

17 Aug 81

Classified portions removed.

PENTAGON TELECOMMUNICATIONS CENTER

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PORTION OF EACH SAMPLE BE PROVIDED TO USAMIIA FOR COORDINATION OF ANALYSIS BY MYCOTOXIN EXPERTS WHO HAVE YEARS OF EXPERIENCE IN SCREENING TECHNIQUES FOR THE TOXINS. USAMIIA POINT OF CONTACT FOR THESE ANALYSES AND FOR FURTHER INFORMATION CONCERNING TRICHOCECCE TOXINS IS DR. SHARON WATSON, AUTOVON 34-7603, REVN 22 AUGUST 2001 BT

FM CONUSAKIIA FTDETRICRND //SEM1-2A//
TO DIA WASHDC //DT-1A// DA WASHDC //DAMI-FIT//
CDR/STC CHARLOTTESVILLEVA //ORLST-RTS/ORLST-FND//
CDR/ARACOM APBND //ORDAR-SEI-C//
CIA WASHDC //OSMR-STD-LBB//
BT

OPI FIT
FIW FIE
FIS ISH
ZK IT IS
ZC FH ISI
ZD FR ICD
ZDL FT ISS
FL CI
AD AM
FT

SUBJ: ANALYTICAL RESULTS ON POSSIBLE CV SAMPLES (U)
A. LETTER DATED 20 APRIL 1981 FROM DADR-RAI-C, CHEMICAL SYSTEMS LABORATORY, TO DIRECTOR, USAMIIA CONCERNING THE SUBMISSION OF A VEGETATION SAMPLE FOR EXAMINATION AND ANALYSIS.
B. MESSAGE, BANGKOK, TH, SUBJECT: FORWARDING OF POSSIBLE CV SAMPLES (U) DTE 201131Z MAR 81.
C. LETTER REPORT DATED 18 MAY 1981, SUBJECT: POSSIBLE CV SAMPLES - FINAL ANALYTICAL RESULTS ON SAMPLES 7 AND 8.
1. (S//NOFORN//SI//TEL) CHEMICAL ANALYSIS OF THE LEAF AND STEM SAMPLE (POSSIBLE CV SAMPLE REPORTED IN REF. B TO HAVE COME FROM THE VICINITY OF TV 2801, JUST SOUTH OF PHRUM NAK NOEUM) HAS REVEALED THE PRESENCE OF ABNORMALLY HIGH LEVELS OF TRICHOCECCE TOXINS. SAMPLE REFERENCED ABOVE (CODED SAMPLE A); POSITIVE CONTROL SAMPLE TO WHICH T2 TOXIN WAS ADDED (CODED SAMPLE B); AND NEGATIVE CONTROL SAMPLE (CODED SAMPLE C) WERE FORWARDED BY USAMIIA TO A LEADING MYCOTOXIN DETECTION EXPERT FOR ANALYSIS. RESEARCHER HAS GIVEN NO INFORMATION CONCERNING THE HISTORY OR CONTENT OF THE SAMPLES, BUT WAS REQUESTED TO ANALYZE THE THREE UNKNOWN SAMPLES ONLY A, B, AND C FOR THE PRESENCE OF TRICHOCECCE TOXINS. METHOD OF ANALYSIS WAS A FERRIC SCL PROCEDURE FOLLOWED BY SELECTED ION MONITORING ON COMPUTERIZED GAS CHROMATOGRAPH/MASS SPECTROMETER (NEWLETT-PACKARD 50000). NO TRICHOCECCE WERE DETECTED IN NEGATIVE CONTROL SAMPLE C AND 24 PPM OF T2 TOXIN WAS DETECTED IN SPIKED POSITIVE CONTROL, SAMPLE B. SAMPLE A (SUSPECTED CV SAMPLE) WAS FOUND TO CONTAIN 100 PPM OF STYLOLIDOL, 57.1 PPM OF DEOXYVALEROL, AND 1.16 PPM