



Director of
Central
Intelligence

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WEB

SAFE 11/17/84 AX

New Directions in Soviet BCW Agent Development and Their Implications

Special National Intelligence Estimate

~~Top Secret~~

~~SPECIAL NATIONAL INTELLIGENCE ESTIMATE~~
24 January 1984

Copies 485

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Addenda

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The Director of Central Intelligence
Washington, D.C. 20505

National Intelligence Council

NFB | SNIE 11/17-84/CX

28 February 1984

MEMORANDUM FOR: Recipients of SNIE 11/17-84/CX:
New Directions in Soviet BCW Agent
Development and Their Implications

SUBJECT : Classification of pages 9 and 10

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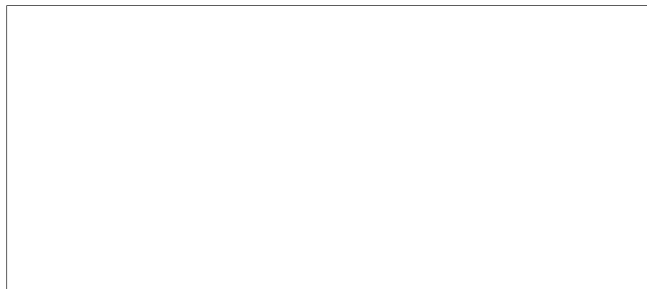
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SNIE 11/17-84/CX

NEW DIRECTIONS IN SOVIET
BCW AGENT DEVELOPMENT
AND THEIR IMPLICATIONS

Information available as of 19 January 1984 was
used in the preparation of this Estimate.

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THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS.

The following intelligence organizations participated in the preparation of the Estimate:

The Central Intelligence Agency, the Defense Intelligence Agency, the National Security Agency, and the intelligence organization of the Department of State.

Also Participating:

The Assistant Chief of Staff for Intelligence, Department of the Army

The Director of Naval Intelligence, Department of the Navy

The Assistant Chief of Staff, Intelligence, Department of the Air Force

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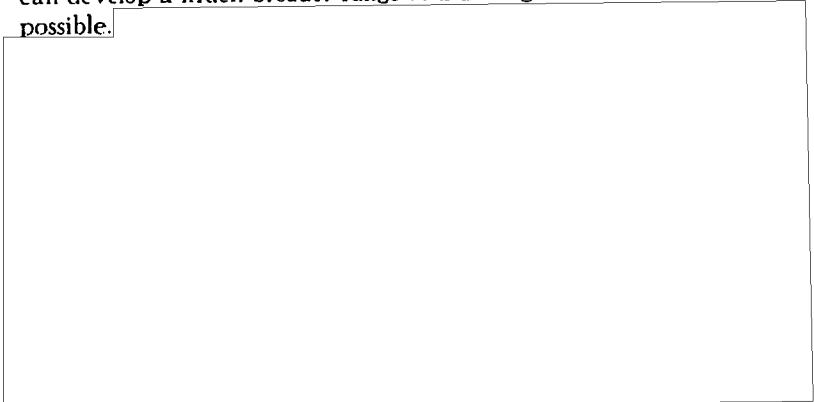
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KEY JUDGMENTS

The Soviet Union has, over the past decade, expanded its traditional R&D program for developing new biological and chemical warfare (BCW) agents to include a program which applies recent advances in biotechnologies such as genetic engineering. This means that the Soviets can develop a much broader range of BCW agents than was heretofore possible.

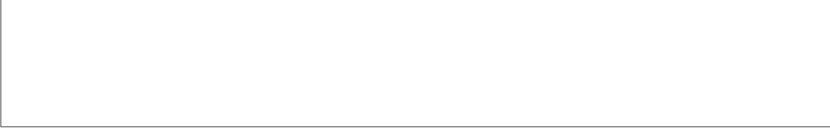


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The Soviets could use modern molecular biology techniques to develop agents against which our current military personal protective equipment is inadequate, against which we have no effective medical prophylaxis or treatment, and for which we have no method of field detection or identification. Application of genetic engineering techniques increases tremendously both the number and kinds of possible agents and the ability to produce them in useful quantities. Furthermore, developing effective countermeasures to a wide variety of possible agents will be extremely difficult.

