

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

AQUA ILLINOIS, INC.)

Proposed general increase in)
water and sewer rates.)

Docket No. 11-0436

Direct Testimony on Rehearing and Exhibits of

Daniel Shenck

**Plant Manager
Viscofan USA, Inc.
Danville Facility**

On behalf of

Viscofan USA, Inc.

May 4, 2012

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

AQUA ILLINOIS, INC.)

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Direct Testimony on Rehearing of Daniel Shenck

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A My name is Daniel Shenck and my business address is 915 N. Michigan Avenue,
3 Danville, Illinois 61834.

4 Q WHAT IS YOUR OCCUPATION?

5 A I am employed by Viscofan USA, Inc. ("Viscofan") and am the Danville facility Plant
6 Manager. I have held this position since 2008. Viscofan is the world's leading
7 producer of meat and food casings.

8 Q WHAT ARE YOUR DUTIES AS PLANT MANAGER AT VISCOFAN?

9 A I have overall responsibility for plant operations at the Danville plant. In addition, I am
10 responsible for ensuring the ongoing viability and fiscal responsibility of the plant. In
11 this role, I have knowledge of the economics of our input materials, such as water
12 supply and of capital spending decisions. With each capital project, we consider the
13 need and justification based on its impact to the overall operation of our plant. We

1 consider the effect on cost savings, reliability enhancements, or just the fundamental
2 need for our plant processes, as well as a consideration of the payback period.

3 **Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK**
4 **EXPERIENCE THAT QUALIFY YOU TO PERFORM THE DUTIES YOU HAVE**
5 **MENTIONED.**

6 A I hold a Bachelors' of Science in Chemical Engineering from New Mexico State
7 University and lack a couple of courses in completing my Masters' in Business
8 Administration. My 17 years of industrial manufacturing work experience includes
9 several roles while employed at the Archer Daniels Midland Corporation, ranging from
10 Plant Superintendent to Plant Engineer. I came to Viscofan in 2003 as a Project
11 Engineer, and then in 2004 was moved to the Plant Support Manager (similar to a
12 Plant Engineer role) overseeing Maintenance, Plant Engineering and Utilities. In
13 2008, I was promoted to Plant Manager with total fiscal responsibility for the facility in
14 all aspects of its production, including energy, raw materials, personnel and capacity
15 utilization.

16 **Q WHAT HAS BEEN YOUR INVOLVEMENT IN THIS DOCKET TO DATE?**

17 A I have overseen Viscofan's intervention efforts in this docket and have reviewed the
18 impact of the increase in water rates resulting from the Commission's decision in this
19 case. I also provided an affidavit in support of Viscofan's application for rehearing in
20 this docket. In the affidavit, I described the impact of the increase in water rates
21 resulting from the Commission's Order in this case and the likelihood of the Danville
22 plant constructing and owning our own water supply system at the current level of

1 increase. I also identified several steps that we have taken toward owning our own
2 water supply.

3 My understanding is that the Commission has granted rehearing for the
4 purpose of receiving more information on the steps that Viscofan has taken toward
5 this goal.

6 **Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY ON REHEARING?**

7 A To provide the Commission with an updated analysis concerning the construction of
8 Viscofan's own water treatment facilities.

9 **Q HAVE ANY EVENTS RELEVANT TO THIS MATTER OCCURRED SINCE THE**
10 **TIME OF VISCOFAN'S APPLICATION FOR REHEARING?**

11 A Yes. Under its terms, Viscofan's four-year agreement required under the Large
12 General Service tariff provisions expired earlier this year. Consequently, Viscofan
13 was required to enter into another four-year agreement or face significantly higher
14 charges under the otherwise applicable water rate. Left with the dilemma of choosing
15 between extremely uneconomic costs under the otherwise applicable rate and the
16 currently uneconomic, but possibly subject to change, choice of the Large General
17 Service rate, Viscofan elected to sign another four-year agreement under the Large
18 General Service rate, with the hope that the Commission will reconsider its original
19 decision and make the rate more viable and conducive to Viscofan remaining on the
20 system. If it does not occur, Viscofan will have approximately four years to design,
21 construct, test and begin using its own water system and will most assuredly be
22 forced to disconnect from the Aqua system, either before or at the end of the new
23 contract term.

