

ATTACHMENT I

E-MAIL FROM JOEL PANZER
REGARDING WATER TREATMENT SYSTEM
INFORMATION

January 3, 2014

PLN040529

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Lister, Daniel M. x6617

From: Joel Panzer [joel@mwruck.com]
Sent: Friday, January 03, 2014 12:24 PM
To: LeWarne, Richard x4544; Lister, Daniel M. x6617
Cc: Allen, Carol x5178
Subject: FW: FW: Vasquez Minor Subdivision (PLN040529)
Attachments: Activated AluminaDD-6.pdf

Dan and Richard-

I finally received the reply/confirmation requested by Richard LeWarne from Advanced Water Systems (see below). Cost to treat water as a Point of Entry System is readily available for residential use and is also affordable. Cost and effectiveness of treatment technology in 2014 is not an issue.

I was quite surprised by what I believe to be significant inaccuracies reported to the Planning Commission in the January 8th staff report. To make sure I wasn't recalling matters incorrectly, I listened to the testimony presented at the Planning Commission public hearing of 10/30. I wanted to let you both know that I will be preparing a letter to factually correct the various errors presented to the Planning Commission as a basis for denial by citing evidence/testimony in the hearing record.

The applicant has continually agreed to work cooperatively with EH staff to prove POE water treatment feasibility. The applicant is not proposing a domestic water system. The subdivision ordinance and Title 15.04 do not prohibit treatment of individual wells.

I'll get you my letter as soon as possible.

Joel Panzer
Maureen Wruck Planning Consultants, LLC
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From: abel espinoza [mailto:abel@advanced-water-systems.com]
Sent: Friday, January 03, 2014 10:13 AM
To: Joel Panzer
Subject: Re: FW: Vasquez Minor Subdivision (PLN040529)

Joel,

The POE equipment will be :

AS0-0071-0 Arsenic Filter, 2 cu ft AAL Media; Clack WS1 120v, 1" in/out	- \$1,800.00
P50-0157-0 Metering Pump, Stenner: 45MHP10, 0-100 PSI, .5-10.0 GPD, 120V	\$695.00
T40-0013-0 Solution Tank: 30 Gallon (Natural White)	\$180.00
P20-0006-0 Clear PVC static mixer, 1" , 6 elements	\$140.00

Installation will run between \$1,000- \$1,500. We will have to firm this number up after we see the site.

The media used is activated alumina, manufactured by BASF, and replacement is based on the industry average . This media will adsorb both fluoride and As (V).

Attached is the spec sheet of the BASF media.

Abel

On 1/3/2014 9:46 AM, Joel Panzer wrote:

Abel-

Per my AM call, attached is the e-mail I referred to. Could you confirm I have the system costs correct for a fluoride and an arsenic treatment system (Point of Entry)? If there is a manufacturer's web-site I can go to for product data/literature to send to the County, I would appreciate getting that information.

Sincerely,

Joel Panzer
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From: Joel Panzer
Sent: Thursday, December 19, 2013 4:24 PM
To: 'abel@advancedwatersystems.com'
Cc: Aaron Bierman
Subject: FW: Vasquez Minor Subdivision (PLN040529)

Hi Abel-

We spoke a few weeks ago regarding general costs for a fluoride and arsenic treatment system. Aaron Bierman suggested I call you.

I took the information you provided to me and sent it off to the Monterey County Health Department (see 1st e-mail, at bottom). The Health Department then responded asking for the same information from Advanced Water Systems (see e-mail immediately below).

Would it be possible to get a quote for a Point of Entry treatment system? I unit would be for flouring removal – to lower to state standards. Currently the well is at 3.5 ug/L.

The other unit is for removal of arsenic – to meet state standards. This well currently is at 45 ug/L.

Any assistance from Advanced Water Systems with documentation confirming units can remove constituents and a cost estimate, including annual maintenance, would be most appreciated.

Please let me know if you can help me in responding to the e-mail below.

