing any of a Contractor's work; or for any decision made regarding the Contract Documents, or any application, interpretation, or clarification of the Contract Documents other than those made by ENGINEER.

5.3.5. While at a Site, ENGINEER's employees and representatives shall comply with the specific applicable requirements of Contractor's and Owner's safety programs of which ENGINEER has been informed in writing.

5.3.6. For each design performed or furnished, ENGINEER shall be responsible only for those construction phase services that have been itemized and expressly required of Engineer in writing through an ESR.

5.4. Ownership of Instruments of Service:

5.4.1. The OWNER acknowledges the ENGINEER's documents, including electronic files, as the work papers of the ENGINEER and are the ENGINEER's instruments of professional service. The ENGINEER retains the right to re-use the documents for any purpose.

5.4.2. In recognition of 5.4.1, final design and construction documents prepared under this Agreement shall become the property of the OWNER upon completion of the services and payment in full of all monies due to the ENGINEER. The OWNER shall not reuse or

make any modification to the construction documents without the prior written authorization of the ENGINEER. The OWNER agrees, to the fullest extent permitted by law, to defend, indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, Consultant) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the construction documents by the OWNER or any person or entity that acquires or obtains the construction documents from or through the OWNER without the written authorization of the ENGINEER.

5.4.3. Under no circumstances shall the transfer of ownership of the ENGINEER's drawings, specifications, electronic files or other instruments of service be deemed a sale by the ENGINEER, and the ENGINEER makes no warranties, either express or implied, of merchantability and fitness for any particular purpose, nor shall such transfer be construed or regarded as any waiver or other relinquishment of the ENGINEER's copyrights in any of the foregoing, full ownership of which shall remain with the ENGINEER, absent the ENGINEER's express prior written consent.

5.5. Opinions of Cost: ENGINEER's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent ENGINEER's estimate as an experienced and qualified professional generally familiar with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If OWNER requires greater assurance

as to probable Construction Cost, OWNER must retain an independent cost estimator.

5.6. Insurance: ENGINEER shall procure and maintain insurance to protect from claims for Worker's Compensation, General Liability, Automobile Liability, and Professional Liability. Upon request, the OWNER will be listed as additional insured with respect to applicable general liability insurance policies for a specific project.

5.7. Limitation of Liability: OWNER agrees to limit the liability of ENGINEER to OWNER due to negligent acts, errors or omissions by ENGINEER, such that the total aggregate liability to all those named shall not exceed \$50,000 or the total fee for services rendered on this project by ENGINEER, whichever is the greater.

5.8. Governing Law: The terms of this Agreement shall be governed by the laws of the State of New Hampshire.

5.9. Termination: The obligation to provide further services under this Agreement may be terminated by either party upon seven days' written notice (or as indicated above for non-payment) in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In the event of any termination, ENGINEER will be paid for all services rendered to the date of termination, all Reimbursable Expenses and termination expenses.

5.10. Successors and Assigns

5.10.1. OWNER and ENGINEER each binds himself and his partners, successors, executors, administrators, assigns and legal representatives to the other party of this Agreement, and to the partners, successors, executors, administrators, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations of this Agreement.

5.10.2. Neither OWNER nor ENGINEER shall assign, sublet or transfer any rights under or interest in (including, but without limitation, moneys that may become due or moneys that are due) this Agreement without the written consent of the other except to the extent that the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent ENGINEER from employing such independent consultants, associates and subcontractors as he may deem appropriate to assist him in the performance of services hereunder.

5.10.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than OWNER and ENGINEER.

5.11. Severability: Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, which agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

5.12. Non-Exclusive Agreement: Nothing herein shall establish an exclusive relationship between OWNER and ENGINEER. Owner may enter into similar agreements with other professionals for the same or different types of services contemplated hereunder, and ENGINEER may enter into similar or different agreements with other project owners for the same or different services contemplated hereunder.

5.13. Dispute Resolution: In an effort to resolve any conflicts that arise during the design and construction of the Project or following the completion of the Project, the OWNER and the

ENGINEER agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation.

The OWNER and the ENGINEER further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the Project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with their subcontractors, subconsultants, suppliers and fabricators, thereby providing for mediation as the primary method for dispute resolution among the parties to all those agreements.

