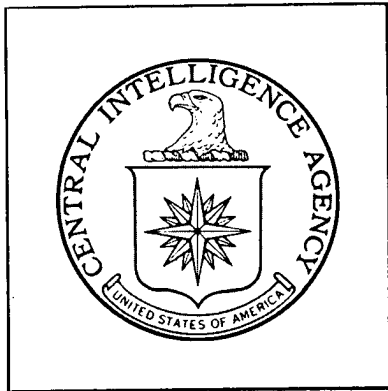


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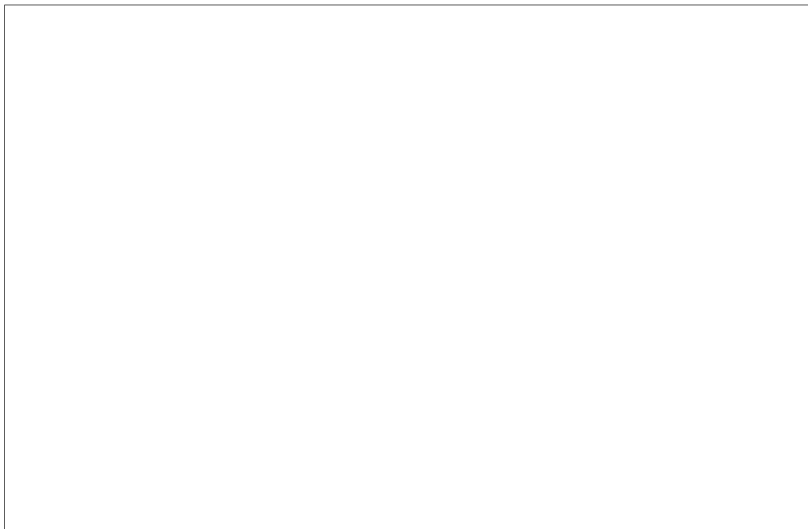
**DIRECTORATE OF  
INTELLIGENCE**

**Industrial Facilities  
(Non-Military)**

*Basic Imagery Interpretation Report*

**Liu-chou Chemical Fertilizer Plant**

**Liu-chou, China**



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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence  
Imagery Analysis Service

INSTALLATION OR ACTIVITY NAME			COUNTRY	
Liu-chou Chemical Fertilizer Plant			CH	
UTM COORDINATES	GEOGRAPHIC COORDINATES	[Redacted]	COMIREX NO.	NIETB NO.
49RCS357960	24-22-00N 109-22-20E		None	None
MAP REFERENCE				
ACIC. USATC, Series 200, Sheet M0497-22HL, 2nd edition, Apr 65, Scale 1:200,000				
(SECRET [Redacted])				
LATEST IMAGERY USED		NEGATION DATE (If required)		
[Redacted]		[Redacted]		

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ABSTRACT

The primary product of the Liu-chou Chemical Fertilizer Plant is ammonium nitrate fertilizer. Secondary products include nitric acid and probably aqueous/liquid ammonia.

The plant was first observed under construction on photography of August 1966. By September 1967 the production facilities for hydrogen, nitrogen, ammonia, nitric acid, and ammonium nitrate were complete. The plant has been observed in operation on all photographic coverage from September 1967 through September 1969.

This report includes a photograph, a process flow chart, a detailed line drawing of the plant, and a chronological summary of construction and operational status.