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The range of novel agents that could result from this program includes compounds that normally are present in the body in minute quantities. These compounds can produce a wide range of deleterious effects if introduced in high concentrations or if genetic manipulation has been used to alter their effects. Toxins not normally found in humans but derived from other organisms, such as bacteria, fungi, plants, and some animals, could also be produced or altered for BCW



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use through these techniques. The effects caused by such compounds could range from emotional and behavioral changes to physical effects such as drowsiness, hemorrhage, and death. Properties could conceivably be tailored to specific field requirements for stability, persistence, dissemination characteristics and rapidity of effect. In a field setting, there would surely be an unquantifiable psychological impact on combat units subjected to such agents, and the psychological stress could severely degrade morale and impair combat effectiveness. [redacted]

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There are nonmilitary rationales for studying such compounds, for example, enhanced pharmaceutical production, better understanding of medical problems, or as tools to investigate biochemical processes. Nonetheless, for the following reasons we believe that the Soviets have a novel BCW agent research and development program:

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The support that has been given to Soviet molecular genetics research has allowed the scientists to achieve quickly a high level of competence in using sophisticated techniques. Whereas Soviet research

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has generally lagged Western (especially US) state of the art, their rapid progress attests to their ability to achieve technological advances in an area given special emphasis. [redacted]

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Western technology acquisition has been central to the rapid progress of biotechnology development in the USSR. However, the United States is no longer the principal direct supplier of biotechnology research expertise to the USSR and in the last decade has been increasingly supplanted by other Western nations as the principal supplier of research equipment and materials. Curtailment of technology transfer from the United States might temporarily slow research progress, but would not prove a permanent impediment. [redacted]

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The Soviets' biotechnology-based BCW agent development program makes it likely that technical approaches to monitoring current and future treaties will be insufficient. [redacted]

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— Their biotechnology-based BCW agent program would not necessarily require unique and identifiable production facilities or storage sites. Furthermore, gearing up for large-scale production could probably be done within days to weeks. Thus it will be extremely difficult to determine by national technical or other physical means whether the Soviets are, at any given time, producing or storing agents. Even on-site inspections would not be sufficient to ensure that prohibited activities could be detected in a timely manner. Establishing intent would be a critical factor.

— The Soviets could easily explain having small quantities of these potential agents for nonmilitary purposes. It is difficult or impossible, on the basis of scientific evidence alone, to differentiate between BCW R&D and that directed toward pharmaceutical development or other nonmilitary purposes.

— As already demonstrated by the "Yellow Rain" situation in Southeast Asia, both detecting and documenting deliberate use of unknown BCW agents (in that case a toxin that occurs naturally in many parts of the world) is difficult.

— The great variety of types of possible novel agents will make it difficult to word effectively a future BCW treaty to contain unambiguous definitions of proscribed agents. Moreover, since no other nation has developed a comparable BCW capability, the Soviets have little incentive to modify existing agreements.

