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ATOMIC ENERGY ACT 1946

SUMMARY OF MAJOR EVENTS AND PROBLEMS
(Reports Control Symbol CSHIS-6)

Fiscal Year 1954

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Security classification will be reviewed by issuing office 1 October 1955

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DOD APPLY

Excluded from General Declassification Schedule
Historical Office
Office of the Chief Chemical Officer

September 1954

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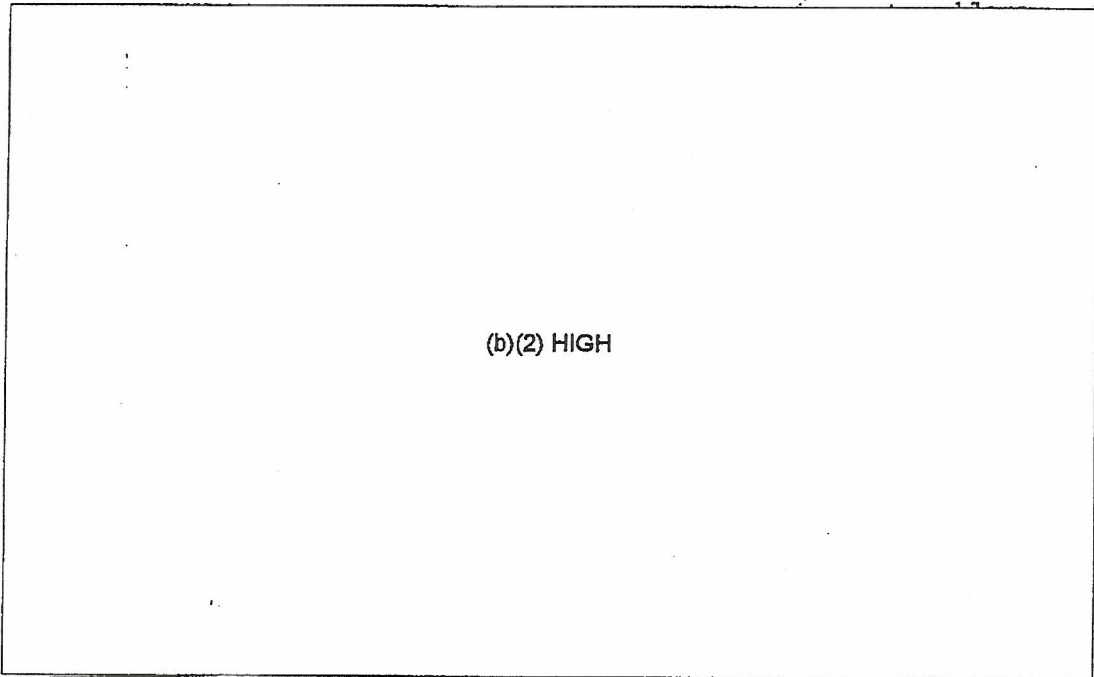
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Of this total, 53 per cent was obligated for biological warfare and the remainder for chemical and radiological warfare. The number of personnel engaged in research activities increased approximately five hundred.⁴³ (~~CONFIDENTIAL~~)

Chemical Research and Development



(b)(2) HIGH

⁴³
See above pp. 19-20.

⁴⁴
Unless noted otherwise, the material in chemical research is based on: C. L. Butler, F. W. Lane, G. A. Miller, E.H. Schwanke, Significant Accomplishments, Fiscal Year 1954, Chemical Corps Chemical and Radiological Laboratories. The manuscript of this report is being prepared for publication in late September or early October.

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See pp.106-114, for additional information.

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due to expire in three months, but he was orally informed by General Lanahan, Office of G-4, that no requirement for protective masks existed. On 4 February 1954 G-4 officially directed cancellation of the Firestone contract. The last delivery of M9A1 masks under previous contracts was made in April 1954 and no requirement was authorized for Fiscal Year 1954 or 1955. As of 1 July 1954 government-owned mask production machinery from all plants was being placed in industrial equipment reserve lay-away. The Chief Chemical Officer placed an embargo on issue of M9A1 protective masks pending formulation of a new distribution policy since shortage of masks could seriously interfere with continental CBR training. ()

Problems in Toxic Production

(b)(2) HIGH

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- (1) See Summary History, Sep.1951-Dec 1952, p.1, and Summary History, FY 1953, pp. 19, 23, 24, 64.
- (2) A nerve gas, cyanogen chloride, was known in World War I, and was produced in World War II, but concentration since the later war has been on agents of the "G" series.