OF T2 TOXIN. THESE THREE COMPOUNDS ARE POTENT TOXINS OF THE TRICHOCECCE GROUP. LEVELS OF DEOXYVALEROL AND STYLOLIDOL DETECTED WERE 10-20 TIMES GREATER THAN THAT REPORTED TO OCCUR WHEN VEGETATION IS NATURALLY CONTAMINATED BY TRICHOCECCE TOXINS. ANALYSIS EXPERT CONSIDERED THESE LEVELS TO BE VERY ABNORMAL AND FEEL IT WAS HIGHLY UNLIKELY, IF NOT IMPOSSIBLE, THAT SUCH LEVELS COULD HAVE OCCURRED IN A NATURAL SITUATION. USAMIIA HAS PREVIOUSLY BROUGHT TO THE ATTENTION OF THE INTELLIGENCE COMMUNITY THE STRIKING SIMILARITY BETWEEN THE SYMPTOMS PRODUCED BY TRICHOCECCE TOXINS AND THE UNIDENTIFIED CHEMICAL AGENT ALLEGEDLY EMPLOYED IN CHOS, CAMBODIA, AND AFGHANISTAN. SYMPTOMS ASSOCIATED WITH TRICHOCECCE POISONING INCLUDE RAPID ONSET OF VOMITING, MULTIPLE HEMORRHAGE OF MUCOSAL MEMBRANES, DIARRHEA, AND SEVERE ITCHING OR TINGLING OF SKIN WITH FORMATION OF SMALL BLISTERS. ALL OF THE TRICHOCECCE PRODUCE SIMILAR SYMPTOMS, HOWEVER, THERE ARE SOME DIFFERENCES IN THE DEGREE OF SEVERITY. STYLOLIDOL AND DEOXYVALEROL HAVE NEVER BEEN REPORTED TO HAVE SUCH EFFECTS AS VOMITING, HOWEVER, STYLOLIDOL IS A SLIGHTLY STRONGER HEMORRHAGIC, WHILE DEOXYVALEROL (ALSO KNOWN AS VONICHTIN) CAUSES VERY SEVERE VOMITING.
2. (S//NOFORN//SI//TEL) TRICHOCECCE ARE CHEMICALLY QUITE STABLE AND CAN EASILY BE PRODUCED IN LARGE QUANTITIES. THESE TOXINS HAVE FIGURED PROMINENTLY IN SOVIET SCIENTIFIC LITERATURE SINCE THE 1970'S AND RESEARCH PROJECTS CONCERNING THEM HAVE BEEN IDENTIFIED AT WARSAW PACT RESEARCH INSTITUTES PREVIOUSLY ASSOCIATED WITH COM RESEARCH. ALTHOUGH THE CIRCUMSTANTIAL EVIDENCE THAT TRICHOCECCE MAY HAVE BEEN EMPLOYED AS CHEMICAL AGENTS IS STRONG AND THE RESULTS OF THE ANALYSIS DESCRIBED ABOVE WOULD TEND TO SUPPORT THIS HYPOTHESIS, COLLABORATIVE EVIDENCE IS REQUIRED. TO PROVIDE ADDITIONAL ANALYTICAL DATA, ALL NEWLY ACQUIRED CV SAMPLES AND ALL AVAILABLE PREVIOUSLY ACQUIRED SAMPLES SHOULD BE ANALYZED FOR THE PRESENCE OF TRICHOCECCE BY THE METHODS DESCRIBED ABOVE.
3. (S//NOFORN//SI//TEL) DUE TO THE TECHNICAL DIFFICULTY OF THE ANALYSIS INVOLVED, ITS TIME CONSUMING NATURE, AND THE SPECIALIZED EXPERTISE REQUIRED TO INTERPRET THE RESULTS OBTAINED, RECOMMEND A

DA WASH DC
ACTION DAMI(4)
INFO AOC-DAMI WATCH(3) SEC REVIEW(1)
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