Missoula Public Health
City-County Health Department

Missoula City-County Health Department
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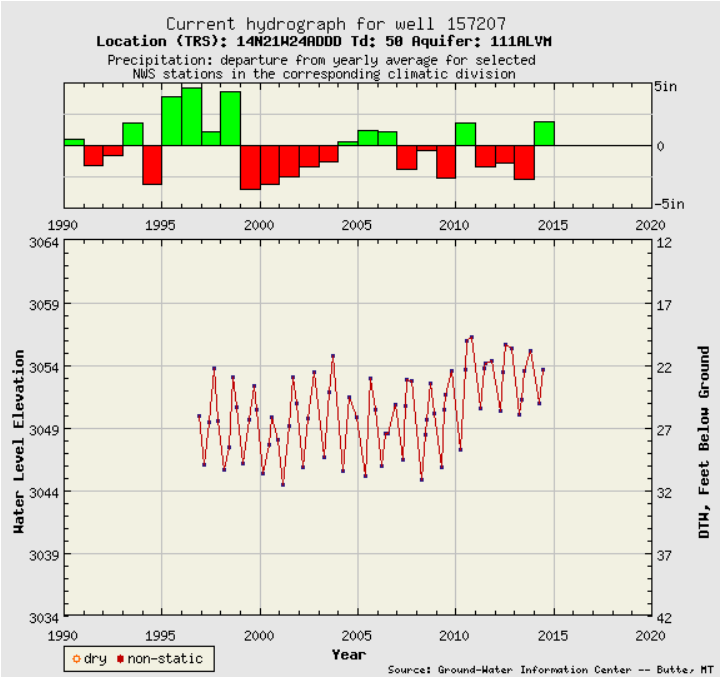
**Memorandum**
**To: Sara Sparks, EPA Project Manager**
**Cc: Keith Large, Montana DEQ**
**From: Peter Nielsen, Missoula Valley Water Quality District**
**Jon Harvala, Missoula Valley Water Quality District**
**RE: Smurfit Site groundwater investigation**
**Date: January 19, 2016**

The Missoula Valley Water Quality District submits the following comments related to the reporting of data collected as part of the Phase 1 investigation of the Former Frenchtown Mill Site. These comments are limited to reporting and interpreting ground water elevations and groundwater quality analytical results in the Phase 1 report.

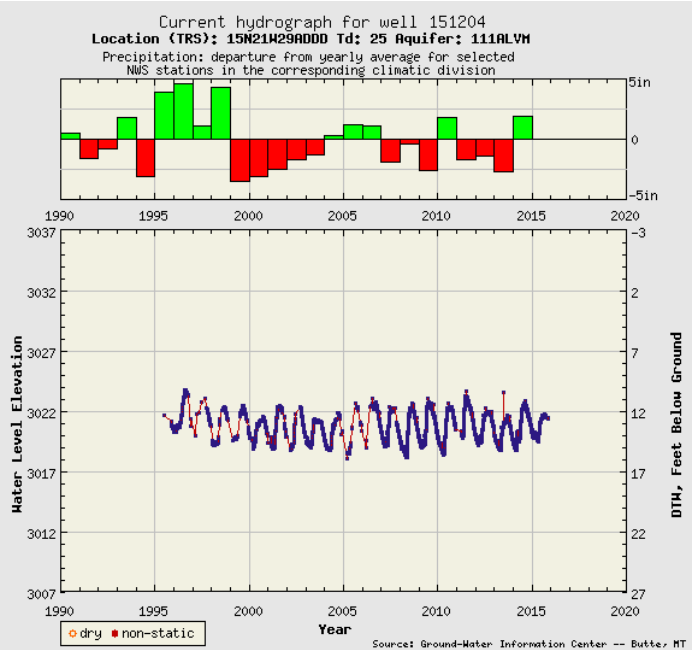
The Water Quality District has a monitoring well located on the Lacasse Lane right-of-way on the southeast side of the Frenchtown mill site. Hydrographs generated from water level measurements show a significant upward step trend in the water table elevation after the mill stopped production in January, 2010. This well is referred to as "County Monitoring Well" on figures included in the Newfields Remedial Investigation Work Plan (RIWP). The water table elevation increase of about 5 feet is most noticeable during seasonally low water levels.

MVWQD Monitoring Well – Lacasse Lane



A hydrograph of water levels from another MVWQD monitoring well located near Frenchtown on Touchette Lane has a more typical seasonal hydrograph.

MVWQD Monitoring Well – Touchette Lane




The Groundwater Mixing Zone Investigation, Stone Container Missoula Facility, 2004 reported groundwater elevations taken from over 21 monitoring wells in November 2002 as a potentiometric surface with flow vectors in Figure 4-1 (Figure 4-1 Attached). Figure 4-1 depicts the combined influence of pumping up to 24 million gallons per day of ground water and the discharge of wastewater through storage/infiltration ponds. Figure 4-1 shows groundwater flow near monitoring well SMW-20 influenced by the production wells and flowing to the southwest. Figure 6 in the RIWP shows groundwater flowing to the northwest in this location. Groundwater elevations measured in wells measured by both URS (October 2011) and Newfields( April 2014) show an increase in groundwater elevation at SMW-20 (Figure 4-1 Attached), which is located near the Mill's production wells.

The Phase 1 remedial investigation report should include figures showing current groundwater potentiometric surface maps that include measured well locations, water table elevations at each well and flow vectors. These should be compared to data prior to mill closure to identify changes in groundwater elevations and flow directions since 2010. Hydrographs of monitoring wells representing background conditions, conditions downgradient of sludge impoundments and conditions near the Clark Fork River should also be included and used to identify seasonal high/low ground water periods.

We also recommend reporting specific conductance and total dissolved solids (TDS) and developing current high/low ground water isoline maps of TDS comparable to the attached Groundwater Mixing Zone Investigation Exhibit 2. TDS, sodium and chloride are indicators of the wastewater impact on ground water. Figures should be included in the Phase 1 report

showing the extent and concentration of TDS, and changes since the mill stopped production. If concentrations of other contaminants of concern in groundwater such as arsenic prove to be associated with wastewater discharge or leachate from sludge impoundments, accurate characterization of historic and current groundwater conditions will help determine the extent of groundwater contamination.