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USC 403-1(i)

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SECTION 001 OF 003
SUBJECT: AFMIC WEEKLY WIRE 11-91 U
1. GENERAL

(U) THIS MESSAGE CONSISTS OF SCIENTIFIC, TECHNICAL, AND GENERAL
MEDICAL INTELLIGENCE. IT IS INTENDED TO PROVIDE A TIMELY SUMMARY

*** AF SECTION MESSAGE ***

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PAGE 1 OF 6
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Refer to

SECRET

NOFORN

PENTAGON OPERATIONS DIRECTORATE

(b)(3):10 USC 424

(b)(6)

OF CURRENT INTELLIGENCE FINDINGS AND ANALYSIS. THE REMARKS ARE PRELIMINARY AND SUBJECT TO REVISION AND DO NOT NECESSARILY REPRESENT AN AGREED DOO POSITION. CLINICAL REVIEW HAS BEEN PROVIDED BY THE [REDACTED]

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2. TABLE OF CONTENTS (U)

A. ~~(S)~~ IRAQ: DISEASE OCCURRENCE IN BAGHDAD (U)

B. [REDACTED]

C. [REDACTED]

D. (U) JAPAN: BACTERIAL SYNTHESIS OF TETRODOTOXIN (U)

E. [REDACTED]

F. [REDACTED]

G. (U) INDIA: TAP WATER USED IN PERFORMING ELECTROCARDIOGRAMS

(U)

H. (U) CUBA: HEPATITIS B VACCINATION (U)

3. ~~(S/NF/WH)~~ INTELLIGENCE FINDINGS AND ANALYSIS (U)

A. ~~(S)~~ IRAQ: DISEASE OCCURRENCE IN BAGHDAD (U)

(U) OPEN SOURCE NEWS RELEASES, CITING INTERNATIONAL AND IRAQI HEALTH OFFICIALS, INDICATE THAT COMMUNICABLE DISEASES IN BAGHDAD ARE MORE WIDESPREAD THAN USUALLY OBSERVED DURING THIS TIME OF THE YEAR AND ARE LINKED TO THE POOR SANITARY CONDITIONS (CONTAMINATED WATER SUPPLIES AND IMPROPER SEWAGE DISPOSAL) RESULTING FROM THE WAR. ACCORDING TO A UNITED NATIONS CHILDREN'S FUND (UNICEF)/WORLD HEALTH ORGANIZATION REPORT, THE QUANTITY OF POTABLE WATER IS LESS THAN 5 PERCENT OF THE ORIGINAL SUPPLY, THERE ARE NO OPERATIONAL WATER AND SEWAGE TREATMENT PLANTS, AND THE REPORTED INCIDENCE OF DIARRHEA IS FOUR TIMES ABOVE NORMAL LEVELS. ADDITIONALLY, RESPIRATORY INFECTIONS ARE ON THE RISE. CHILDREN PARTICULARLY HAVE BEEN AFFECTED BY THESE DISEASES. INCREASED INCIDENCE OF MENINGITIS, TYPHOID, OR CHOLERA HAS NOT BEEN REPORTED.

COMMENT: (U) THE PREVALENCE OF SOME DISEASES HAS INCREASED IN BAGHDAD, BUT MAJOR DISEASE OUTBREAKS (INCLUDING TYPHOID, CHOLERA, AND MENINGITIS) HAVE NOT OCCURRED. THERE ARE INDICATIONS THAT THE SITUATION IS IMPROVING AND THAT THE POPULATION IS COPING WITH THE DEGRADED CONDITIONS. DAILY RADIO BROADCASTS HAVE PROVIDED PRECAUTIONARY MEASURES TO BE TAKEN BY CIVILIANS TO PREVENT DISEASES. HOWEVER, CONDITIONS IN BAGHDAD REMAIN FAVORABLE FOR COMMUNICABLE DISEASE OUTBREAKS; THE DELAYED RESTORATION OF PUBLIC HEALTH SERVICES AND APPROACHING WARMER TEMPERATURES WILL INCREASE THE LIKELIHOOD OF SIGNIFICANT DISEASE OUTBREAKS. ADDITIONALLY, CIVIL DISTURBANCES COULD FURTHER DELAY INFRASTRUCTURE REPAIRS.