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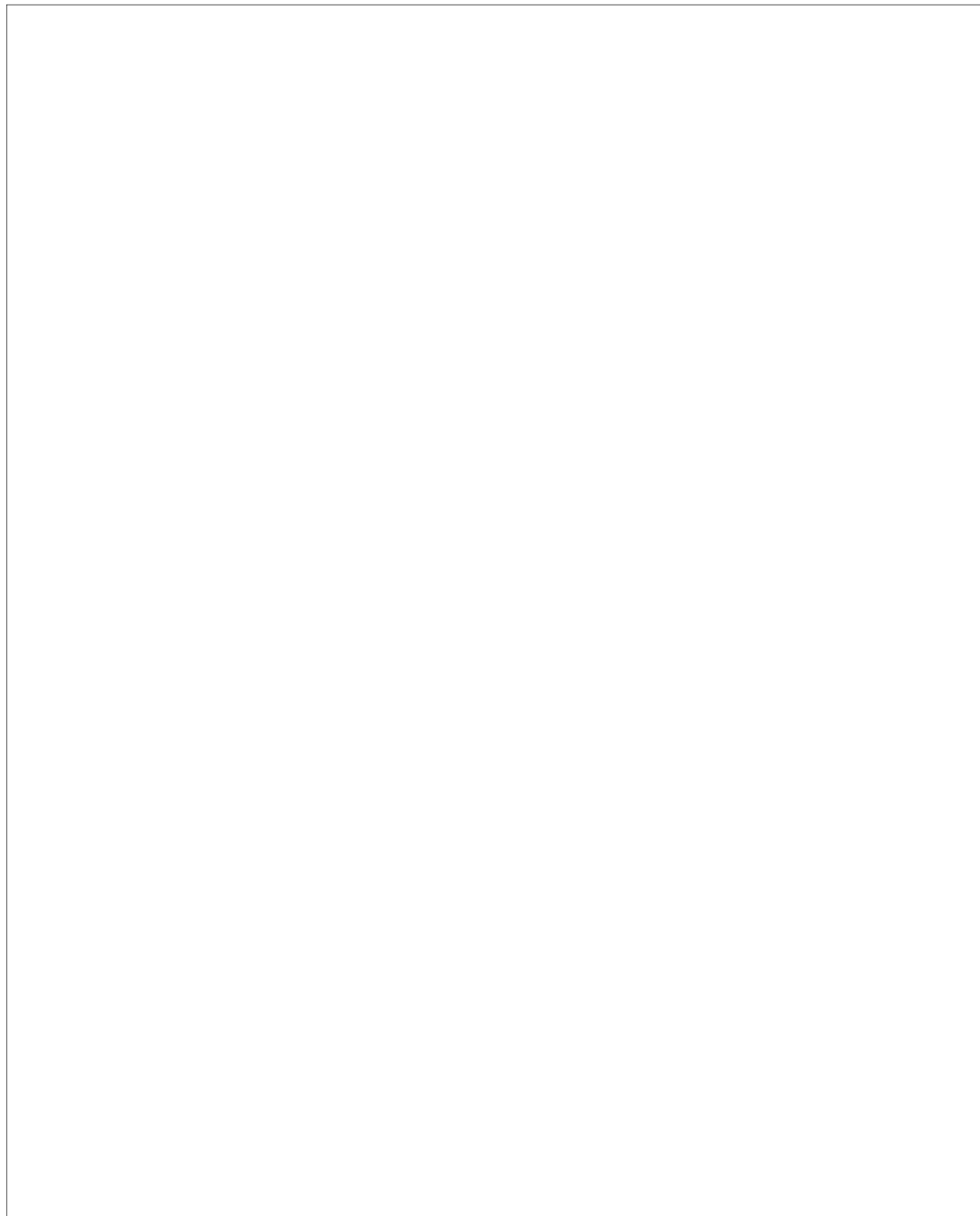
