

Iranian Pathway¹ to a Nuclear Weapon Under the Amad Plan–What we learned from the Nuclear Archives

Fissile material²

Uranium mining and milling

“Bandar Project” @ Gchine

[Full report](#) | [Summary](#)

LEU³ imported, or produced at Natanz or other Iranian sites

Conversion to UF₆, @ “New Tehran Site” (planned) | [Full report](#)

Uranium enrichment plant

@ Al Ghadir, aka Fordow

[Full report](#) | [Summary](#)

Conversion from weapon grade uranium hexafluoride to weapon grade uranium tetrafluoride

Production of weapon grade uranium metal and components of nuclear core

Project 3/14: “Shahid Boroujerdi” @ Parchin

[Full report](#) | [Summary](#)

and Shahid Mahallati Metals Workshop @ Shahid Hemmat Industrial Group

In the early 2000s, Iran’s was building a substantial nuclear weapons production complex under the “Amad Plan” to manufacture five nuclear weapons and prepare an underground nuclear test site, all to be finished by early 2004 (on five weapons, read the [full report](#) or the [summary](#).) Under international pressure, Iran secretly downsized and reoriented this nuclear weapons program into more camouflaged parts, some or all of which may continue today in reduced form (on reorientation, read the [full report](#) or [summary](#).)

Non-fissile material weapons components (see @Project 110, click [here](#))

High explosives manufacturing⁴

Nuclear weapon design (“Simulation Project”)

Mechanical, electrical, and electronics parts fabrication⁵

Shock wave generator @ Sanjarian [Full report](#)

Major high explosives testing

Testing @ Parchin

[Full report](#)

Other testing @ Marivan, Sanjarian, Golab Dareh | [Full report](#)

Hydrodynamic testing with pin dome [Click here.](#)

Neutron source

Sub-projects 3/20⁶ and 3/21

[Full report](#)

Other components

Flyer plate (click [here](#) for more), main charge, outer casing, etc.

Underground nuclear test site

“Midan Project”

[Full report](#) | [Summary](#)

Warhead assembly plant

Click [here](#) for the weapon design

Re-entry vehicle

@ Shahid Hemmat Industrial Group

Click [here](#) for schematics

Shahab-3 missile Integration



Notes and Comments

¹This chart generally flows from the top to the bottom, ending with a nuclear warhead on a Shahab-3 missile. Some activities occur simultaneously and are therefore presented on the same level.

²This pathway does not include all of the design, testing, and development facilities involved in the steps of converting and enriching uranium, or making nuclear weapon components from natural and enriched uranium, in particular those facilities for making uranium tetrafluoride or converting enriched uranium hexafluoride to uranium tetrafluoride.

³ Low-enriched uranium

⁴ It is not clear if this was part of the weapons program or part of a conventional military industry, where high explosive components were built under contract according to designs provided by the nuclear weapons program.

⁵ It is currently unknown where these parts were made.

⁶ The location of the site which manufactured uranium deuteride (project 3/20) is not currently known.