1 Q PLEASE IDENTIFY THE STEPS TAKEN BY VISCOFAN TOWARD
2 CONSTRUCTING AND OWNING YOUR WATER SUPPLY SYSTEM AS
3 MENTIONED IN YOUR AFFIDAVIT IN SUPPORT OF VISCOFAN'S APPLICATION
4 FOR REHEARING.

5 A As mentioned in Paragraph 7. of my affidavit, Viscofan has already taken the
6 following steps toward owning our own water supply:

- 7 • We have a completed a hydrology study showing ample availability of water.
- 8 • We have property with a test well already constructed.
- 9 • We control right-of-way for a main water supply line from the well area to the
10 Plant.
- 11 • We have, in 2012, developed installation costs and a construction timeline.
- 12 • We have an operating cost estimate of \$0.25 per 1,000 gal. (or \$0.187 per ccf).

13 In addition, we have calculated the payback period for the potential well and
14 associated investment at the current water rate.

15 Q PLEASE PROVIDE GREATER DETAIL ON THE HYDROLOGY STUDY THAT
16 VISCOFAN HAS COMPLETED?

17 A Investigative work at the site was conducted by Mr. Mike McCoy of Layne-Western, a
18 commercial well construction contractor. He notes two (2) test holes, identified as
19 "5-89" and "6-89," each suitable for 1 MGD (million gallons per day) wells. He states,
20 the test hole site 5-89 will be capable of pumping in the range of 800 to 1000 gpm
21 and the test hole site 6-89 will produce 1000 gpm or higher. Viscofan's expected
22 plant needs are less than 800 gpm. Since the time that this work was done (1989)
23 local industrial demand on the aquifer has dropped from 2-3 MGD to 0.2 MGD, which
24 suggests even greater water availability today. Hydrology information provided by the

1 Illinois Water Survey and Illinois Geological Survey indicates that Viscofan's intended
2 well location is situated above the aquifer very near a valley in the bedrock, providing
3 near-optimal hydrological conditions.

4 **Q PLEASE DESCRIBE IN GREATER DETAIL VISCOFAN'S PROPERTY FOR**
5 **WELLS AND THE TEST WELL THAT IS ALREADY CONSTRUCTED.**

6 A The property owned by Viscofan and intended for construction of wells is located
7 northwest of the corner of Kingdom and Fairchild Streets. There is currently a test
8 well located on the western part of the property. This test well may be observed as a
9 white PVC pipe extending 1.5 ft above the ground and including a removable cap. A
10 photograph of the Viscofan well property is attached as Exhibit 1.1-RH.

11 **Q PLEASE DESCRIBE IN GREATER DETAIL VISCOFAN'S CONTROL OF**
12 **RIGHT-OF-WAY FOR A MAIN WATER SUPPLY LINE FROM THE WELL AREA TO**
13 **THE PLANT.**

14 A Viscofan has in its possession a number of documents (copies of documents on file in
15 Vermilion County) constituting a continuous right-of-way from the property at Kingdom
16 and Fairchild streets to the Viscofan plant location at 915 N. Michigan, as detailed in
17 Viscofan 1.2-RH. All of these right-of-ways were granted in 1956 and are available
18 for inspection. With control of this right-of-way, Viscofan would be able to install its
19 water supply line, without the need for additional property purchase or lease.

