



City of Grand Island

Tuesday, December 02, 2003

Study Session/Special Mtg

Item -3

Presentation Concerning the Use of Plastic Pipe

Background:

With the discovery of Volatile Organic Compound (VOC) contamination in private domestic wells in the Mary Lane and Kentish Hills Subdivision in Grand Island, the Utilities Department immediately began design of City Water Main extensions into those areas to provide a safe drinking water supply. During the course of this water main work, Diamond Plastics offered to provide PVC water main pipe, at no cost, for the water main extensions. Because of concerns with the permeation of PVC pipe by the known organic compound contamination, the offer to provide free pipe was not accepted.

Discussion:

Nebraska Health and Human Services (NHHS) regulations, Distribution Systems, Section 8.0, Materials, state “where distribution systems are installed in areas of ground water contaminated by organic compounds... non-permeable materials shall be used for all portions of the system...”

PVC and other plastic materials can be susceptible to permeation by VOC compounds. Iron materials are not permeable to organic compounds. Therefore, the water main extensions were designed of ductile iron pipe with joint gaskets specified that are of a material designed to resist VOC permeation. Per NHHS direction, the design of the water main extensions was submitted to NHHS for that Department’s review.

Recommendation:

It is the recommendation of the Utilities Department that the water main design with ductile iron pipe be maintained.

Fiscal Effects:

CNH has agreed to pay for these water main extensions.

Alternatives:

None known to readily comply with HHS regulations.

Staff Contact: Gary R. Mader