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[REDACTED]

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It was

therefore proposed to produce the intermediate product in a plant which could be commercially designed, constructed and operated. A site selection board determined that the Wilson Dam Area at Muscle Shoals, Alabama, would be a good location for the intermediate product plant which comprises three steps of the five step process. This site offered the advantages of a location dispersed from other Chemical Corps facilities, adequate space, adequate transportation, ample water, a ready source of power and the use of government-owned property. Rocky Mountain Arsenal was chosen as the location of the final two steps. ¹⁶⁷ [REDACTED] (CONFIDENTIAL)

The Muscle Shoals plant was designed by the Vitro Corporation, and in November 1950, the Vitro Corporation and Southern Constructors, the principal construction sub-contractor, initiated construction under the overall management of the Corps of Engineers. The

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Interv, Hist O, OCCm10 with Mr. [REDACTED] (b)(6) Engr. Div., -Cml C RECOM, 18-19 Aug 54.

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Chief Chemical Officer maintained a staff under Colonel Graydon C. Essman, Special Assistant to the Chief Chemical Officer, at the site for coordination of technical matters. The Tennessee Valley Authority assisted at the project in many ways and the Authority designed and built a bench model aluminum chloride process plant which, although the process differs from the five step process, assisted greatly in the presentation and understanding of many little known technical problems. The Tennessee Valley Authority also offered its services in operating the DMHP plant when construction was completed. A memorandum of agreement for plant operation was signed between the Authority and the Army on 25 January 1951. The Chemical Corps Materiel Command assumed responsibility for the plant, now called the Muscle Shoals Phosphate Development Works, upon completion of construction, 168
1 September 1953.