1 **Q PLEASE DESCRIBE IN GREATER DETAIL VISCOFAN'S DEVELOPMENT OF**
2 **INSTALLATION COSTS AND A CONSTRUCTION TIMELINE.**

3 A Viscofan has employed the Industrial Technology Group ("ITG") of Henneman
4 Engineering Inc. to compile a cost for installation of water pumping and treatment
5 facilities for purposes of serving water from the potential well property to the Viscofan
6 plant, located at 915 N. Michigan. The assumed flow rate of 1 MGD, which is
7 expected to exceed our needs, was used. ITG's work was completed in February of
8 2012. The results of their work (attached as Exhibit 1.3-RH), show a total final cost of
9 \$3,662,130. However, this total includes an Optional Storage Tank which is not
10 necessary in this case, since Viscofan already operates two (2) storage tanks which
11 receive water from the Aqua Illinois supply for re-pumping to the plant. When we
12 remove the Optional Storage Tank, adjust the associated Mark-Up and Engineering
13 costs and rely on a 10% Contingency, instead of 15%, we arrive at a total final cost of
14 \$3,066,965.

15 ITG has indicated that engineering and construction would take under one
16 year to complete, as shown on Exhibit 1.5-RH, attached.

17 **Q PLEASE DESCRIBE IN GREATER DETAIL VISCOFAN'S OPERATING COST**
18 **ESTIMATE OF \$0.25 PER 1,000 GAL. (OR \$0.187 PER CCF).**

19 A Within the same study, ITG compiled a cost for treatment of the water to be pumped
20 and used at the Viscofan plant. The results are shown on Exhibit 1.4-RH, attached.
21 Viscofan has an average delivered price for electricity of around \$0.048/kWh, based
22 on contracts held through 2014. ITG has calculated treatment, pumping,
23 maintenance and operator costs. These are based on specified horsepower,
24 anticipated efficiencies, chemical costs, labor costs and standard maintenance

1 allowances for such installations. As Exhibit 1.4-RH shows, the anticipated cost of
2 water is \$0.25 per 1,000 gal.

