

New Satellite Imagery of Iranian Nuclear Sites on Google Earth

October 11, 2011

Over the last several months, Google Earth has posted updated commercial satellite imagery over Iran which includes several nuclear sites. [New imagery](#) from June 22, 2010 covers the Arak heavy water reactor and heavy water production facility. Compared with [earlier imagery](#) from November 2009, also available on Google Earth, there do not appear to be major external changes at either the reactor site or the heavy water production facility—though construction continues inside the buildings (see figures 1 and 2). Assorted construction activity at heavily guarded sites along the mountainside adjacent to the Arak site, such as [here](#) and [here](#), continues.

In July 2011, Google Earth also posted new imagery of the [Gchine mine and mill](#) from November 8, 2010. Previous imagery of the site available on Google Earth was from February 9, 2010. There do not appear to be any new ponds under construction, although the waste tailings level can be seen changing [here](#) (see figures 3 and 4).

In August 2011, Google Earth added imagery from March 6, 2011 of the [Ardakan yellowcake production plant](#). The facility is being constructed very slowly, with few buildings added each year. Comparing the new imagery to a picture from October 2009, a few more buildings have been constructed (see figures 5 and 6). Two large square excavations can be seen [here](#) (see figure 7). One or both of these excavations could be for a tailings pond. A building towards the south of the site, under construction in previous imagery, now [appears to be a hardened facility](#) (see figures 8 and 9).



Figure 1. The Arak reactor and heavy water production site in November 25, 2009.



Figure 2. Arak reactor and heavy water production site in new Google Earth imagery June 22, 2010. There do not appear to be major external changes to the site—though construction inside the buildings is ongoing.



Figure 3. Tailings pond full in February 9, 2010 image of the Gchine uranium mine and mill

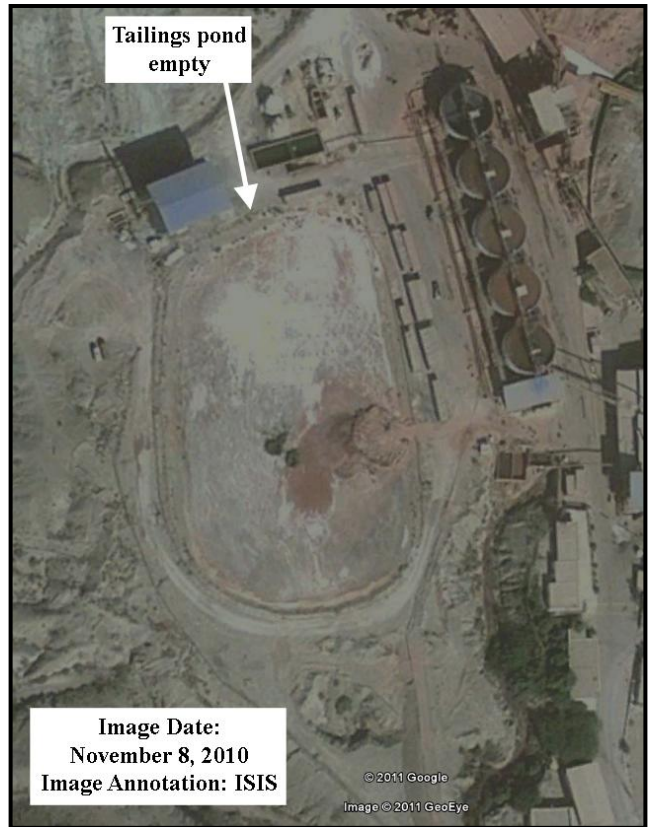


Figure 4. Tailings pond empty in November 8, 2010 image of the Gchine uranium mine and mill site.



Figure 5. Ardakan yellowcake production facility under construction in this October 6, 2009 satellite image.