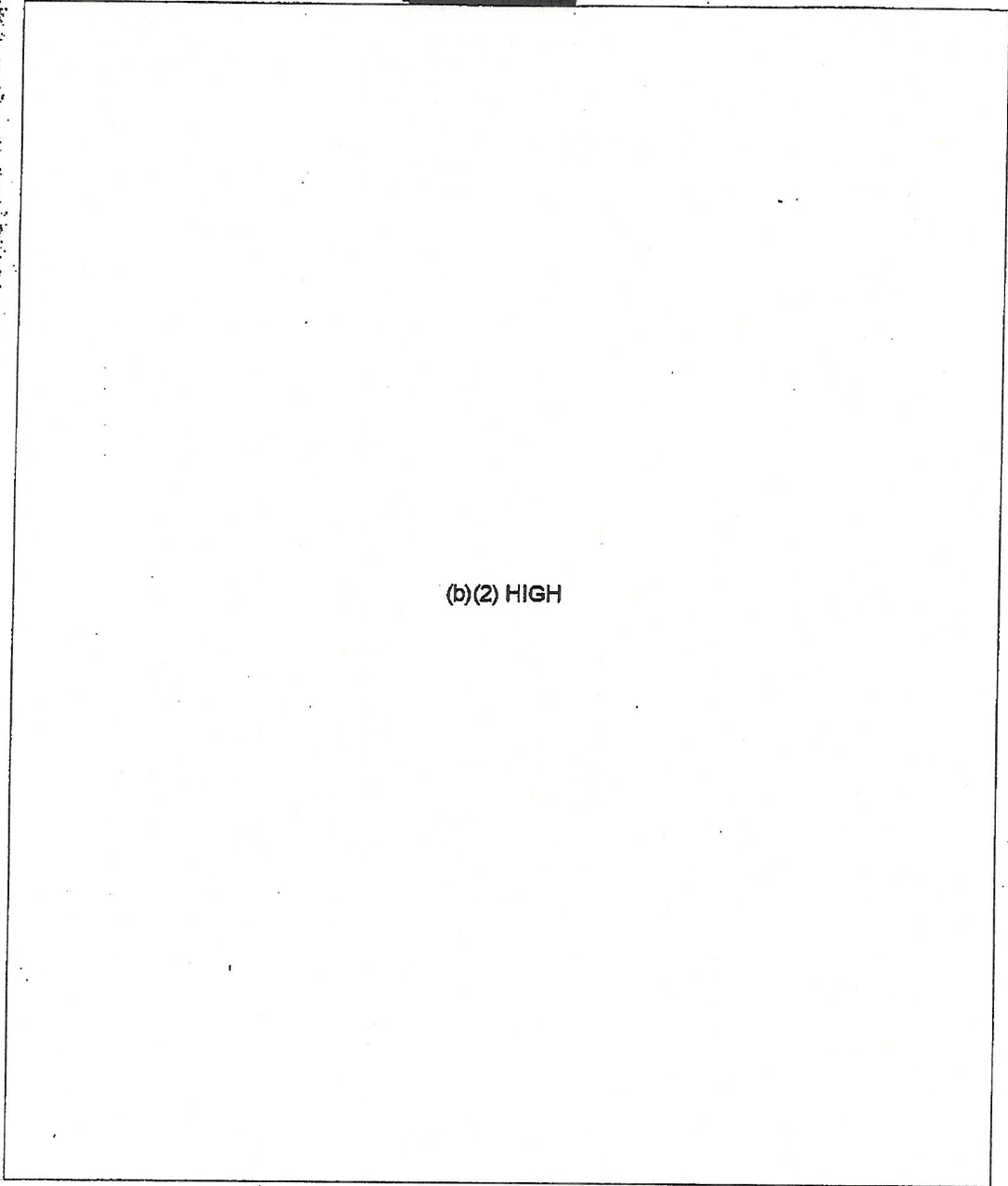
(b)(2) HIGH

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- (1) Ibid.
- (2) Pers Ltr, Maj Gen ~~E.F. Dillone~~, C Cml O, to Mr. (b)(6)
- (3) (b)(6) Mgr, Cml Engineering, TVA, 10 Feb 54, no sub.
- (3) Ltr, CMLWX, Maj Gen ~~E.F. Dillone~~, C Cml O to CG, Cml C MATCOM, CG, Cml C RECOM, and Spec Asst to the C Cml O, 28 Jul 53, sub: Status of GB Program.
- (4) Interv, Hist O, OCGm10 with Mr. (b)(6), Indus Div, Cml C MATCOM, 26 Aug 54.

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Colonel (b)(6) , Commanding Officer, Rocky Mountain Arsenal, was placed on temporary duty as project officer at the Muscle Shoals Phosphate Development Works under Research and Engineering Command management. Lt. Colonel (b)(6) was given permanent assignment as project deputy commander. Generals ~~Bullene and Greasy~~ assigned top priority to the project over all other research and engineering programs. General Bullene assigned

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- (1) Ltr, CMLRE-E 322 Muscle Shoals, Maj (b)(6) Eng Div., Cml C RECOM to Hist O, OCCmLO, 16 Aug 54, sub: DMHP Plant at Muscle Shoals Phosphate Development Works.
- (2) Quart Hist Rpt, Hqs, Cml C MATCOM, Jan-Mar 54.
- (3) Memo for Record, 7 Dec 53, sub: Technical Difficulties at Site A and Production of ELOI Clusters.
- (4) Notes for Meeting with Gen Bullene, 8 Dec 53.
- (5) Ltr, Maj Gen ~~E.F. Bullene~~, C Cml O, to Dr. (b)(6) Chairman, Cml C Advisory Council, 11 Dec 53, no sub.
- (6) Rpt of the Ad Hoc Committee of the Cml C Advisory Council Meeting of 10-12 Jan 54.
- (7) Recommendations of the Ad Hoc Committee of the Cml C Advisory Council, 10-11 Jan 54.
- (8) Ltr, CMLWR, Maj Gen ~~E.F. Bullene~~, C Cml O, to CG, Cml C RECOM and CO, Cml C MATCOM, 16 Feb 54, sub: Classified Plant at Muscle Shoals.
- (9) OCCmLO GO 4, 23 Feb 54.

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a threefold mission to General ~~Cross~~ with respect to the plant:

- (1) "Run the plant as much as possible to produce product, and, on the highest priority, make every effort to expedite operation of the plant with the objective of placing the facility on a sustained production basis...."
- (2) Second in priority, effect the necessary modifications in the plant to the end of sustained operation at full design capacity.
- (3) Concurrently with the above, but on the third priority, prepare plans, final designs, and cost estimates to increase the capacity of the intermediate product plant to support the final product plant on the basis of three complete production units operating at capacity.¹⁷⁰

(b)(2) HIGH

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Ltr, CMLWR, Maj Gen ~~W. H. ...~~, C Cml O, to CG, Cml C-RECOM and CO, Cml C MATCOM, 16 Feb 54, sub: Classified Plant at Muscle Shoals.