3 **Q PLEASE DESCRIBE IN GREATER DETAIL THE PAYBACK PERIOD**
4 **CALCULATION YOU MENTIONED.**

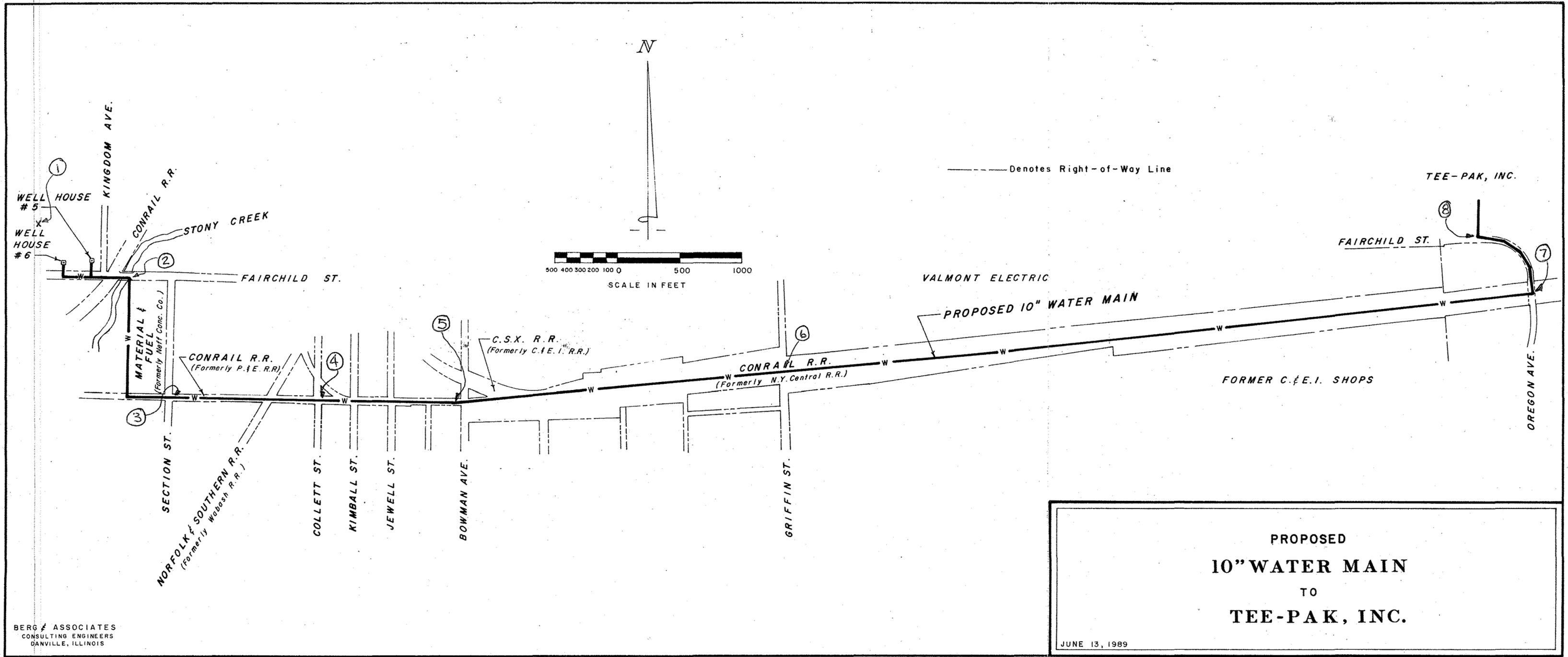
5 A As I indicated above, the capital cost is estimated at just over \$3 million. Under the
6 increased Aqua Illinois rate, the avoidable annual utility cost, should we disconnect, is
7 estimated to be \$708,000 per year (\$59,000/month). As shown on Exhibit 1.4-RH,
8 we anticipate an operating cost of around \$92,000 per year. Thus, the annual net
9 savings to Viscofan is estimated to be \$616,000 per year (\$708,000 minus \$92,000).
10 Therefore, the simple payback is estimated at 4.97 years ($\$3,066,965 / \$616,000$).
11 Should the Large General Service rate remain as approved in the Final Order,
12 Viscofan finds this payback period to be sufficient to warrant construction of the water
13 treatment facility.

14 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON REHEARING?**

15 A Yes, it does.







PROPOSED
 10" WATER MAIN
 TO
 TEE-PAK, INC.
 JUNE 13, 1989

BERG & ASSOCIATES
 CONSULTING ENGINEERS
 DANVILLE, ILLINOIS



Champaign: 2803 Research Road
Champaign, Illinois 61822-1079
T 217.398.6280
F 217.398.6286

Toll Free 866.398.6280
Email itg@henneman.com
www.itg-henneman.com

Project Name:	Viscofan Well Water System Cost Estimate
Customer:	Viscofan
Location:	Danville, IL
Classification:	Industrial
Job #:	12-4712
Date:	2/22/2012
By:	Beth Mader