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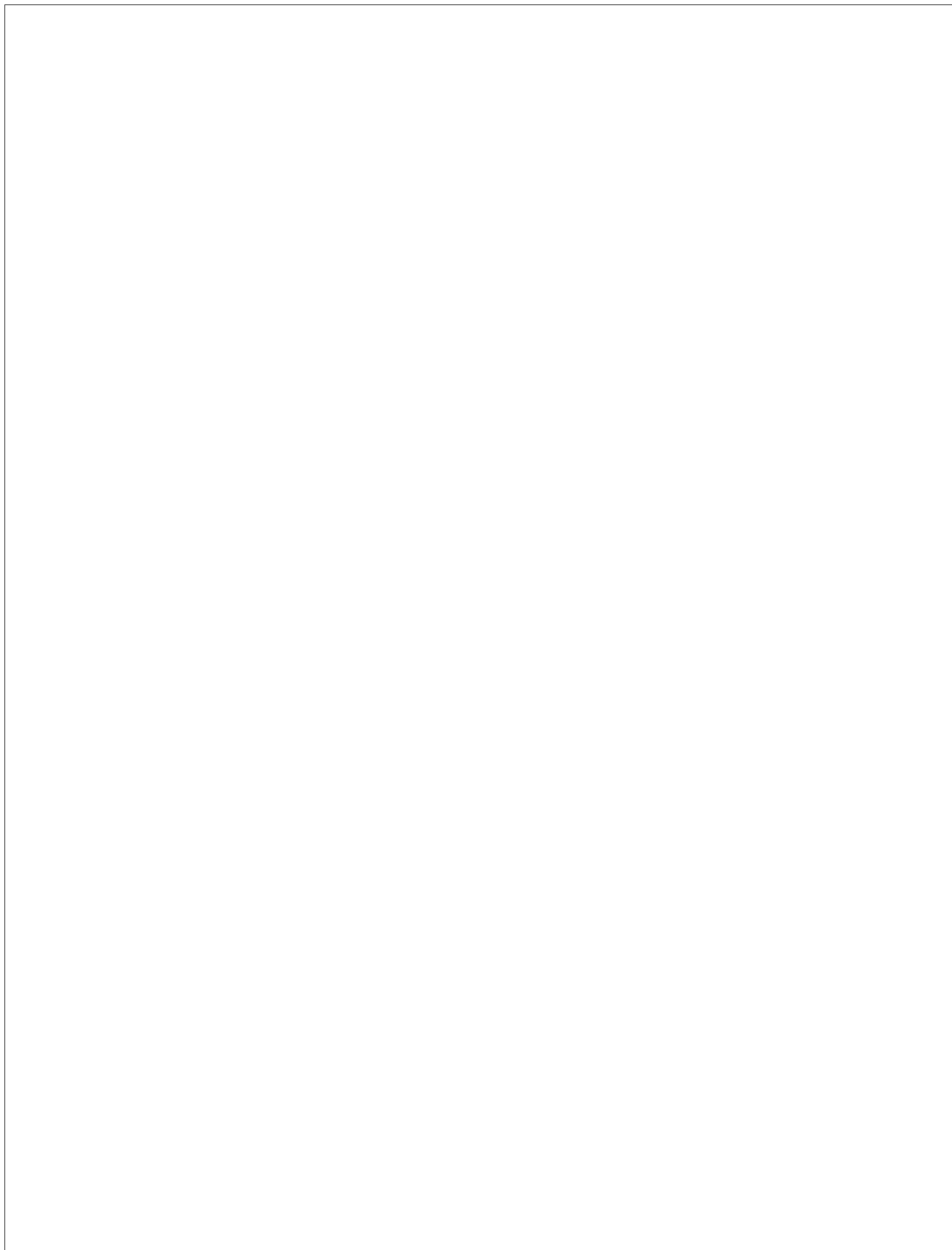
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