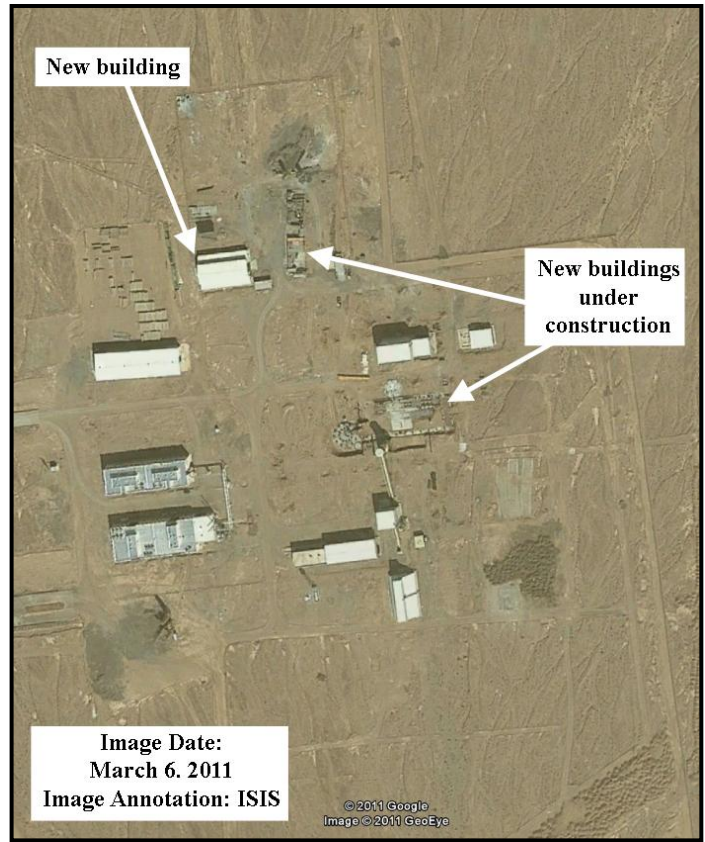


Figure 6. Several new buildings are under construction in this new image from March 6, 2011 recently added to Google Earth.

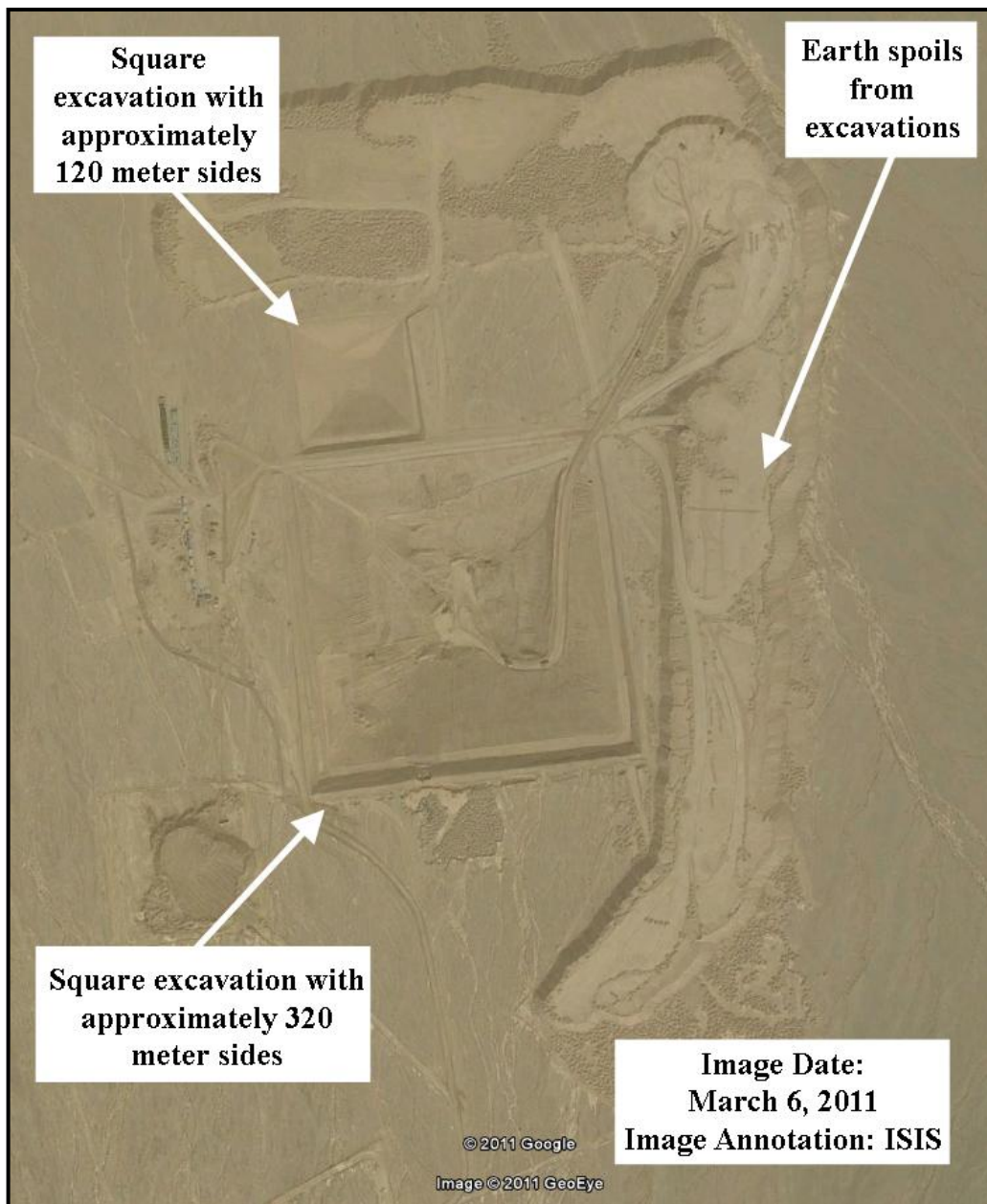


Figure 7. Large square excavations towards the north of the Ardakan yellowcake production facility construction site. One or both of these excavations could be for a tailings pond.



Figure 8. October 6, 2009 satellite image shows building under construction at southern end of Ardakan site.



Figure 9. March 6, 2011 satellite image showing the hardened facility.