Description	Quantity	Unit	Unit Material Cost	Unit Installation Cost	Material Total Price	Installation Total Price	Summary Total Price	Note-Source	Alternates			
									Description	Cost	Source	
Well Site												
Water Supply for Well Drilling	1	ea	\$0.00	\$0.00	\$5,000	\$0	\$5,000	ITG Estimate				
1000 gpm Production Well	2	ea	\$0.00	\$147,000.00	\$0	\$294,000	\$294,000	Layne				
Line Shaft Pumping System	2	ea	\$0.00	\$36,000.00	\$0	\$72,000	\$72,000	Layne				
Check Valve	1	ea	\$4,225.00	\$555.00	\$4,225	\$555	\$4,780	RSMMeans				
Flow Meter	1	ea	\$3,000.00	\$100.00	\$3,000	\$100	\$3,100	Brooks & Associates				
Well House Construction	2	ea	\$5,413.30	\$5,000.00	\$10,827	\$10,000	\$20,827	ITG Estimate				
Well Houses Electrical	1	ea	\$13,215.00	\$5,430.00	\$13,215	\$5,430	\$18,645	RSMMeans				
Well Site Electrical Services	1	ea	\$31,634.00	\$9,494.00	\$31,634	\$9,494	\$41,128	RSMMeans				
Communication Cable	14500	ft	\$1.50	\$0.00	\$21,750	\$0	\$21,750	ITG Estimate				
Well Pump 150 hp VFD	2	ea	\$11,900.00	\$2,050.00	\$23,800	\$4,100	\$27,900	RSMMeans				
Electrical Utility Fee	1	ea	\$0.00	\$6,500.00	\$0	\$6,500	\$6,500	ITG Estimate				
Pipe - Well Site to Plant												
AWWA C900 10" PVC	14500	ft	\$14.00	\$6.20	\$203,000	\$89,900	\$292,900	Crescent Pipe	10" Ductile Iron (Material only)	\$580,000.00	Crescent Pipe	
Detectable Underground Tape, reinforced	14500	ft	\$5.60	\$2.01	\$81,200	\$29,145	\$110,345	RSMMeans				
10" 45	5	ea	\$330.00	\$18.80	\$1,650	\$94	\$1,744	RSMMeans				
10" 90	8	ea	\$330.00	\$18.80	\$2,640	\$150	\$2,790	RSMMeans				
10" Tee	1	ea	\$565.00	\$23.50	\$565	\$24	\$589	RSMMeans				
10" Gate Valve and Box	6	ea	\$1,250.00	\$208.50	\$7,500	\$1,251	\$8,751	RSMMeans				
Trenching & Backfill Common Earth 2'x6'	14500	ft	\$1.52	\$4.67	\$22,040	\$67,715	\$89,755	RSMMeans				
Pipe Bedding & Compacting	14500	ft	\$5.45	\$2.76	\$79,025	\$40,020	\$119,045	RSMMeans				
Bridge over Stony Creek	1	ea	\$0.00	\$20,156.50	\$0	\$20,157	\$20,157	2000 Estimate +30%				
Street Crossings	5	ea	\$7,000.00	\$8,000.00	\$35,000	\$40,000	\$75,000	ITG Estimate				
Rail Road Crossing												
Horizontal Boring	115	ft	\$146.00	\$189.50	\$16,790	\$21,793	\$38,583	RSMMeans				
Jacking Pits	3	ea		\$3,150.00	\$0	\$9,450	\$9,450	RSMMeans				
Remove and Repair Pavement (Drives, Sidewalk, etc.)												
Pavement Demo	280	sq yd	\$3.78	\$9.42	\$1,058	\$2,638	\$3,696	RSMMeans				
Pavement Repair	280	sq yd	\$19.80	\$1.21	\$5,544	\$339	\$5,883	RSMMeans				
Clean Up												
Site Clean Up	2.7	mi	\$0.00	\$37,000.00	\$0	\$99,900	\$99,900	2000 Estimate +30%				
Sterilize (HTH)	50	hr	\$9.75		\$488	\$0	\$488	2000 Estimate +30%				
Test Pipe	7	2,000 ft		\$2,100.00	\$0	\$14,700	\$14,700	RSMMeans				
Fees												
Design and Inspection Fee	1	ea	\$65,000.00		\$65,000	\$0	\$65,000	2000 Estimate +30%				
Legal Description for Easements	1	ea	\$66,300.00		\$66,300	\$0	\$66,300	2000 Estimate +30%				
Railroad Insurance	1	ea	\$7,800.00		\$7,800	\$0	\$7,800	2000 Estimate +30%				
Railroad Inspection/Protection	1	ea	\$19,500.00		\$19,500	\$0	\$19,500	2000 Estimate +30%				
Treatment Plant												
Site												
Clearing and Grubbing	111	sq yd	\$0.00	\$1.35	\$0	\$150	\$150	RSMMeans				
Building Foundation	50	CY	\$190.00	\$240.00	\$9,500	\$12,000	\$21,500	UIUC Abbot				
Building Excavation	336	CY	\$0.00	\$20.00	\$0	\$6,720	\$6,720	UIUC Abbot				
Building Backfill & Compaction	241	CY	\$0.00	\$30.00	\$0	\$7,230	\$7,230	UIUC Abbot				
Building Slab	2686	SF	\$3.60	\$4.50	\$9,670	\$12,087	\$21,757	UIUC Abbot				
Pre-Engineered Building 2,500 sq ft	1	ea	\$122,165.00	\$20,000.00	\$122,165	\$20,000	\$142,165	Kelly Klosure				

