

300-FF-5 Groundwater Operable Unit



Overview

Groundwater in the 300 Area is contaminated with uranium and volatile organic compounds. DOE is conducting a treatability study of a method to immobilize uranium in the aquifer.

The operable unit includes several burial grounds and cribs north of the 300 Area. One of these, 618-11 burial ground, has contaminated groundwater with tritium.

Limitations

Uranium interacts with soil grains and levels have not attenuated as much as predicted.

Uranium concentrations vary seasonally in response to Columbia River Stage.

Cis-1,2-dichloroethene and trichloroethene are distributed unevenly with depth in the aquifer.

Conclusions

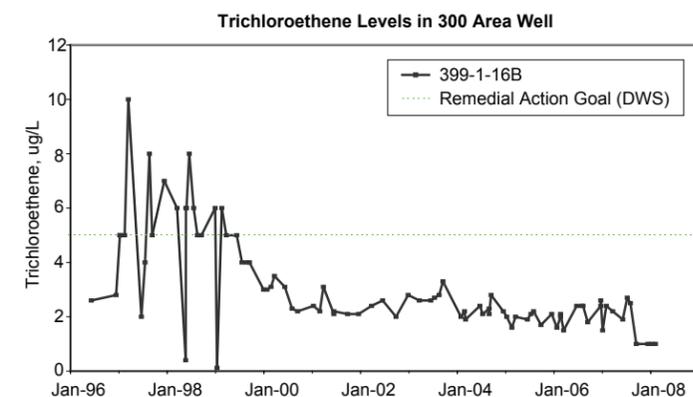
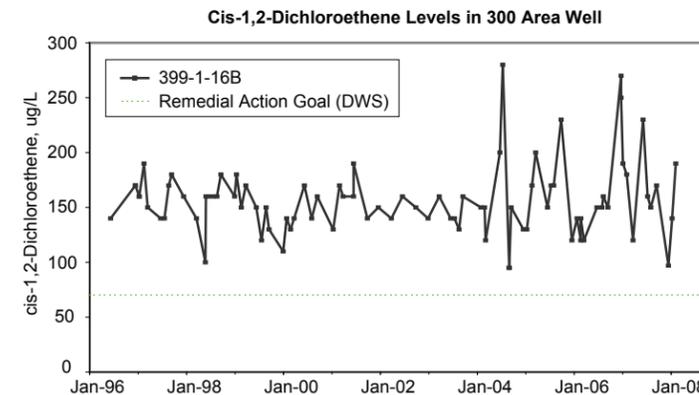
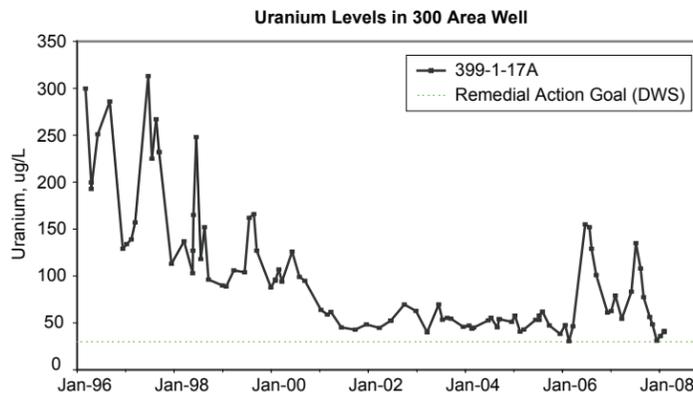
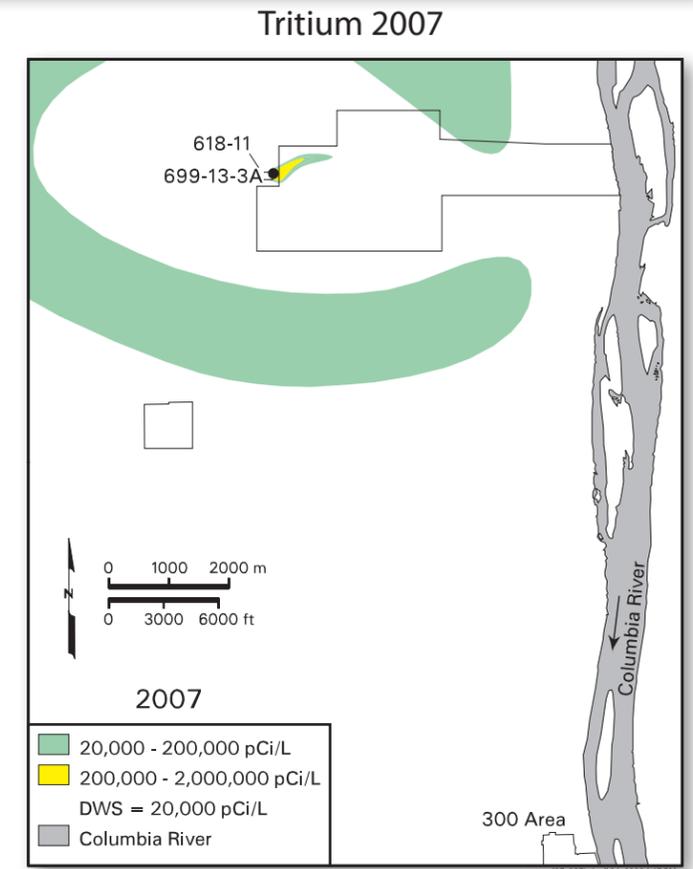
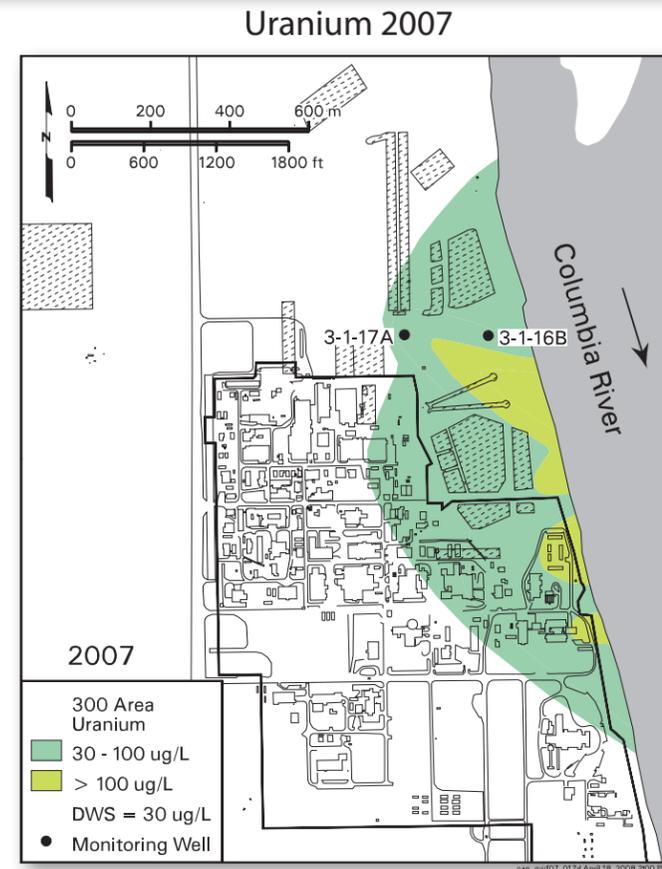