ATTACHMENT A
ENGINEERING SERVICES REQUEST
AUTHORIZATION TO PROCEED

SAMPLE

To: Underwood Engineers, Inc. (**Engineer**)
25 Vaughan Mall
Portsmouth, New Hampshire 03801

ESR No.: #__
File No.:
Date: Month, Day, Year
Description: **Project Name**

From : _____ (**Owner**)

Owner's Contact(s) (this project): _____
Engineer's Contact(s) (this project): _____

Under agreement for Professional Services as Consulting **Engineer** for the **Owner** (General Services Agreement dated _____), **Engineer** is authorized to proceed with the following work:

Description:

Scope of Work:

Engineer will provide the following engineering services:

Budget Costs:

Task 1 – _____	\$0
Task 2 – _____	\$0
Task 3 – _____	\$0
Task 4 – _____	\$0
Task 5 – _____	\$0
TOTAL	\$0

Fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the Engineer's technical payroll plus an allowance to cover overhead and profit. Fees also include reimbursement for transportation expenses (per mile), out-of-pocket travel expenses (tolls), prints, telephone calls and miscellaneous materials that may be required to complete the work.

Suggested budgets, as used herein, are best estimates by Underwood Engineers. The budgets are based on available information and prior to a detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size. Budget will not be exceeded without written authorization.

ATTACHMENT A

Schedule:

Underwood Engineers, Inc. will begin work within ___ days of authorization to proceed and provide the project deliverables within ___ days thereafter.

Approval:

Approval and authorization to proceed with the work:

<Client>
<Title, Town>

Date

W. Steven Clifton, P.E., Vice President Date
(or Keith Pratt, P.E., President)
Underwood Engineers, Inc.

ATTACHMENT B

UNDERWOOD ENGINEERS, INC.
Portsmouth & Concord, New Hampshire
STANDARD BILLING RATES
Effective through December 31, 2016

Labor Rates:

Principal-in-Charge	\$160 to	\$200 per hour
Senior Project Manager	\$130 to	\$180 per hour
Project Manager	\$100 to	\$150 per hour
Senior Project Engineer	\$90 to	\$130 per hour
Project Engineer	\$70 to	\$110 per hour
Resident Engineer	\$70 to	\$110 per hour
Resident Engineer II	\$50 to	\$95 per hour
Technician	\$50 to	\$95 per hour
Clerical	\$50 to	\$70 per hour

Reimbursables

Mileage	IRS Reimbursable Rate
Prints	\$1.50 each
Copies	\$0.10 each
Telephone	\$1.85 per call
Fax	\$1.00 per call
Field Supplies	At Cost
Postage	At Cost
Food & Lodging	At Cost
Subcontractors	At Cost
Miscellaneous Job Related Expenses	At Cost

Approved by Board of Directors:

Date: 1/7/16

KAP
WSC
CAM

WAB
WSC
CAM

ENGINEERING SERVICES REQUEST
AUTHORIZATION TO PROCEED

To: Underwood Engineers, Inc. (**Engineer**)
25 Vaughan Mall
Portsmouth, New Hampshire 03801

ESR No.: One (#1)
File No.:
Date: June 22, 2016
Description: **Wells #4 and
#5 PFC Treatment
Prelim. Design Phase**

From: Merrimack Village District (**Owner**)
2 Greens Pond Road
PO Box 1949
Merrimack, New Hampshire 03054

Owner's Contact(s) (this project): Ronald Miner Jr., Superintendent
Engineer's Contact(s) (this project): Michael B. Metcalf, P.E., Senior Project Manager

Under agreement for Professional Services as Consulting **Engineer** for the **Owner** (General Services Agreement dated June 6, 2016), **Engineer** is authorized to proceed with the following work:

Description:

Scope of Work:

See attached **Exhibit "A"**: Scope of Services

Budget Costs:

Task 1 – Preliminary Design – Wells #4 and #5	\$36,000
Task 2 – Topographic Survey – Wells #4 and #5	\$8,400
Task 3 – Subsurface Investigations – Wells #4 and #5	\$7,900
Task 4 – Interim Emergency Supply Options	\$13,500
TOTAL	\$65,800

Fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the Engineer's technical payroll plus an allowance to cover overhead and profit. Fees also include reimbursement for transportation expenses (per mile), out-of-pocket travel expenses (tolls), prints, telephone calls and miscellaneous materials that may be required to complete the work.