Description	Quantity	Unit	Unit Material Cost	Unit Installation Cost	Material Total Price	Installation Total Price	Summary Total Price	Note-Source	Alternates		
									Description	Cost	Source
Drives and Walks	1	lot	\$15,000	\$7,000	\$15,000	\$7,000	\$22,000	ITG Estimate			
Building Electrical											
400 A, 480 V Service from Existing Breaker in Sub "I"	1	ea	\$111.92	\$57.24	\$89,536	\$45,792	\$149,628	RSMMeans			
Low Voltage Feeders	1	ea	\$14,063.58	\$6,936.34	\$19,820	\$12,112	\$31,932	RSMMeans			
Building Electric Service	1	ea	\$11,425.00	\$26,700.00	\$11,425	\$26,700	\$38,125	RSMMeans			
Treatment Pump VFD's	1	lot	\$11,868.00	\$3,890.00	\$18,901	\$6,040	\$24,941.00	RSMMeans			
Controls & Instrumentation											
PLC Control Panel : 80 DI, 30 DO, 12 AI, 12 AO	1	ea	\$35,000.00	\$0.00	\$35,000	\$0	\$35,000	Kraft			
PLC Remote Control Panel	1	ea	\$15,000.00	\$0.00	\$15,000	\$0	\$15,000	Kraft			
Instruments	1	lot	\$7,000.00	\$0.00	\$7,000	\$0	\$7,000	Foxboro			
Engineering: Controls Design and Programming	1	lot	\$0.00	\$40,000.00	\$0	\$40,000	\$40,000	ITG Estimate			
Instrumentation Conduit and Wire	840	lot	\$3.35	\$10.15	\$2,814	\$8,526	\$11,340	ITG Estimate			
Chlorination System	1	ea	\$29,000.00	\$1,000.00	\$29,000	\$1,000	\$30,000	Brooks & Associates	Automate Backwash	\$75,000	Brooks & Associates
Aeration Tower											
Aeration Tower and Blower	1	ea	\$55,000.00	\$9,500.00	\$55,000	\$9,500	\$64,500	Brooks & Associates	Pressure Aerator	\$10,000	Layne
Aerator Foundation Excavation	33	cu yd	\$6.75	\$12.05	\$223	\$398	\$620	RSMMeans			
Aerator Foundation Pad 4'	33	cu yd	\$178.00	\$84.48	\$5,874	\$2,788	\$8,662	RSMMeans			
Settling Tank											
Settling Tank 30,000 gal	1	ea	\$35,000.00	\$5,000.00	\$35,000	\$5,000	\$40,000	CAT Decatur	LayneOx Filter System	\$400,000	Layne
Tank Foundation excavation	107	cu yd	\$6.75	\$12.05	\$722	\$1,289	\$2,012	RSMMeans			
Tank Foundation Pad 4'	107	cu yd	\$178.00	\$84.48	\$19,046	\$9,039	\$28,085	RSMMeans			
Filters											
5 - 8'φ Sand/Anthracite Filter Skids	1	ea	\$213,900.00	\$2,000.00	\$213,900	\$2,000	\$215,900	Brooks & Associates			
Pumps											
Tower Pump	2	ea	\$16,000.00	\$1,220.00	\$32,000	\$2,440	\$34,440	BRI			
Filter Pump	2	ea	\$14,500.00	\$1,220.00	\$29,000	\$2,440	\$31,440	BRI			
Backwash Pump	1	ea	\$13,575.00	\$1,220.00	\$13,575	\$1,220	\$14,795	BRI			
Booster Pump	1	ea	\$7,600.00	\$700.00	\$7,600	\$700	\$8,300	BRI			
Backwash To Lagoon											
AWWA C900 10" PVC	1000	ft	\$14.00	\$6.20	\$14,000	\$6,200	\$20,200	Crescent Pipe	Sewer Connection	\$500	ITG Estimate
Trenching & Backfill Common Earth 2'x6'	1000	ft	\$1.52	\$4.67	\$1,520	\$4,670	\$6,190	RSMMeans			
Pipe Bedding & Compacting	1000	ft	\$5.45	\$2.76	\$5,450	\$2,760	\$8,210	RSMMeans			
Optional Treated Water Storage Tank											
120,000 Gal 304 Stainless Steel (API 650 Storage Tank)	1	ea	\$212,000.00	\$131,500.00	\$212,000	\$131,500	\$343,500	UIUC Abbot			
120,000 Gal Tank Side Wall Ins. - 2" Fiberboard + Alum. Jkt.	2750	ea	\$4.00	\$6.00	\$11,000	\$16,500	\$27,500	UIUC Abbot			
120,000 Gal Tank Roof Ins. - 2" Fiberboard + Alum. Jkt.	475	ea	\$8.00	\$12.00	\$3,800	\$5,700	\$9,500	UIUC Abbot			

