

(b)(3):50 USC 403-1
(i)

The following pages were denied in full and not provided pursuant to FOIA Exemptions b(1), 1.4(b)(c)(h), b(3) 50 USC 403-1(i) and 50 USC 403(g): i, 2,3, 9-12, 14-18 and one "Administrative Notes" page.

September 2002
DJ-1610-93-02-SCI

DEFENSE INTELLIGENCE ASSESSMENT



(S) Iraq's Reemerging Nuclear Weapon Program

Derived from Multiple Sources
Declassify on: NND 700000

The unauthorized disclosure of classified information may be prosecuted under Section 793 and Section 798, Title 18, USC, and is punishable by fine of not more than \$10,000, imprisonment of not more than 10 years, or both.

Defense Intelligence Assessment

This document is published under the auspices of the Department of Defense Intelligence Production Program (DoDIPP). The Defense Intelligence Agency produced it as the designated producer for this subject.

Prepared by:

(b)(3):10 USC 424

Directorate for Analysis and Production
Defense Intelligence Agency

Principal Author:

■ Directorate for Analysis and Production, (b)(3):10 USC 424

(b)(2),(b)
(3):10 USC
424

Major Contributors:

■ Directorate for Analysis and Production, (b)(3):10 USC 424

(b)(2),(b)
(3):10 USC
424

■ Directorate for Analysis and Production, (b)(3):10 USC 424

(b)(2),(b)
(3):10 USC
424

This product addresses the interests of the Office of Secretary of Defense, the Joint Chiefs of Staff, and the National Security Council.

Contents

Introduction	1
Lack of Inspections as Catalyst	1
(b)(1), 1.4 (c)	1
Consolidation and Activities	3
Al-Taji	3
Saad Center	4
(b)(1), 1.4 (c)	5
Continued Use of International Atomic Energy Agency Programs	6
Training	6
Uranium Acquisition	6
Uranium Processing	7
Facilities for Uranium Milling and Processing	7
Gas Centrifuge Enrichment Process	8
Gas Centrifuge-Related Parts	10
Other Related Procurement	10
Facilities for Uranium Enrichment	10
(b)(1), 1.4 (c)	10
Al-Rashidiyah	13
Design, Fabrication, and Weaponization of Nuclear Weapons and Components ...	13
(b)(3):50 USC 403-1(i)	13
Neutron Generators	13
(b)(3):50 USC 403 (g)	13
Detonators — Arming, Fuzing, and Firing	13
Warhead Integration With Missile Delivery Systems	14
Foreign Nuclear Weapon Assistance?	15
Pakistan	15
(b)(3):50 USC 403 (g)	16
Likelihood To Accept Assistance?	16
Conclusions	17
Timeline for Completion of a Nuclear Weapon	17
Table	
General Nuclear-Related Procurement, 1999-2002	11

Contents (Continued)

Figures

1. Saddam Meeting With IAEC in September 2001	2
2. (b)(1), 1.4 (c)	4
3. [Redacted]	5
4. Yellowcake	6
5. (b)(1), 1.4 (c)	8
6. Aluminum Tubes	9
7. Gas Centrifuge	9
8. (b)(1), 1.4 (c)	12
9. Firing Set	14
10. (b)(1), 1.4 (c)	14
11. Iraqi Centrifuges	17

~~(S)~~ Iraq's Reemerging Nuclear Weapon Program

Introduction

~~(S)~~ Iraq's nuclear weapon program probably began in 1975. Initially, Iraq concentrated on efforts to recover plutonium from its French-supplied Osirak reactor. However, after Israel destroyed this reactor in June 1981, Baghdad emphasized production of highly enriched uranium.

