

**Comparing Russian and U.S. Perspectives on
Policies Toward Iran's Nuclear Program:
Can anything be done diplomatically?**

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Outline

- Iran vs. the UN Security Council: Escalation to where?
- Elements of a diplomatic solution?
- Washington politics and Teheran politics

Natanz

Centrifuge assembly and Testing (Pilot Plant) area where 20% LEU is being produced



Multilayered roofs of underground halls where 3.5% enriched LEU is now being produced (being covered up in 2002).

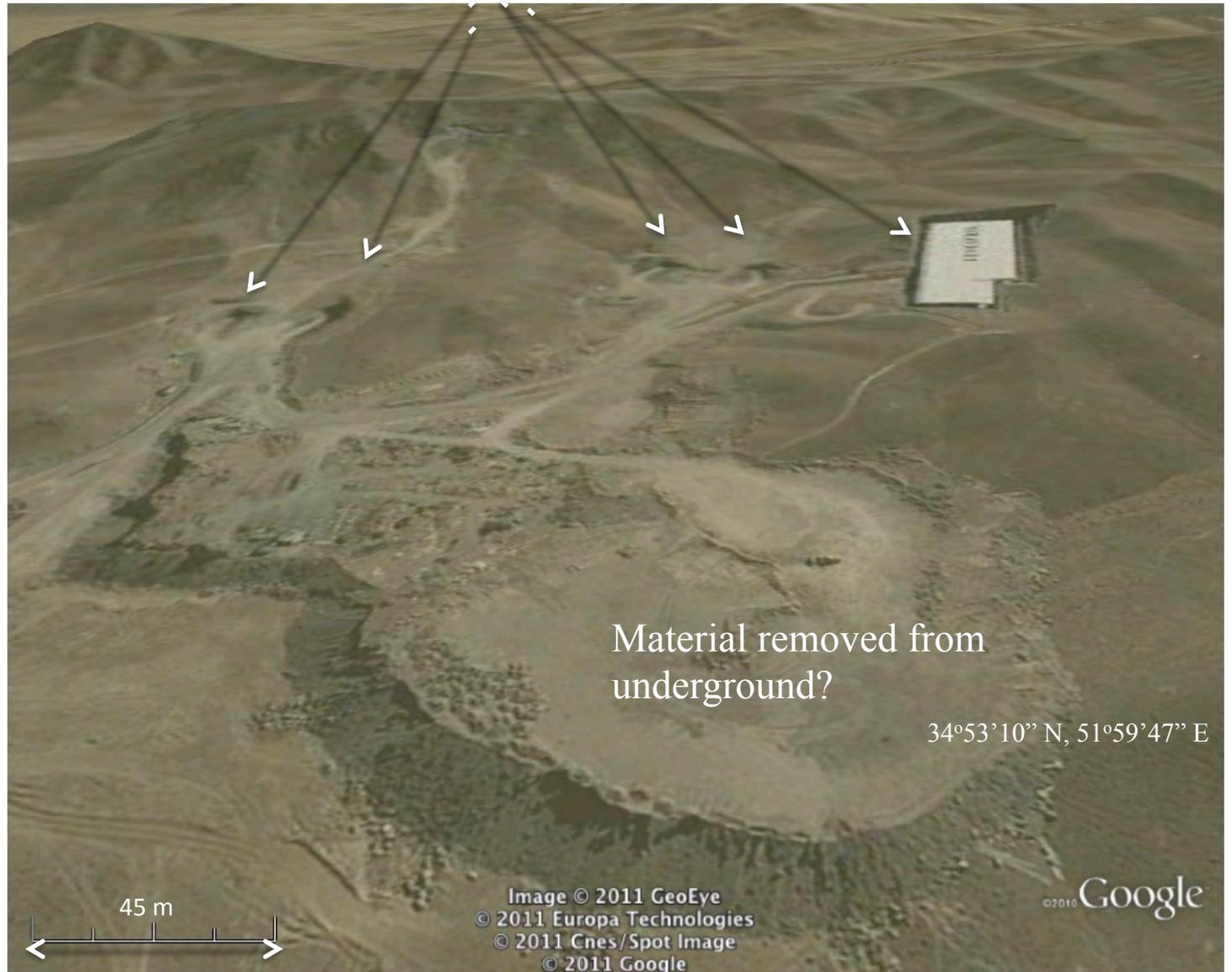
NATANZ, IRAN -- CLOSE-UP

 INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY

IMAGE CREDIT: DIGITALGLOBE
DATE OF IMAGE: 16 SEPTEMBER 2002

THE GAS CENTRIFUGE URANIUM ENRICHMENT PLANT AT NATANZ, IRAN.

Tunnel entrances



Fordow Fuel Enrichment Plant, revealed, Sept. 2009. Centrifuge installation has now begun. Production of 20% LEU is being moved here and production rate is to be tripled.

Breakout scenarios (enough 90-percent uranium for 1-4 Nagasaki-type bombs, 25-100 kg)

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	From Natural U	From 3.5% LEU	From 20% U
Feed required (kgU)	7-14,000 (0.4% DU)	800-3200 (0.7% DU)	130-520 (3.5% DU)
Feed available (kgU)	250,000	3,000	50 →+ 100/yr
SWUs then required (time at 5000 SWU/yr)*	4-17,000 (years)	1400-5400 (a year or less)	250-1000 (months)

**Breakout times cannot be calculated from SWUs/yr only because they do not take into account the time required to reconnect centrifuges and problems with optimizing the centrifuges and cascades for high enrichments. The quantities of feed required would also be significantly increased with the losses experienced at Natanz.*

(See <http://isis-online.org/isis-reports/detail/critique-of-gregory-joness-breakout-estimates-at-the-natanz-fuel-enrichment/>)

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The Teheran Research Reactor requires only 15-20 kg/yr of 20% U/yr.
Does Iran want nuclear weapons or a nuclear-weapon option?

(Do different factions have different answers for that question?)

**PLUTONIUM
ROUTE. The 40-
MWt Arak
Research Reactor
is to start operating
at the end of 2013.**

There is no evidence that Iran is building a reprocessing plant to separate plutonium from the irradiated fuel.

But this is basically the same reactor is used by India to make enough weapon-grade plutonium for about 1 bomb/yr and it is not as good as the 5 MWt Teheran Research Reactor for isotope production.



What will happen to the spent fuel produced by this reactor?

Elements of a diplomatic solution?

- **Accept Iran's right to enrich *if***
 - it ratifies the Additional Protocol,
 - limits enrichment to <5%
 - does not stockpile enriched UF₆
 - caps its enrichment capacity for 5 years
 - makes a no-reprocessing commitment for 10 years?
- **UN Security Council guarantees**
 - against attack
 - that admissions of nuclear-weapon-design activities will not be used to justify additional sanctions?
- **Confidence building, starting with a deal built on Iran's offer to stop producing 20% enriched uranium in exchange for fuel for the Teheran Research Reactor (TRR)? (The U.S. wants more.)**

Washington Politics

Obama will be attacked if he agrees to Iran's right to enrich.

Many US supporters of Israel see President Ahmadinejad as a potential Hitler.

But can we afford to wait until after the U.S. elections (Nov. 2012)?

Will the U.S. leadership necessarily be more inclined or empowered to make a deal then?

Teheran Politics

There is great distrust of U.S. intentions in Teheran and fear that any concession to the U.S. would be taken as a sign of weakness – both by the U.S. and internally by other factions in Teheran.

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There also are well-placed people in both capitols interested in achieving a diplomatic solution.