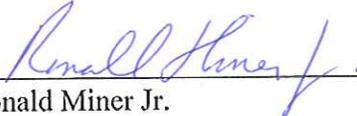
Suggested budgets, as used herein, are best estimates by Underwood Engineers. The budgets are based on available information and prior to a detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size. Budget will not be exceeded without written authorization.

Schedule:

See attached Exhibit "A" for schedule.

Approval:

Approval and authorization to proceed with the work:



Ronald Miner Jr. Date
Superintendent, Merrimack Village District



Keith Pratt, P.E., President Date
Underwood Engineers, Inc. 6/24/16

Approved for Payments

Edward J. Canning Date
Director
Environmental, Health and Safety
Saint-Gobain Performance Plastics
One Sealants Park
Granville, NY 12832

EXHIBIT "A"

SCOPE OF SERVICES

**Facility Improvements – Wells #4 and #5 PFC Treatment Prelim. Design Phase
PRELIMINARY DESIGN PHASE**

Merrimack Village District, Merrimack, New Hampshire
June 22, 2016

PROJECT UNDERSTANDING

Underwood Engineers (UE) will provide professional engineering design services for the Merrimack Village District (MVD) for improvements to its water system facilities at Wells #4 and #5 located off Front St. A water treatment facility is needed to reduce PFC's because the current combined level of PFOA and PFOS in both Wells #4 and #5 exceed the long-term health advisory of 70 parts per trillion (ppt) recently established by EPA. See summary data (ppt) below compiled by NHDES. NHDES has established 70 ppt of PFOA, PFOS or PFOA + PFOS as an Ambient Groundwater Quality Standard (AGQS), which in NH, has the same enforcement requirements as a Maximum Contaminant Level (MCL) As a result, NHDES has de-activated the wells (see attached letter dated June 8, 2016).

Updated June 17, 2016

PFOA/PFOS Sampling Results for Merrimack Village District Water Works

**MVD 7&8 TP – is a blend of MVD wells 7 and 8 after green sand treatment*

Well Name:	MVD-2	MVD-3	MVD-4 (offline)	MVD-5 (offline)	MVD-7	MVD-8	MVD-7&8 TP*
5/26/16	12/ND	13/ND	34/ND	35/ND	13/ND	8/ND	10/ND
5/12/16	18/4.4	29/4.5	75/5.5	79/4.8	25/4.6	13/4.5	17/4.4
5/5/16	33/4.9	45/16.7	130/11	66/4.7	27/4.7	9.6/ND	16/ND
4/28/16	24/ND	25/ND	85/5.9	57/ND	21/ND	9.2/ND	14/ND
4/21/16	26/5.5	26/ND	93/7.0	56/5.4	25/5.4	9.9/9.1	16/ND
4/14/16	31/15	32/6.1	94/8.8	67/5.5	30/7.0	10/ND	18/4.9
4/7/16	28/ND	Not Available – Scheduled Maintenance	94/6.8	52/ND	28/5.5	8.6/ND	Not Sampled
3/31/16	27/ND	Not Available – Scheduled Maintenance	90/5.6	56/ND	26/ND	8.5 & 9.7/ ND & ND	Not Sampled
3/9/16	17/ND	Not Available – Scheduled Maintenance	90/6	54 & 52/ND &ND	Not Available – Scheduled Maintenance	Not Available – Scheduled Maintenance	Not Sampled

UE recently completed a draft report discussing temporary alternatives to removing PFC's at Wells #4 and #5 and identified granular activated carbon (GAC) and synthetic resins as possible treatment technologies. GAC is a proven technology and is being used elsewhere for public water supply treatment for PFC's, however, resins may be a more cost-effective option due to lower O&M costs. Since the UE report focused on temporary treatment options, additional

design phase services are needed to establish the basis of design for long-term treatment at Wells #4 and #5. It is anticipated that the permanent treatment facility will be located on MVD property near the wells. See suggested layout on attached Figure: Well #4 & #5 Conceptual Layout (attached).

Therefore, a Preliminary Design Phase is proposed to establish the recommended treatment technology, basis of design and opinion of cost.

The Goals of this phase include:

- Compare alternative technologies to identify cost effective solutions that consider long-term operating costs.
- Identify the recommended treatment technology for Wells #4 and #5. Note, piloting may be needed in a future phase.
- Establish the basis of design including design flows, type of facility, size of facility, and location of facility.
- Identify next steps and schedule to design and construct a treatment facility.