Well Site	\$515,630
Piping to Treatment Plant	\$1,052,374
Treatment Plant	\$1,053,242
Optional Storage Tank	\$380,500
Subtotal	\$3,001,746
Contractor Mark Up 5%	\$150,087
Engineering 2%	\$60,035
Contingency 15%	\$450,262
Total	\$3,662,130



Industrial Technology Group

Henneman Engineering Inc.

Champaign:
2803 Research Road
Champaign, Illinois 61822-1079
itg@henneman.com

T 217.398.6280
F 217.398.6286
www.itg-henneman.com

TRANSMITTAL 02
11-7412

VIA

- US MAIL
- UPS Ground
- Hand Delivery
- Email
- Fax

Fax Number: _____

Pages including this one: **2**

WE ARE SENDING YOU

- Attached
- Under separate cover

- Drawings
- Specifications
- Submittals
- Other

- For review & comment
- For approval
- For your use
- As requested

- Approved as noted
- Revise and resubmit
- Not reviewed

Submit copies

Spec section

TRANSMITTAL

To:
Dan Shenck

Date: April 30, 2012

Copies To: _____

From:
Beth Mader

ITG Project Name:
Viscofan Well Water Treatment Preliminary
Layout & Cost Estimate

ITG Project Number:
11-7412

ITEMS

ITG Construction Time Estimate



Industrial Technology Group

Henneman Engineering Inc.

Champaign:
2803 Research Road
Champaign, Illinois 61822-1079
T 217.398.6280
F 217.398.6286

Toll Free 866.398.6280
Email itg@henneman.com
www.itg-henneman.com

To: Dan Shenck, Viscofan USA, Inc.

From: Beth Mader, ITG

Cc: Kip Doyle, ITG

Date: April 30, 2012

Re: Viscofan Well Water System Preliminary Layout & Cost Estimate

ITG # 12-7412

Dear Mr. Shenck,

Industrial Technology Group estimates that it will take ten (10) months to complete construction of the Well Water Treatment Project estimated in ITG job number 12-7412.

Sincerely,

A handwritten signature in black ink that reads "Beth Mader". The signature is written in a cursive, flowing style.

Beth Mader