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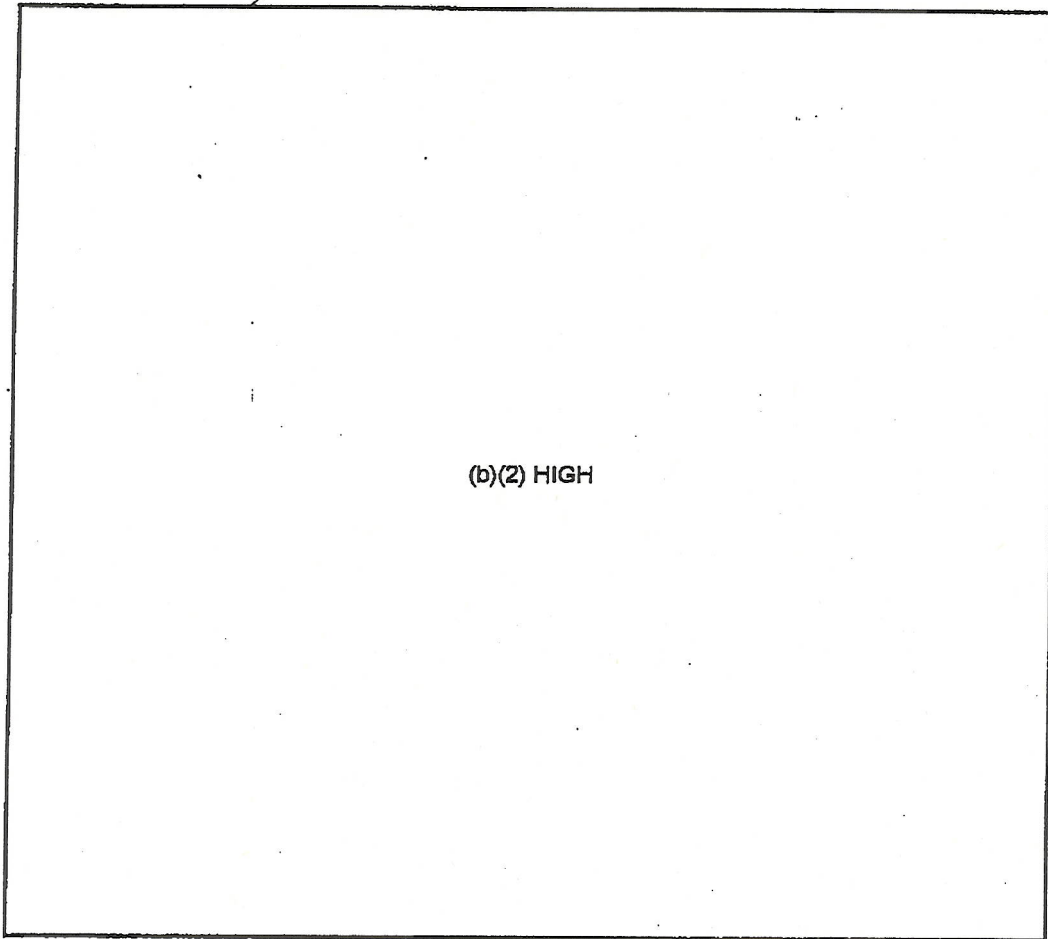
- (1) Quart Hist Rpts, Hqs, Cml C MATCOM, Jan-Mar and Apr-Jun 54.
- (2) Statement, Col ~~William J. Allen, Jr~~, Cml C Engineering Agency, 16 Aug 54, before Informational Meeting prior to August Cml C Development Conference.
- (3) ~~Morgan~~ Interview.

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- (1) Quart Hist Rpts, Rocky Mountain Arsenal, App. I, Oct-Dec 1953, .
Jan-Mar, and Apr-Jun 1954.
- (2) Interview.
- (3) (b)(6) r Interview.

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Production and Procurement Performance

Appendix B gives the quantity of accepted production for principal Chemical Corps items during Fiscal Year 1954. Appendix A, pages 78 and 79 presents the aggregate dollar value of deliveries. It is noteworthy that the delivery performance for 1954 was high relative to the over-all materiel program because of the large quantities of material being delivered from contracts and production programs of previous fiscal years. (UNCLASSIFIED)

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(1) [] Statement.
(2) (b)(6) Interview.
(3) Interview.

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