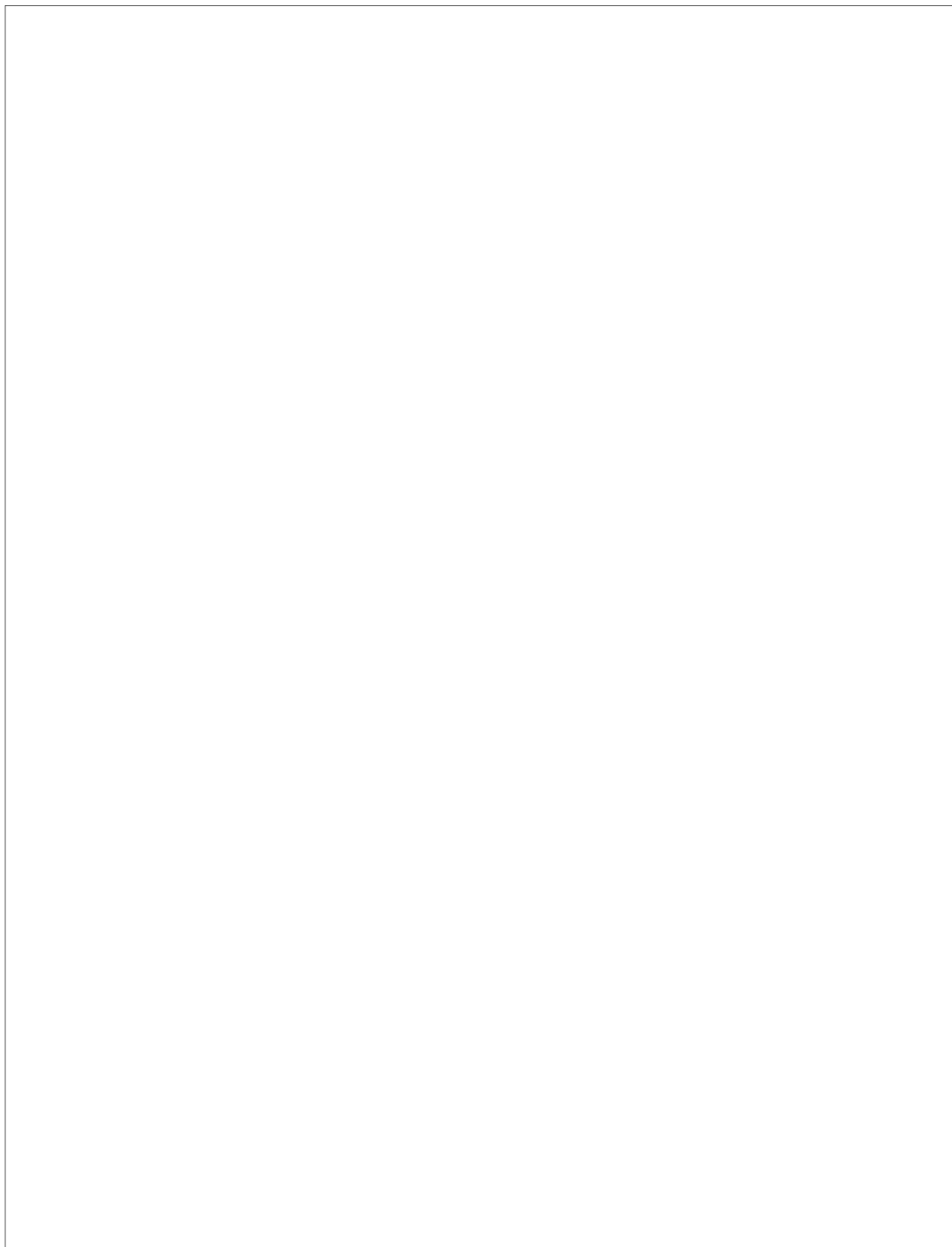
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