



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

TO: Beth Rowan

FROM: Barb Carey *BC*

SUBJECT: Elevated Nitrate in Ocean Park Drinking Water Well

DATE: May 31, 1988

One of the samples collected during the Long Beach ground water survey exceeded the drinking water standard for nitrate. The nitrate+nitrite-N measurement for the sample collected on July 29, 1987, and analyzed at the Ecology Laboratory in Manchester was 14 mg/l. The drinking water standard for nitrate-N is 10 mg/l. The well is a 30 ft. driven well point situated about 70 ft. from the owner's septic system drainfield. There may be other drainfields nearby since the lots are quite small and septic systems are the only available treatment. The well points on the peninsula generally have no surface seals. According to the owner, Mrs. Dorthy Garland, no fertilizer has been used on the property for at least four years.

Mrs. Garland's home is on the south corner of 252nd and Park in the town of Ocean Park. Her telephone number is: (206) 665-5070. She told me that she only spends the summers at this home and lives in Columbus, New Mexico for the rest of the year. I tried to contact her to collect a verification sample in the fall, but could not reach her; nor was I able to find any nearby wells to sample.

The well was purged for about 5-7 minutes at about 3-5 gallons/minute before the sample was collected. (I assumed about 12 gallons total storage in the well casing and pump.) Although field control samples for nitrate+nitrite were not submitted for analysis, I analyzed a sample in the field for nitrate with a Chemetrix Co. test kit that I used for screening before collecting the lab sample. The sample far exceeded the maximum concentration for the kit of 5 mg/l nitrate-N.

Of the 57 samples analyzed for nitrate+nitrite during the survey, the value for this sample was more than double the next highest measurement. The background level for nitrate+nitrite-N was less than 0.1mg/l. The chloride concentration from this well was also relatively high, 25 mg/l. Background chloride was in the range of 7-8 mg/l. However, this well was relatively close to the ocean where salt spray may have played a part in the higher chloride content. I did not sample for coliform bacteria.

Due to the health risk to babies from drinking water with high nitrate and the possibility of pathogen contamination from septic system effluent, I bring this to your attention. Please contact me if you wish to discuss this further.

cc: Dick Cunningham
Bill Yake