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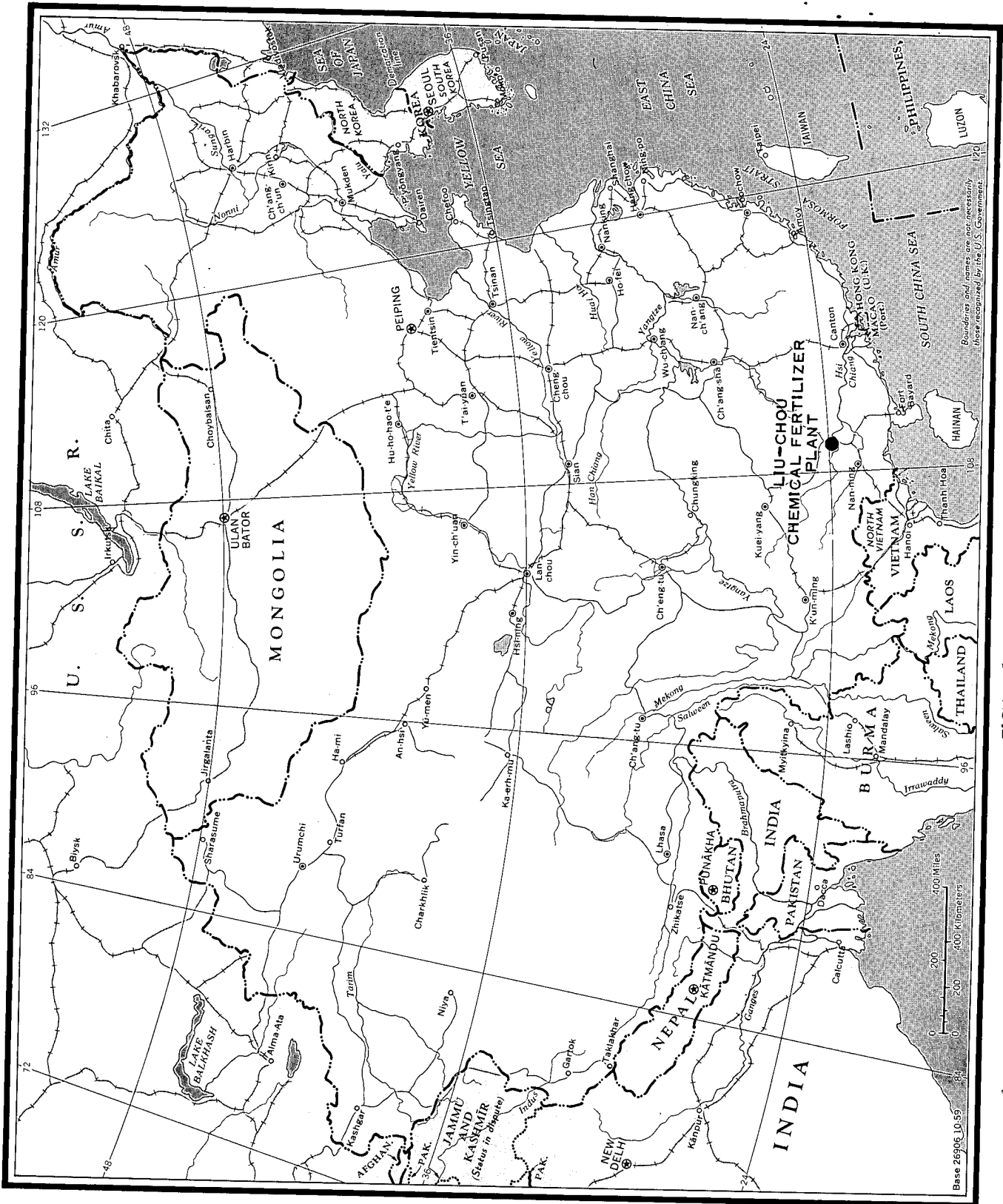
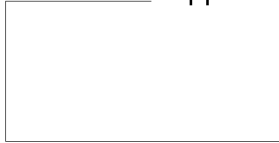


FIGURE 1. LOCATION MAP.

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### INTRODUCTION

The Liu-chou Chemical Fertilizer Plant is located 3 nautical miles (nm) northwest of the center of Liu-chou, Kwangsi Chuang Autonomous Region (see Figure 1). Electric power is provided by the Liu-chou Thermal Power Plant



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### BASIC DESCRIPTION

The plant occupies an area approximately 1,440 by 1,390 feet which contains about 45 acres (see Figures 2 and 3). It is served by road and by a rail spur from the Liu-chou to San-cha-chieh rail line. The plant is secured by a wall and has three controlled-access vehicle entrances.

The primary function of the plant is the production of ammonium nitrate fertilizer. Secondary products include nitric acid and probably aqueous/liquid ammonia. The process flow for the plant is shown in Figure 4. Coal in a water gas retort subjected alternately to steam (make run) and air (blow run) produces gases rich in hydrogen and nitrogen. After purification these gases are combined to form ammonia. Part of the ammonia is utilized to produce nitric acid. The nitric acid is then combined with additional ammonia to form ammonium nitrate.

The plant was first observed in the early stages of construction on photography of August 1966. Construction progressed rapidly and the plant was observed in operation by September 1967. Since that time only minor support buildings have been added. The chronology of construction is shown graphically in Figure 3.

The plant has been observed in operation on all large-scale photographic coverage since it was first seen complete in September 1967. This is indicated by fluctuations in the number of rail cars observed near the ammonium nitrate warehouse and in the number of trucks observed within the plant and on the road leading into the plant.

