

## **Radiation in Jersey Village Water**

### **Background Regarding the Radioactive Wells**

As a part of their routine monitoring program, the City of Houston (COH) began to notice high arsenic levels in groundwater testing results for wells located in Kingwood and the Greenspoint area. As a result, COH public works officials contracted with the United States Geological Service (USGS) to undertake detailed examinations of the wells to determine the nature and origin of the arsenic. As a part of the USGS work, all COH wells were subjected to a full range of tests that included radiation. The USGS results indicated that raw water samples from several wells in the COH system contained levels of radiation that exceeded federal limits. Under the open records act, media outlets in town requested and subsequently received the testing information. One of the wells that was singled out for high radiation levels is located in the Jersey Village well field. The Jersey Village well field consists of eight wells located in a linear fashion running from Beltway 8 to Copperfield, roughly parallel to FM 529. The Jersey Village well field is not operated by the City of Jersey Village: it is a part of the Houston water system. It is important to remember that the test that caused the concern was on raw water, and not the treated / mixed water that was sent to customers within the system.

### **How This Impacts JV**

Under normal conditions, the source of water for Jersey Village is the Acres Homes repump station. In turn, the Acres Homes repump station is fed from two sources, the Northeast and East water plants within the COH system. Both the Northeast and East plants utilize surface water exclusively. These are large plants that pump tens of millions of gallons per day from Lake Houston into the city of Houston water system. Regarding JV's specific water source, there are eight groundwater wells in close proximity to the Acres Homes station. When demand is high, the COH will augment the Acres Homes repump station with well water from these eight wells. None of the wells in the Acres Homes well field had detectable radiation levels.

The Acres Homes water is sent to Jersey Village where it is fed into the water plant located along Fairview Road (In our ETJ). Again, under normal conditions this water is sent into the distribution network for the west side of Houston. The Jersey Village Interconnect with the Houston water system is downstream of the Fairview plant. Significantly, the water from the Jersey Village well field also enters into the Fairview plant. Here, the water from the Jersey Village well field is blended with the Acres Homes water. Jersey Village receives the blended water. It is both possible and likely that during periods of high demand and drought (summer months), Jersey Village will receive water from the wells within the Jersey Village well field. The period of high demand roughly correlates with the summer months, beginning in May and ending in September – October.

2009 was a drought year for the Houston area. During the summer of 2009, the COH mixed water from the Jersey Village well field with Acres Homes water to provide service to customers in west Houston. This included Jersey Village. In 2010, the Jersey Village well field was not activated. During periods of high usage, we can expect to receive water from the Jersey Village well field. If we are in a drought, this could possibly continue for several months until drought conditions abated. The water that Jersey Village would receive would be mixed with surface water from Acres Homes. The one well that we are concerned with has a potential to produce two million gallons of water per day. The contracted peak flow through the Fairview plant is approximately 45 million gallons per day.

Going forward, the COH does not intend to test raw water samples for any of the wells in the Jersey Village well field. They are not required to test raw water. They are only required to test treated water.

The COH will test for radiation in their treated water using samples taken from the blended water. The Texas Commission on Environmental Quality determines the testing schedule for radiation in the water.

### **Summary**

Under periods of high demand, we do receive well water from the City of Houston. The well water is blended with surface water from Lake Houston. Even under conditions of high demand, the surface water accounts for the vast majority of water we receive (in excess of 90 percent). The City of Jersey Village recently tested a sample of the COH water for radiation. The results of the test indicated the sample was well within federal guidelines for radiation levels. The COH also routinely tests the water they provide their customers for radiation. In testing the treated water that we actually receive, the COH has never exceeded federal standards for radiation. The tests that caused the media concern were undertaken on raw water.

The City of Jersey Village will continue to test and monitor the water it receives from the City of Houston. We have also asked the COH to notify Jersey Village when we are receiving water that is blended. This will also help us to determine a schedule for testing. At this point in time, we have no indication that the water we receive from the COH exceeds minimum contaminate levels for radiation.