



## Unknown Amad Sites, Prior to the Nuclear Archive Seizure

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Based on our newly released book, *Iran's Peddling Pursuit of Nuclear Weapons*,<sup>1</sup> many Amad facilities were unknown to Western intelligence and the International Atomic Energy Agency (IAEA) prior to the seizure of the Nuclear Archive in early 2018. This table lists 20 main facilities and sites, representing the bulk of the Amad Plan facilities. Of those, the existence of nine major Amad facilities was completely unknown until after the seizure of the Nuclear Archive, which provided great detail about their activities.<sup>2</sup> Interestingly, two sites, Shahid Boroujerdi and Al Ghadir, both tunnel complexes, were visible in commercial satellite imagery, but it was not known until the archive that they were part of the Amad Plan and had a nuclear weapons purpose.<sup>3</sup> Another three sites were partially known to exist, but their locations were not known. Seven sites were known by location and certain activities, but many additional activities were revealed by the archive. The final location is unknown, and any of its activities are not described in the archive.

About half of the Amad sites were unknown by Western intelligence and the IAEA until after the seizure of the Nuclear Archive. Except in one case, the archive provides much greater detail about the Amad sites that were already known prior to its seizure.

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<sup>1</sup> The book is available on Amazon at [https://www.amazon.com/dp/B094DTRJFL?ref=pe\\_3052080\\_276849420](https://www.amazon.com/dp/B094DTRJFL?ref=pe_3052080_276849420)

<sup>2</sup> Potential locations for stored nuclear weapons-related equipment or related documents are not included.

<sup>3</sup> The latter was revealed years later as a secret enrichment site and regarded as highly suspicious, but it was not known until the archive seizure that it was started by Amad to produce weapons grade uranium; it must therefore be counted as one Amad site that was missed, together with Boroujerdi.

<b>Facility/Activity</b>	<b>Location Known prior to Archive</b>
Sanjarian Building <ul style="list-style-type: none"> <li>- main testing chambers</li> <li>- shock wave generator development &amp; manufacturing location</li> <li>- high explosive (PETN) production</li> </ul>	Known by 2009, but not all activities at the site
Shahid Mahallati/Uranium Metallurgy/Weapon Grade Uranium (WGU) Core Development and Production (pilot plant)	Unknown
Shahid Boroujerdi/Uranium Metallurgy (production scale)	Unknown
Project Midan	Unknown but some activities identified, without knowing the locations or understanding the nature of the activities
Integration on Missiles	Known via laptop documents but key sites were not identified, except a few workshops involved in making re-entry vehicle mockups
Golab Dareh	Unknown
Conversion, HEUF <sub>6</sub> to HEUF <sub>4</sub> (Highly enriched uranium hexafluoride to highly enriched uranium tetrafluoride)	Unknown and is still unknown. The archive does not identify where this facility was or would be.
Misc. Workshops for making key nuclear weapons subcomponents, excluding shock wave generator and neutron initiator	Unknown, counted as one site, although activities occurred at several
High Explosive Casting and Finishing	Unknown
Neutron Initiator	Location(s) unknown, activities partially known
Military Centrifuge R&D	Unknown, archive does not identify any location for this work, but it contains information on the inside of the building and centrifuges associated with this program.
Al Ghadir (later renamed Fordow)	Unknown that part of Amad, even after its eventual discovery in 2009
Laser Enrichment	Known
Parchin (Taleghan 1 and 2)	Known
Marivan	Location unknown/some activities known
Gchine Mine and Mill	Known
Uranium Conversion (UF <sub>6</sub> ), Pilot Plant	Unknown
IRGC technical universities associated with Amad and post-Amad organizations: Malak Ashtar University, Imam Hussein University, Shahid Beheshti	Known except one university not known
Headquarters of Physics Research Center (PHRC) and Amad at Lavizan-Shian	Known
Warhead assembly building	Unknown, but construction had not yet started by the time Amad Plan was halted