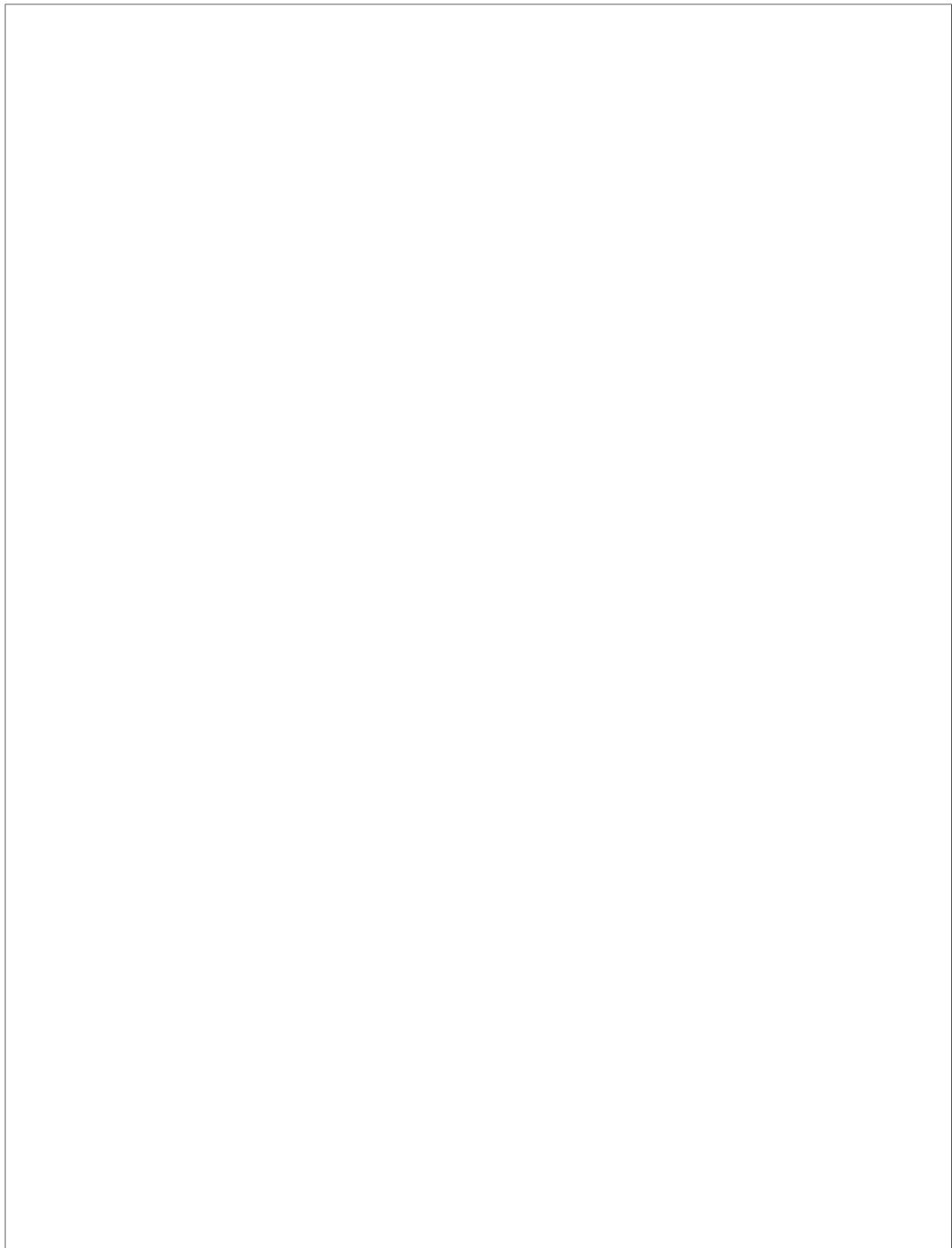
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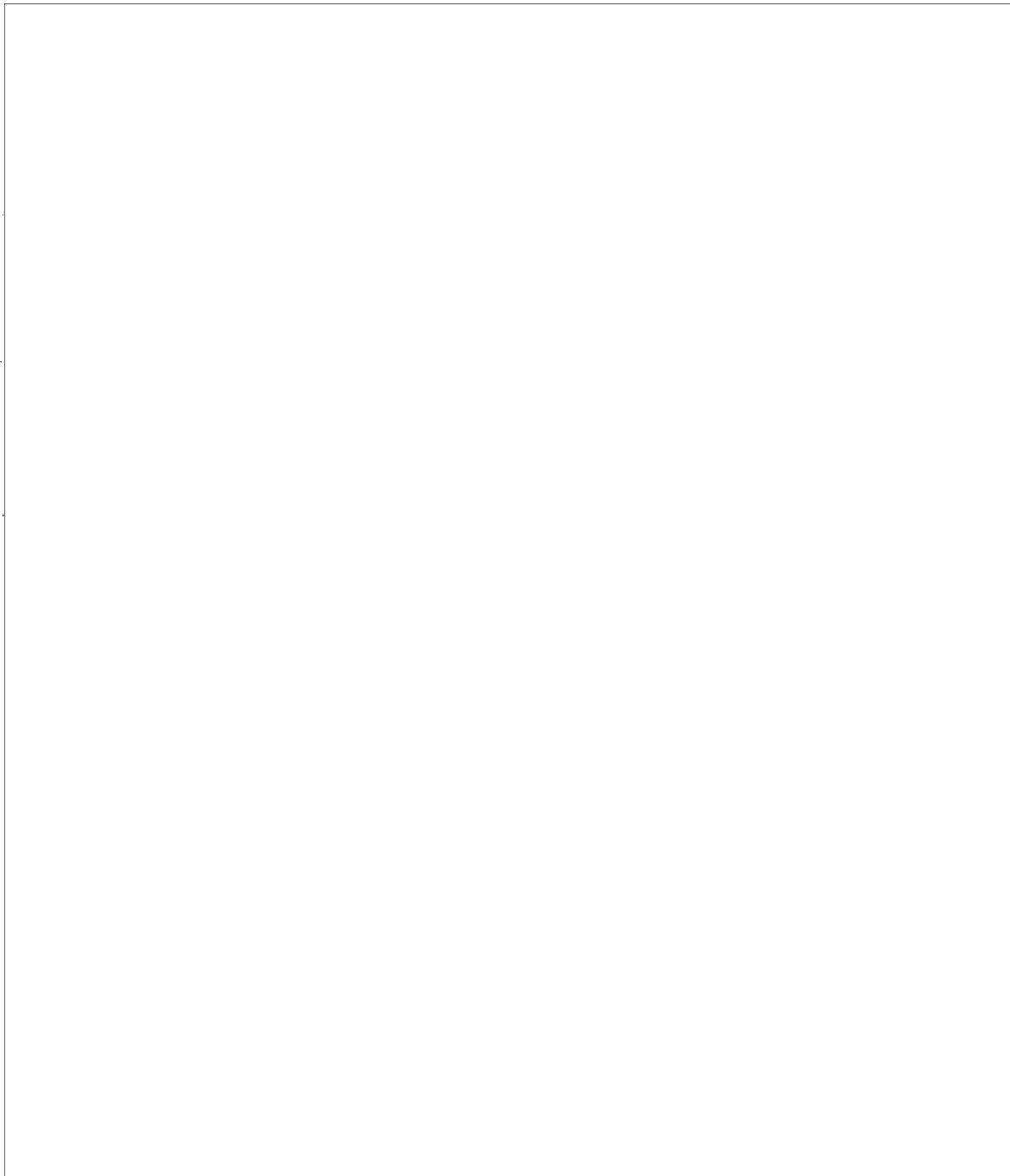