~~(S)~~ During the 1980s, Iraq researched several different uranium enrichment techniques, such as electromagnetic isotope separation, gaseous diffusion, and gas centrifuge. After setbacks in the gaseous diffusion program, Iraq emphasized electromagnetic isotope separation and gas centrifuge methods and had established the facilities for these types of enrichment.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1 (i), 1.4 (b), 1.4 (c)

(b)(1), 1.4 (b), 1.4 (c), 1.4 (h)

(b)(3):50 USC 403-1 (i)

(b)(3):50 USC 403-1(i)

Saad Center

~~(S//NF)~~ Activity has increased substantially at this facility since July 2001. Numerous deliveries of unidentified materials are continuing. This material has

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c)

(b)(3):50 USC 403-1(i)

(b)(3):50 USC 403-1
(i)

been placed in several distinct groups covered with nets or tarpaulins. Vehicular activity, including trucks and buses, has increased markedly. The organizational importance of the Saad Center leads to the judgment that the activity may support the nuclear program.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i), 1.4 (b), 1.4 (c)

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1 (i),1.4 (b),1.4 (c)

UNCLASSIFIED

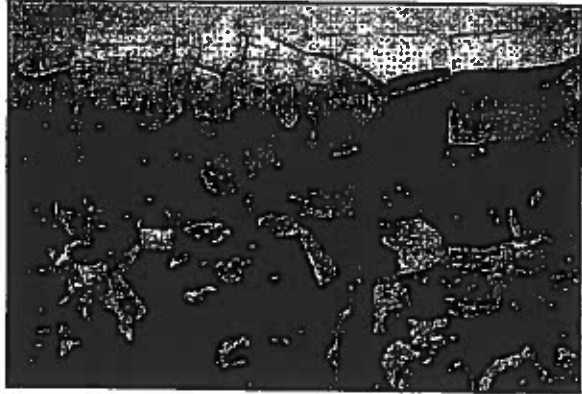
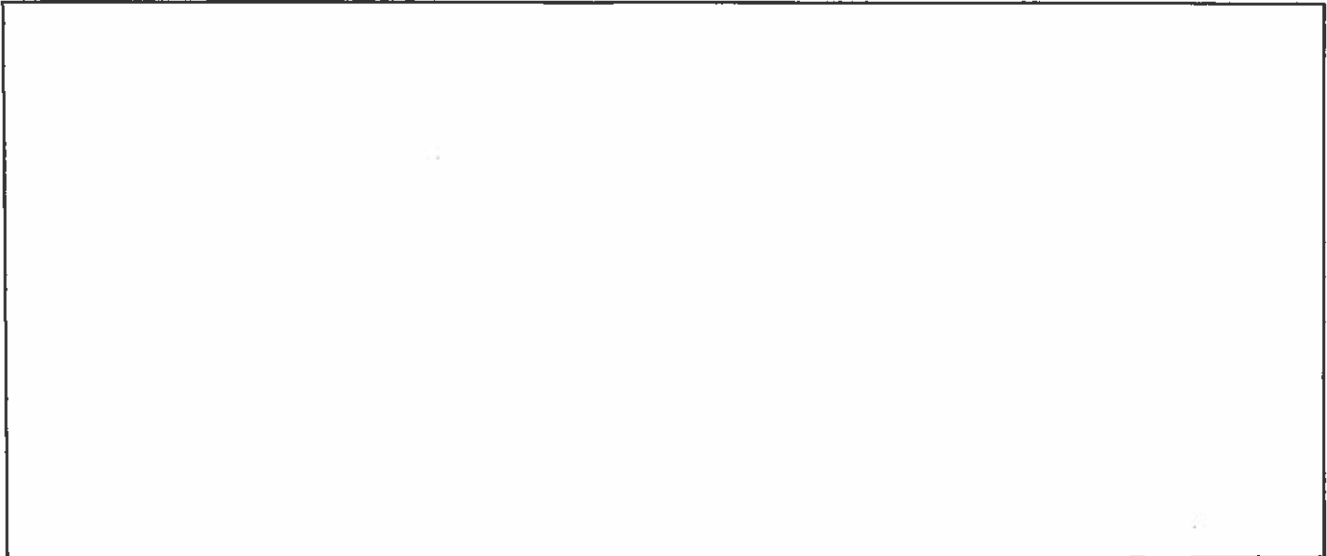