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From: LeWarne, Richard x4544 [<mailto:lewarner@co.monterey.ca.us>]
Sent: Monday, December 09, 2013 9:51 AM
To: Joel Panzer
Cc: Lister, Daniel M. x6617; Treffry, Patrick, T x4556; Sandoval, Cheryl L. x4552
Subject: RE: Vasquez Minor Subdivision (PLN040529)

Joel:

Please formalize this with a letter from the vendor with some quotes with information regarding possible POE unit(s) that the vendor proposes to use. Also, is the approximate two year filter replacement based on the specific water quality of the wells or some industry average?

Richard LeWarne

Assistant Director

Environmental Health Bureau

Environmental Health Review, Drinking Water Protection, Hazardous Materials Management
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From: Joel Panzer [<mailto:joel@mwruck.com>]
Sent: Friday, December 06, 2013 4:57 PM
To: LeWarne, Richard x4544; Lister, Daniel M. x6617
Cc: ferminhd@aol.com
Subject: Vasquez Minor Subdivision (PLN040529)

Richard-

In response to your recent e-mail and November 13th letter, I was able to reach Advanced Water Systems in Santa Cruz. I spoke with Abel and he confirmed that Point of Entry (POE) treatment equipment is readily available and approved by the State for arsenic and fluoride treatment.

Abel provided general pricing for a treatment system (arsenic or fluoride) as follows:

POE Unit cost = \$1,800.00. This unit includes chlorination and activated aluminum filter.

Static Mixer cost = \$150.00

Installation costs to install are as follows:

- POE unit, including static filter = \$1,000;
- Activated aluminum unit = \$500 – \$600;
- Chlorination unit = \$400.00 to \$500.00;

Maintenance costs for the system are:

- Annual system inspections (2 x year) = \$400.00 in labor;
- Changing of arsenic/fluoride filters every 2 years = \$600 parts and \$200 labor.

Total costs to install would be \$6,650 - \$6,850 and total annual costs to operate (2 year average) would be \$800/year or \$66.00 month, plus electrical costs for the well pump. As a point of reference, my Cal-Water bill in Salinas runs approximately \$88.00/month in the winter and up to \$135.00/month in the summer...

In summary, these costs are affordable to install and reasonable to maintain. Let me know what else you or planning might need for the January report to the Planning Commission.

Joel Panzer
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The Chemical Company

DD-6 activated alumina

Fluoride and arsenic removal

Product data

Effective arsenic & fluoride removal

BASF DD-6 granular activated alumina, a NSF 61 certified product, enables the removal of arsenic and fluoride from drinking water. Activated alumina is listed by the U.S. Environmental Protection Agency (EPA) as a "best available technology" (BAT) for the removal of arsenic and fluoride. BASF DD-6 alumina is currently installed in various municipal and bottled water facility applications for the removal of arsenic and fluoride.

Industrial applications

With arsenic and fluoride health-

related concerns on the rise, activated alumina offers a polishing step for industrial waste waters. Common applications using arsenic and fluoride within the production process include glass manufacturing, aluminum and steel processing, pesticide as well as fertilizer production and the semiconductor industry.

Cost-effective treatment

At a bulk density of 40 pounds per cubic foot, BASF DD-6 granular activated alumina is an economical alternative alumina that is regenerable in both fluoride and arsenic applications.

Available packaging

BASF DD-6 activated alumina is available in the following granular sizes:

- 14 X 28 Tyler mesh
- 1850 lb. supersaks
- 28 X 48 Tyler mesh
- 2000 lb. supersaks

About BASF

As the world's leading chemical company, BASF's portfolio ranges from chemicals, plastics, performance products, agricultural products and fine chemicals to crude oil and natural gas.

BASF's intelligent system solutions and high-value products help its customers to be more successful. BASF develops new technologies and uses them to open up additional market opportunities. It combines economic success with environmental protection and social responsibility, thus contributing to a better future.

Chemical composition (%)	
Al ₂ O ₃	92.0
Na ₂ O	0.35
SiO ₂	0.03
LOI (1000°C)	8.0
Physical properties	
Total pore volume, cc/g	0.52
Surface area, m ² /g	380
Bulk density, lbs/ft ³ (kg/m ³)	40 (641)
Sizes (Tyler mesh)	14x28, 28x48

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