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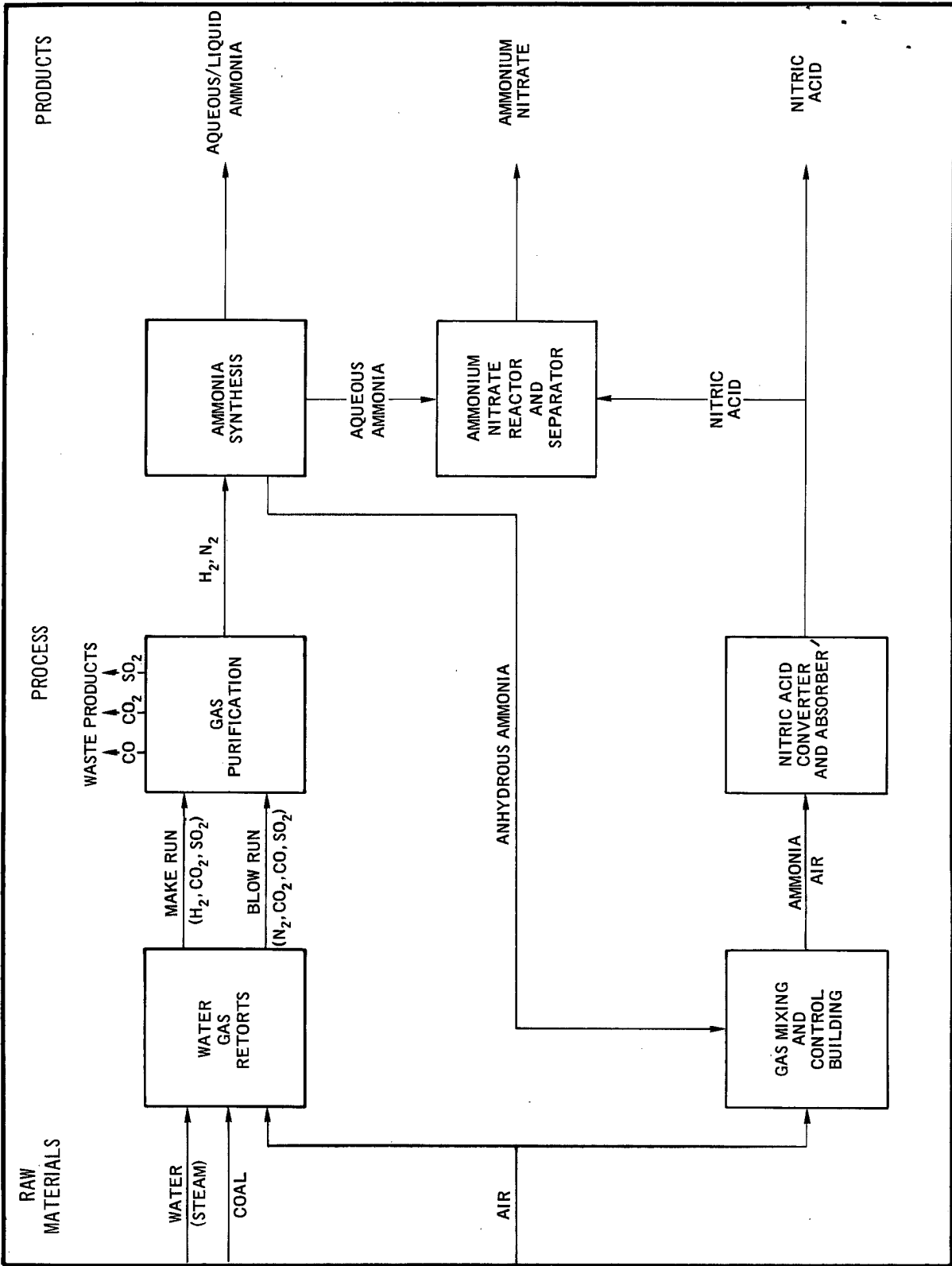
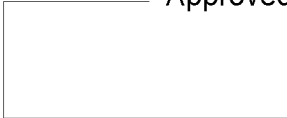


FIGURE 4. PROCESS FLOW AT LIU-CHOU CHEMICAL FERTILIZER PLANT.

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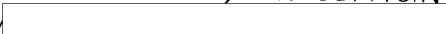

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Map

ACIC. US Air Target Chart, Series 200, Sheet M0497-22HL, 2nd edition, April 1965, Scale 1:200,000 (SECRET,   


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Document

CIA. SID Memorandum - 269/68, Chemical Fertilizer Plant, Liu-chou, China, 7 October 1968, TCS - 10924/68 (TOP SECRET RUFF)

Requirement

COMIREX N02  
Support Number 420117

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