



Notes:
 ND = Not Detected
 J = Estimated concentration, detected above the detection limit (DL) and below the limit of quantitation (LOQ)
 J* = Result is considered an estimate, no bias; flag applied by Shannon Wilson, Inc. based on analytical quality control issues
 µg/L = micrograms per liter
 -PW-1230 has been plotted offset from the exact location for clarity.
 -Private wells regardless of depth that are sampled within the last 12 months (September 13, 2015 through September 13, 2016) are displayed with color coding that is based on concentration from the most recent sampling event.
 -Monitoring well sample results shown here are from July and August 2016.
 -Contours are generally based on third quarter 2016 results. Contours include some historical data where a third quarter 2016 sample had not been collected.
 -The ND contour on this figure may be different from the individual suprapermafrost and subpermafrost ND contours, due to detections in private wells not designated as either suprapermafrost and subpermafrost.
 -The lower end of the yellow color coding range is based on the method detection limit.
 -Image provided courtesy of Pictometry International 2012

Legend

- Monitoring Well
- Point-of-entry treatment system sample collected
- Private Well
- Initial Result from Third Quarter 2016
- Permafrost Boring
- Inferred Suprapermafrost and Subpermafrost Mixing Zone
- FHRA Property Boundary

Private Well Sulfolane Results

- Not Detected
- 1.0 - 100 µg/L
- 100 - 200 µg/L
- 200 - 300 µg/L
- 300 - 400 µg/L
- Greater than 400 µg/L

Monitoring Well Sulfolane Results

- Not Detected
- 3.1 - 100 µg/L
- 100 - 200 µg/L

Approximate Sulfolane Isopleth Regardless of Depth in µg/L

104 Sulfolane Concentration (µg/L)
 < Not detected: detection limit listed

MW-353-15 Monitoring Well Location ID

0 2,500 5,000
 SCALE IN FEET

FLINT HILLS RESOURCES ALASKA, LLC
 NORTH POLE TERMINAL, NORTH POLE, ALASKA
**SECOND SEMIANNUAL 2016 OFFSITE
 GROUNDWATER MONITORING REPORT**

THIRD QUARTER 2016 APPROXIMATE EXTENT OF
 SULFOLANE IMPACTS IN OFFSITE MONITORING WELLS
 AND PRIVATE WELLS

FIGURE
3-5

ARCADIS