Note, the design efforts described within the Scope of Work will be coordinated with MVD, NHDES, and Saint-Gobain High Performance Plastics (SGHPP) or their designated agents, together referred to as the “stakeholders”. However, MVD remains as the client.

It may be appropriate to begin the Final Design Phase prior to completion of the Preliminary Design Phase. UE will develop a design phase scope as soon as the basis of design is complete enough to establish the final design scope.

Since Wells #4 and #5 have been de-activated, it is necessary to ensure that MVD has adequate supply to provide for existing demands and emergencies such as firefighting. UE will develop strategies to address the short-term loss of supply by evaluating other options for supply needed to meet demand. This work is necessary to address the June 13, 2016 letter from NHDES to Saint-Gobain Performance Plastics.

SCOPE OF WORK

Underwood Engineers will provide the following professional engineering services:

Task 1 – Preliminary Design – Wells #4 and #5

Meetings and Work Session

- Coordinate and attend up to three (3) meetings as follows:
 - *Kick-off* meeting with the stakeholders to review project goals and schedule.
 - *Operator's Meeting* with MVD water system operators to discuss their concerns and desired project outcomes.
 - *Work Session* with MVD Commissioners and stakeholders to present results of the Preliminary Design Phase.

Site Visit

- Conduct a site visit to Wells #4 and #5 to confirm the current status, condition and equipment.

Cost Effective Evaluation

- UE will conduct a cost effective evaluation (capital and O&M) to compare the 20-year present worth costs of GAC vs. a synthetic resin.
- If piloting is needed, UE will provide a recommended scope of work to conduct it as soon as possible. It is intended that the lowest cost alternative (20-year present worth) would be the recommended technology assuming they are both viable and proven technologies.

Establish Basis of Design

- Summarize water production for Wells #4 and #5 to establish the treatment plant design flow. It is anticipated that the combined flows from Wells #4 and #5 is in the range of 800 gpm.
- Identify treatment technology.
- Evaluate the need for backwash and/or pretreatment.
- If backwash is needed, establish method of backwash waste disposal.
- Establish size and type of treatment building.
- Establish how new treatment will interface with existing facilities/treatment.
- Provide a summary of basis of design.

Preliminary Design – 30%

- Prepare 30% design drawings of the site, process piping and building floor plan.
- Note: electrical, SCADA, structural, mechanical, and architectural drawings will be prepared during the final design phase.
- Identify needed permits.
- Prepare an updated opinion of cost and suggested schedule.
- Prepare a technical memorandum.
- Submit technical memorandum and 30% design drawings to stakeholders for review.

Deliverables (Task 1)

UE will provide the following deliverables:

- *Basis of Design* in list and/or table format identifying proposed improvements.
- *30% Design Drawings* as noted above.
- *Updated Opinion of Cost. Suggested Project Schedule.*
- *Technical Memorandum with Opinion of Cost and Suggested Next Steps.*

Task 2 – Topographic Survey – Wells #4 and #5

Underwood Engineers will provide engineering topographic survey using ground survey techniques.

- Establish ground control including benchmarks at each project area. Unless there is a benchmark within 1,000 feet, an assumed datum will be used.
- Provide topographical survey of the project area at 1"=20' scale (or other scale if appropriate based on site conditions) with a contour interval of 2 feet.
- Survey will include:
 - Ground survey to locate utilities based on visible surface features and markings only, borings, etc.
 - Develop base plans of existing structures, with key elevations.
 - Delineate adjacent wetlands, if any.
 - Identify property boundaries based on Town GIS information..

Deliverables (Task 2)

UE will provide the following deliverables:

- *Topographic survey of existing conditions.*

Task 3 – Subsurface Investigations – Wells #4 and #5

- Complete up to five (5) borings at the site. At least four (4) in the general vicinity of the proposed corners of the building.
- Prepare a geotechnical report regarding construction and dewatering techniques.