Figure 4. (U) Yellowcake. This is a concentrated form of uranium ore.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c)

Uranium Acquisition

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c)



Facilities for Uranium Milling and Processing

~~(S//NF)~~ If Iraq succeeds in purchasing uranium ore, yellowcake, or anhydrous hydrofluoric acid, it still

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c),1.4 (h)

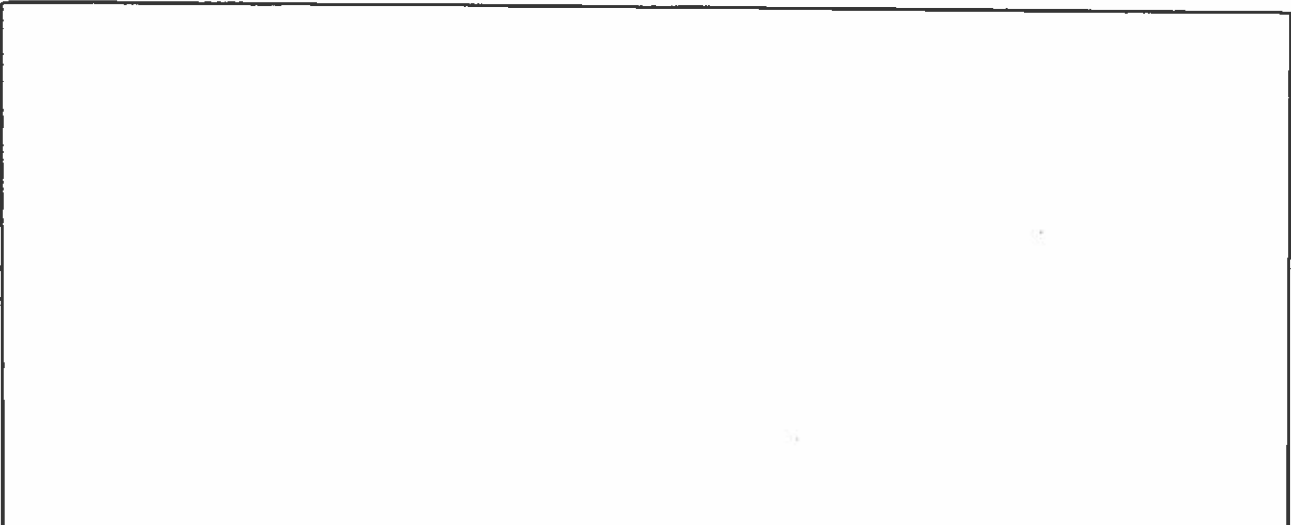
(b)(3):50 USC 403-1(i)

[Redacted]

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c)

will need facilities to process the material for eventual use in a uranium enrichment plant. DIA has not been able to identify any active milling, purification, or enrichment plants in Iraq. As it did before Operation DESERT STORM, Iraq may already have selected facilities in anticipation of acquiring these parts for its nuclear fuel cycle.

[Redacted]



Al-Rashidiyah

~~(S//NF)~~ This facility was intended to house a gas centrifuge cascade. During late 2000, four foundations were begun in the easternmost portion of the complex, and by August 2001, the buildings appeared externally complete. Also, a wall was constructed to separate this portion from the rest of the site. As of late January 2002, activity continued at the laboratory building.

(b)(1),(b)(3):50 USC 403 (g),(b)(3):50 USC 403-1(i),1.4 (b),1.4 (c),1.4 (h)



1
2
3

~~TOP SECRET~~

(b)(3):50 USC 403-1(i)

NOFORN//NF

(b)(3):50 USC 403-1(i)

~~TOP SECRET~~

(b)(3):50 USC 403-1(i)

NOFORN//NF