(C) NEWS RELEASED TO WESTERN AUDIENCES FROM BAGHDAD ON SANITARY CONDITIONS AND DISEASE INCIDENCE IS CONSIDERED BIASED. THE IRAQI GOVERNMENT HAS MANDATED THE DEPARTURE OF NEWS PERSONNEL AND RELIEF AGENCY OBSERVERS, MAKING EVALUATION OF ACTUAL HEALTH CONDITIONS (DISEASES, INCIDENCE LEVELS, AND GROUPS AFFECTED) UNCLEAR.

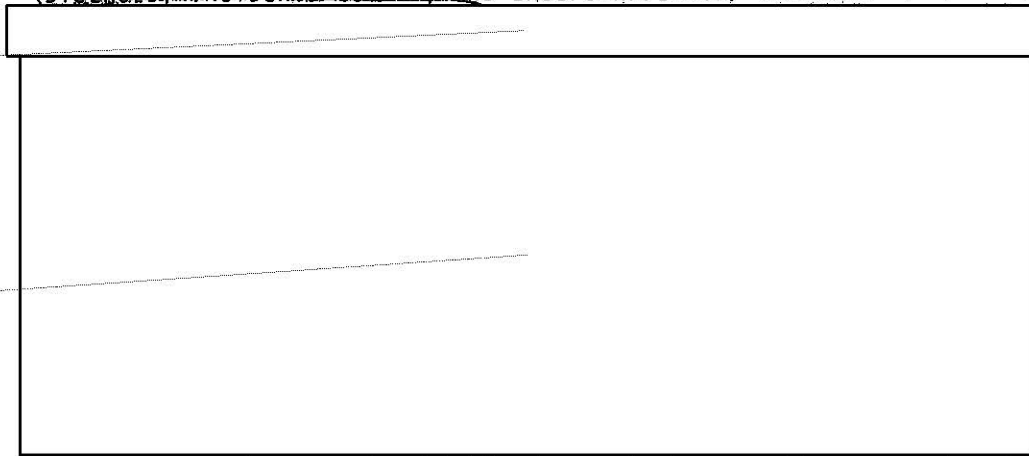
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(b)(3):10 USC 424

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(b)(3):10 USC 424, (b) (6)



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76

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NOFORN

PENTAGON
OPERATIONS DIRECTORATE

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(b)(3):10
USC 424,
(b)(6)

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D. (U) JAPAN: BACTERIAL SYNTHESIS OF TETRODOTOXIN (U)
(U) IN AUGUST 1990, RESEARCHERS AT JAPAN'S TOHOKU UNIVERSITY REPORTED THE ISOLATION OF TETRODOTOXIN-PRODUCING BACTERIA (ALTERMONAS SPP.) FROM ALGAE. THEIR FINDINGS SUPPORTED EARLIER JAPANESE RESEARCH IN WHICH SAXITOXIN, TETRODOTOXIN, AND OTHER PARALYTIC SHELLFISH POISONS WERE FOUND TO BE PRODUCED BY SEVERAL GENERA OF BACTERIA (MORAXELLA AND VIBRIO SPP.; SEE AFMC WEEKLY WIRES 31-90, 37-87, AND 20-87).
COMMENT: (U) TETRODOTOXIN CURRENTLY IS ACCUMULATED BY ISOLATING IT FROM FISH FLESH. THE RETAIL PRICE OF THE TOXIN IS APPROXIMATELY U.S. \$100,000 PER GRAM. INCREASING PHARMACEUTICAL INTEREST IN SAXITOXIN AND TETRODOTOXIN AS RESEARCH TOOLS HAS GENERATED GROWING PRESSURE TO PRODUCE THEM AT A LOWER COST. WITH THE POSSIBILITY OF RAISING TOXINS IN BACTERIAL CULTURES, THE PHARMACEUTICAL INDUSTRY WILL MOVE RAPIDLY TO DEVELOP LARGE-SCALE FERMENTATION CULTURE PRODUCTION METHODS. IN THE PAST, MANY NATURAL TOXINS HAVE BEEN DISCARDED AS POSSIBLE BIOLOGICAL WARFARE (BW) AGENTS BECAUSE OF AN INABILITY TO PRODUCE SUFFICIENT QUANTITIES FOR BATTLEFIELD USE. IF SUCCESSFUL METHODS ARE DEVELOPED FOR PRODUCING LARGE QUANTITIES OF THESE TOXINS, AT LEAST ONE BARRIER TO THEIR DEVELOPMENT AS BW AGENTS WILL HAVE BEEN REMOVED.