Deliverables (Task 3)

UE will provide the following deliverables:

- *Geotechnical report.*

Task 4 – Interim Emergency Supply Options

In accordance with the June 13, 2016 letter, NHDES has requested that a pumping station be installed at the existing connection between PWW and MVD at Route 101A. Additionally, UE will evaluate the ability of this connection to meet the necessary demands on the system (including fire flows) and will consider other viable options, if necessary. The primary goal is to identify the improvements needed for the interim emergency solutions to maintain adequate supply for summer time demands, and particularly in drought conditions and/or a fire emergency, without the use of Wells #4 and #5.

The improvements to the PWW connection are considered short-term and it is anticipated that the pump will be removed once Wells #4 and #5 can be put back online or other viable solutions are found. The work will include the following:

- Review the November 2014 Master Plan Update and update demand information with recent data. Utilizing NHDES and MVD standards, available supply will be compared to the following demands:
 - Annual Average
 - Summertime Average
 - Maximum Daily

- Meet with MVD and NHDES to discuss potential options for interim emergency supply.
- Coordinate with MVD and PWW to design and specify a pump for the Rte. 101A connection. At this time, it is assumed that the pump will be purchased and installed by MVD. The work will include the following:
 - Meet with PWW and MVD to coordinate connection
 - Using existing record drawings, assist with specifying the pump and providing a conceptual design layout for install by MVD or MVD's contractors.
 - Coordinate with NHDOT for review of the PS installation.
 - Evaluate fire flows using the PWW connection and the existing hydraulic model to determine design point and to assess available fire flows.
 - Submit proposed pumping station design to PWW and NHDES for review and approval.
- Coordinate with EGGI to discuss other supply options.
- Provide a recommended interim solution for meeting demands until Wells #4 and #5 are available.
- Prepare a technical memorandum summarizing the evaluation.

Deliverables (Task 4)

UE will provide the following deliverables:

- *Technical memorandum with recommended interim emergency solutions*

Limitations/Assumptions

The following information is needed from the MVD:

- Record drawings and GIS information of meter pit at Route 101A
- Record Drawings of Wells #4 and #5.

Work Not Included

- Water Quality sampling or analysis
- Piloting, design phase, bidding, and construction phase services. (To be included in a future contract.)
- Electrical, structural, or architectural services. These will be included in a future phase.
- Hydrogeological investigations

SCHEDULE

UE anticipates the following schedule:

Authorization to Proceed	June 27, 2016
Topographic Survey	July 20, 2016
Subsurface Investigations	July 29, 2016
Interim Emergency Solution – Task 4	July 31, 2016
Preliminary Design	August 31, 2016

Note, UE will begin preparing a final design contract as soon as the basis of design is complete.



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

June 8, 2016

Tom Nutting
Merrimack Village District
2 Greens Pond Rd.
Merrimack, NH 03054-4259

Subject: Town: Merrimack - Public Water System: Merrimack Village District
PWS ID: 1531010
Inactivation of Well(s), Source ID: 004, 005
Revised Chemical Monitoring Sampling Schedule

Dear Mr. Nutting:

The records of the Department of Environmental Services ("DES"), Drinking Water & Groundwater Bureau, indicate that the subject wells; source ID 004 'GPW 4/ MVD 4' and 005 'GPW 5/MVD 5' have shown contamination of PFOA above the Ambient Groundwater Quality Standard (AGQS) of 0.000070 mg/L. Based on this information, the subject wells are hereby deactivated along with the blended chemical sample site ID 501 'ST PUMP STATION 5/OFF FRONT ST/BLEND 004 005'.

The subject wells are **NOT** to be used to supply water to the water system without prior DES approval. The wells should be locked out and tagged out to prevent inadvertent use.

The chemical monitoring requirements for the above water system have been updated. The revised Master Sampling Schedule (MSS) reflects all results received to date as well as future sampling requirements.

The MSS and all analysis request forms (which must accompany all samples to the laboratory) are available on line at: www.des.nh.gov; click on A to Z list and select Public Water System Search and enter your specific PWS identifier. We encourage you to check your MSS and download new forms each time you collect a sample. The analysis request forms are pre-populated with information specific to your public water system. It is important that this information is correct to ensure that your laboratory can submit accurate data to us in a timely fashion.

If you have any questions or need assistance, please contact Rick Skarinka at (603) 271-2948 or by email at Richard.Skarinka@des.nh.gov.

Sincerely,

Harrison 'Chip' Mackey
Drinking Water and Groundwater Bureau

cc: Ronald Minor Jr., Operator
Rick Skarinka P.E., NHDES
File