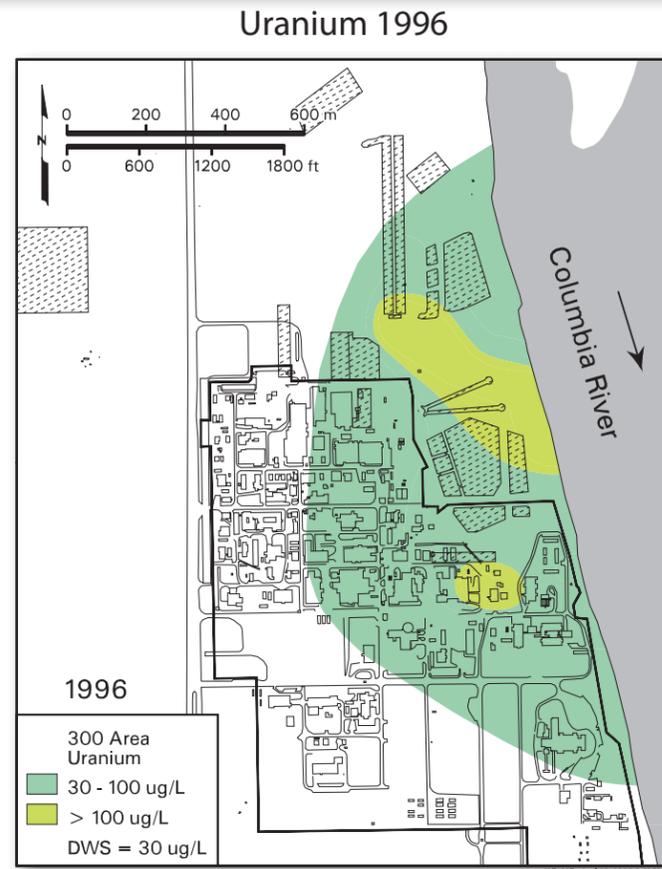
Uranium concentrations have declined but remain above the cleanup goal (30 µg/L).

Cis-1,2-dichloroethene levels have not attenuated as expected and levels are above the cleanup goal (70 µg/L).

A trichloroethene plume has attenuated and levels are below the cleanup standard (5 µg/L) in routine monitoring. However, a few wells and aquifer tubes screened in a fine-grained layer have elevated trichloroethene levels.

DOE is implementing an aggressive characterization program for the uranium and organic plumes and is developing alternative remediation technologies.

5/21/08



The 618-11 burial ground, north of the 300 Area, has contaminated groundwater with a small but highly-concentrated tritium plume. Concentrations are declining. DOE plans to remove tritium sources from the burial ground in coming years and the plume is not expected to reach the Columbia River.