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USC 424

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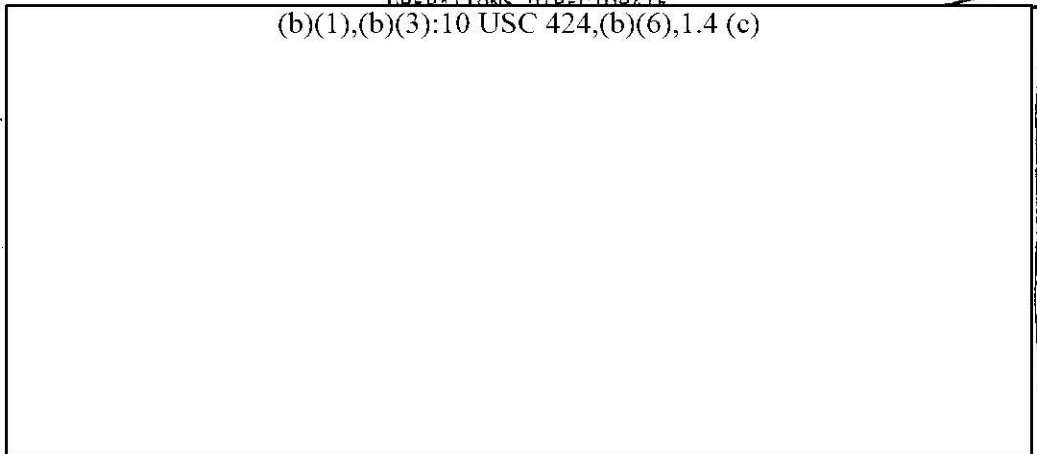
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PENTAGON
OPERATIONS DIRECTORATE

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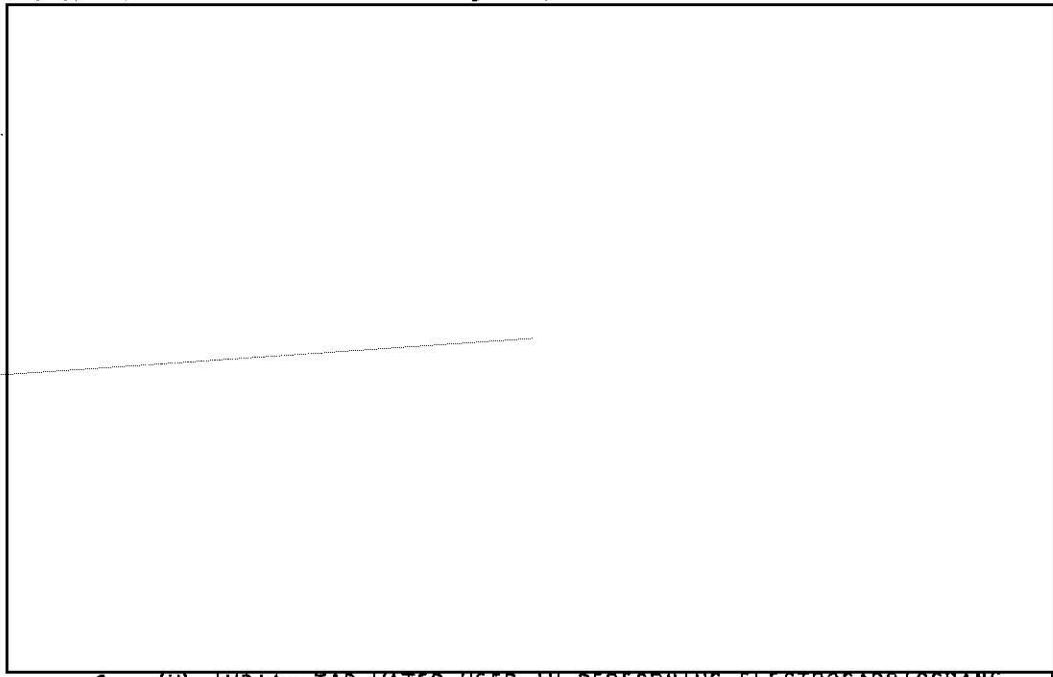
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FINAL SECTION OF 003
SUBJECT: AFMIC WEEKLY WIRE 11-91 U)

(b)(3):10 USC
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G. (U) INDIA: TAP WATER USED IN PERFORMING ELECTROCARDIOGRAMS

