Manufactured Housing Research Alliance MHRA

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Pureflow Filtration Systems

Response to MHRA questions regarding arsenic water treatment systems

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1. Name(s) of your system(s)

Pureflow

2. Will the system be available for installation and operation prior to the EPA mandated date of January 23, 2006?

3. Manufacturer and distributor contact information

Pureflow Filtration Div, 6739 S. Washington Ave., P.O. Box 469, Whittier, CA 90608
800-926-3426, Fax: (562) 693-5257 e-mail: pureflow@pfdiv.com

4. Basic description of your technology

The removal of arsenic occurs by its adsorption onto an iron precipitate that is formed in the Pureflow© pretreatment process. The Pureflow© multi media filter includes a highly adsorptive active media that adsorbs the iron and arsenic (as well as other heavy metals such as cadmium, zinc, etc.) in essentially hydroxide forms. The filter media is cleaned by backwashing the filter with processed water. The backwash to filtration ratio is less than 5%.

Well water containing arsenic is chemically treated with an oxidant (such as chlorine) at the first static mixer. If dissolved iron (in sufficient concentration) is not present in the raw water, ferric chloride is also fed ahead of the second static mixer. The iron is oxidized to a processable form and a free chlorine residual is provided to the water distribution system.

The filter media does not contain greensand or activated alumina, and therefore does not require costly regenerating chemicals such as potassium permanganate or acid/caustic solutions. Backwash water is usually discharged to the sewer system. An optional backwash water reclaim system is available to reclaim approximately 99% of the backwash water.

The chemical pretreatment is manually set and automatically operated. The filter effluent is continuously monitored with a chlorine residual analyzer to permit the positive and simple adjustment of the oxidant chemical feed.

A control panel provides automatic operation of the filtration system, and includes flexibility in the simple adjustment of various filter cycles.

5. Maximum arsenic levels that can be mitigated to below the 10ppm standard using your system.

6. Range of system capacities available with your system.

20 GPM to 10,000 GPM

7. What method of disposal has been approved for the media type? Is it considered hazardous material or will they pass TCLP as non-hazardous waste?

8. Approximate cost for a typical 200gpm system, including engineering, design, drawings, specifications, equipment, installation, and start-up. Do not including the building to house the system or piping to and from the plant.

9. Approximate ongoing annual operational costs for a 200gpm system, including chemicals, media replacement, disposal, electrical power, etc., as applicable. Please also include approximate labor requirements in labor-hours and the level of training/skill required by operators.

10. What is the lead time required from purchase to operational installation?

11. Describe the track record of the system and supplier including examples of existing installations, if any.

12. List and explain any site-specific factors (such as appropriate water pH and mineral levels) that may affect the decision to use your system.

13. Other information

A pilot testing program is available to insure the proper design and operation of every system. The cost of this program is deductible from the purchase price.