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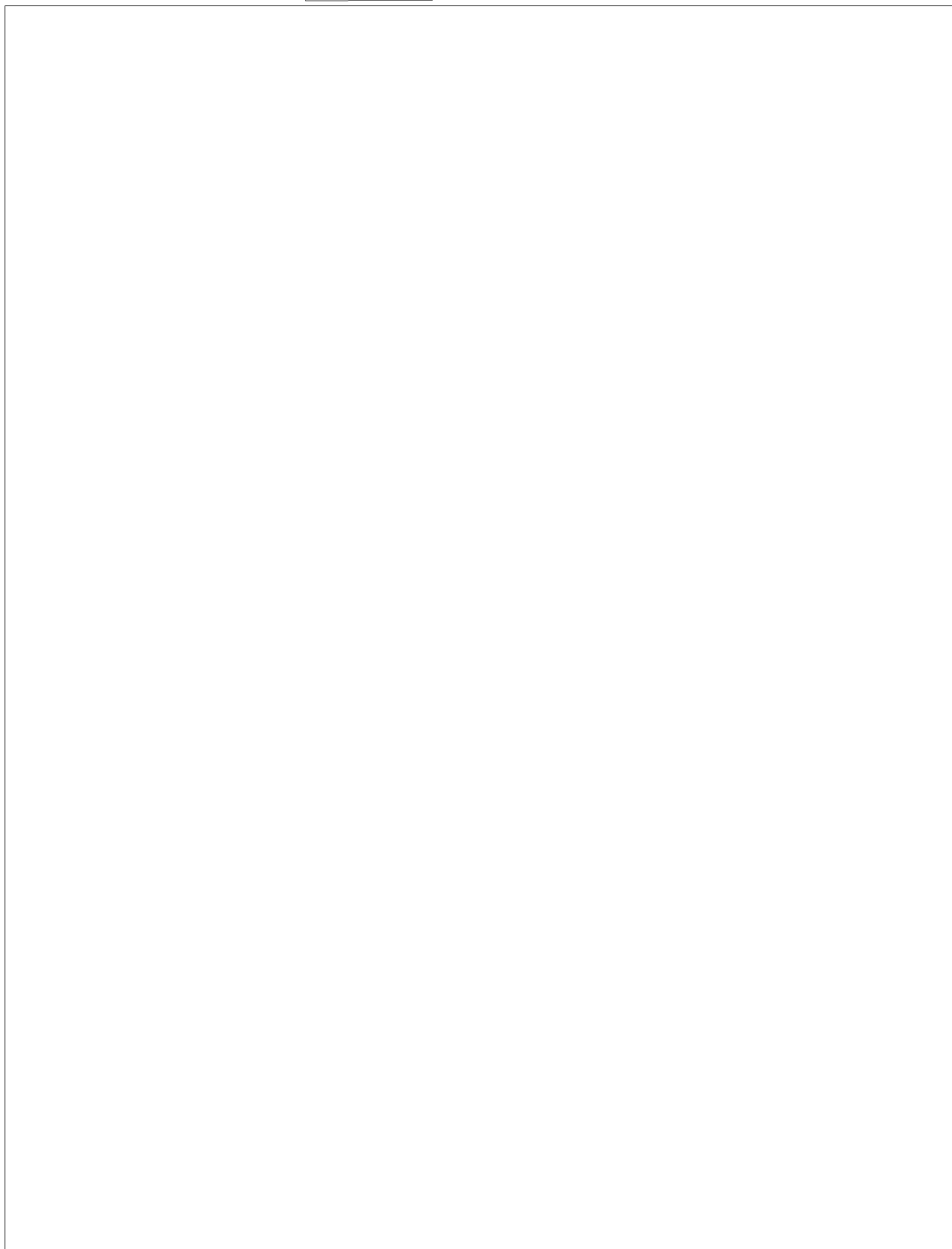
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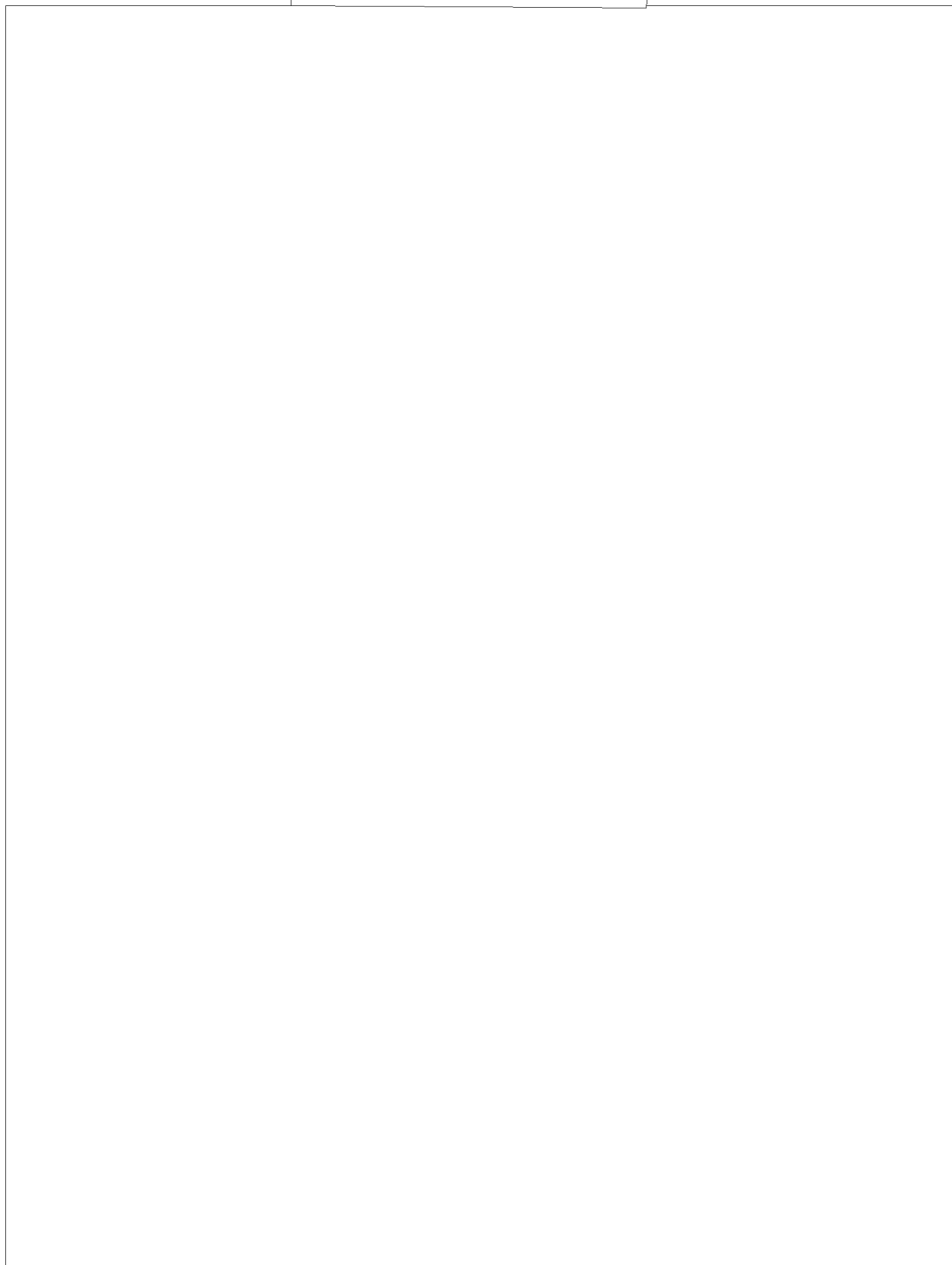