(U)
(U) A JUNIOR TECHNICAL ASSISTANT AT THE ARMED FORCES MEDICAL COLLEGE IN PUNE, INDIA, RECENTLY WAS RECOGNIZED FOR RESEARCH IN THE EFFICACY OF USING "TAP WATER INSTEAD OF ELECTRODE JELLY IN THE RECORDING OF ECG'S." IN THE STUDY, 20,000 ECG'S WERE PERFORMED USING TAP WATER IN PLACE OF ELECTRODE JELLY. THE RESULTS DEMONSTRATED THAT TAP WATER WAS AS EFFECTIVE AS JELLY.
COMMENT: (U) THIS RESEARCH DOES NOT REPRESENT A TECHNOLOGICAL BREAKTHROUGH AS MUCH AS IT ILLUSTRATES AN EMPHASIS IN INDIAN MILITARY MEDICINE ON FINDING THE LEAST EXPENSIVE MEANS OF DELIVERING HEALTH CARE TO A LARGE POPULATION. WITH PERHAPS MILLIONS OF INDIAN MILITARY PERSONNEL RECEIVING ECG'S, THE COST SAVINGS OF USING TAP WATER, RATHER THAN ELECTRODE JELLY, IS SIGNIFICANT.
(U) EXPERIENCE INDICATES THAT USING TAP WATER HAS NO ADVERSE

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79

SECRET

NOFORN

PENTAGON
OPERATIONS DIRECTORATE

EFFECT ON THE QUALITY OF THE ECG. THE CRITICAL ISSUE IS THE QUALITY OF CONTACT BETWEEN THE SKIN AND LEAD. IF THE PATIENT'S SKIN IS PROPERLY CLEANED WITH AN ASTRINGENT, SUCH AS ALCOHOL, AND THE LEADS ARE CLEAN, WATER SHOULD WORK AS WELL AS JELLIES (OR THE ELECTROLYTE PADS NOW BEING MARKETED).

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USC 424.(b)
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H. (U) CUBA: HEPATITIS B VACCINATION (U)
(U) CUBA PLANS TO IMPLEMENT A COUNTRYWIDE THREE-STAGE HEPATITIS B VACCINATION PROGRAM IN 1991. THE FIRST STAGE WILL BE THE VACCINATION OF HIGH RISK GROUPS, SUCH AS HEALTH WORKERS AND NEWBORNS OF MOTHERS INFECTED WITH HEPATITIS B; THE SECOND STAGE WILL BE THE VACCINATION OF INHABITANTS UNDER 20 YEARS OLD; AND THE THIRD STAGE WILL BE VACCINATION OF PERSONS 20 TO 64 YEARS OLD.

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(b)(3):10 USC 424

(U) THE VACCINE TO BE USED REPORTEDLY WAS DEVELOPED AND PRODUCED IN CUBA. DEVELOPMENT WAS LED BY A TEAM AT A GENETIC ENGINEERING AND BIOTECHNICAL CENTER LOCATED IN A HAVANA NEIGHBORHOOD (PROBABLY THE GENETIC ENGINEERING AND BIOTECHNOLOGY CENTER).

COMMENT: (U) MASS IMMUNIZATION PROGRAMS FOR HEPATITIS B PREVIOUSLY HAVE BEEN CONDUCTED IN COUNTRIES WHERE THE DISEASE IS HIGHLY ENDEMIC, SUCH AS TAIWAN AND INDONESIA; HOWEVER, AVAILABLE DATA DO NOT INDICATE THAT HEPATITIS B IS HIGHLY ENDEMIC IN CUBA. THEREFORE, THE IMPLEMENTATION OF CUBA'S PROGRAM SIGNIFIES THAT ACTUAL ENDEMICITY MAY BE HIGHER THAN PREVIOUSLY INDICATED OR THAT CUBA MAY BE TRYING TO DEMONSTRATE ITS CAPABILITY TO PRODUCE AN EFFICACIOUS VACCINE.

(U) CUBA'S BIOTECHNOLOGY INDUSTRY PROBABLY CAN PRODUCE RELATIVELY LARGE QUANTITIES OF A RECOMBINANT VACCINE; HOWEVER, THE EFFICACY OF THE VACCINE WOULD BE QUESTIONABLE BECAUSE OF POOR QUALITY CONTROL PROCEDURES DURING PRODUCTION.

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