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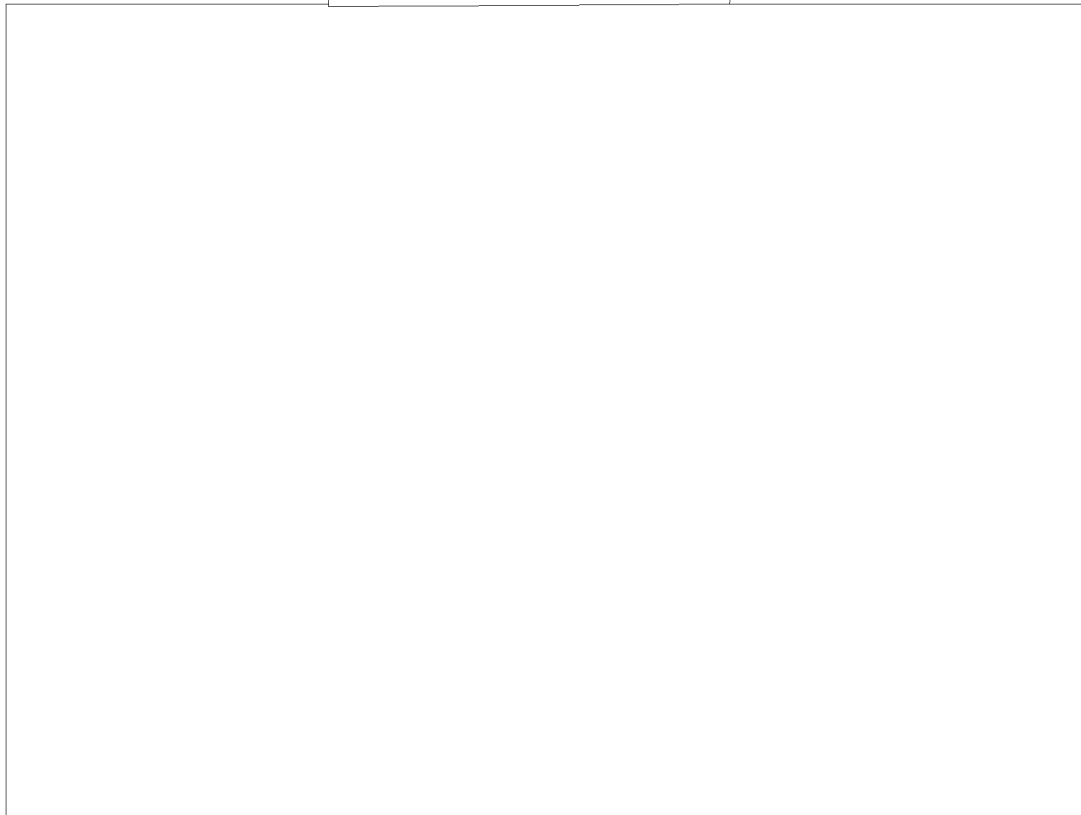


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