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UNCLAS [REDACTED] SUBJECT: SURFACE SOIL CONCENTRATION OF PLUTONIUM 239 ON BIKINI ISLET

THE PURPOSE OF THIS TX IS TO INFORM YOU OF A POSSIBLE PROBLEM WHICH HAS COME TO LIGHT AS A RESULT OF THE 1969 RADIOLOGICAL SAMPLING PROGRAM AT BIKINI ATOLL. TWO SOIL SAMPLES OBTAINED ON BIKINI ISLET CONTAINED ABOUT 132 PICOCURIES PER GRAM OF PLUTONIUM 239.

THAT CONCENTRATION IS MORE THAN A FACTOR OF TEN HIGHER THAN WAS REPORTED IN SIMILAR SAMPLES OBTAINED IN 1964 AND HAVE CAUSED SOME CONCERN AMONG DOS PERSONNEL. THEIR CONCERN ARISES PRIMARILY FROM THE FACT THAT LOWER CONCENTRATIONS OF PU IN OTHER AREAS HAVE CAUSED POLITICAL PROBLEMS EVEN THOUGH THERE WAS NO SAFETY PROBLEM INDICATED. ALSO THEY ARE CONCERNED ABOUT THE APARENT INCONSISTENCY OF THE SAMPLES. PARA

AFTER DISCUSSIONS WITH DOS PERSONNEL, THIS OFFICE HAS INITIATED PROCEDURES FOR VERIFICATION OF THESE DATA. FOUR ADDITIONAL SOIL

SEARCHED	INDEXED
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MRA-7 Direct Territory
*Materials Plutonium

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PAGE 2 CAI ADMU 2259 UNCLAS OFFICIAL USE ONLY

SAMPLES OBTAINED ON BIKINI ISLET IN 1967 BUT NOT ANALYZED FOR PLUTONIUM ARE CURRENTLY BEING ANALYZED BY BOTH THE USPHS SHWRL AND THE UNIVERSITY OF WASHINGTON. ALSO, TWO SAMPLES OBTAINED ON ENEU ISLET ARE BEING ANALYZED FOR PLUTONIUM. PARA DEPENDING UPON THE RESULTS OF THESE ANALYSES AND FURTHER DIRECTION FROM DOS AND DBM, WE HAVE FORMULATED TENTATIVE PLANS TO OBTAIN THE NECESSARY INFORMATION FOR AN ASSESSMENT OF THE SITUATION. IF SO DIRECTED, WE PROPOSE TO INITIATE THE FOLLOWING RESAMPLING AND MONITORING PROGRAM ON BIKINI AND ENEU THROUGH USPHS SWRHL AND UNIVERSITY OF WASHINGTON:

- A. OPERATE 6 TO 8 AIR SAMPLERS ON BIKINI AND 2 TO 3 AIR SAMPLERS ON ENEU.
- B. OBTAIN APPROXIMATELY 30 ADDITIONAL SOIL SAMPLES ON EACH ISLET. THE AIR SAMPLERS WILL BE OPERATED CONTINUOUSLY FOR A 10-DAY PERIOD WITH FILTERS CHANGES ONCE EVERY 24 HOURS. ALL SOIL SAMPLES WILL BE TAKEN TO A DEPTH OF ONE INCH, EXCEPT THREE SITES WHICH WILL BE SAMPLED TO A DEPTH OF THREE INCHES BY HALF-INCH INCREMENTS. ADDITIONAL SOIL SAMPLES TO BE USED FOR COMPARATIVE PURPOSES MAY BE OBTAINED FROM RONGELAP, ENIWETOK AND JOHNSTON ISLAND. BOTH LABORATORIES HAVE INDICATED THAT FY 70 FUNDS CAN BE REDIRECTED IF

NMB 141

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PAGE 3 CA1 ADMU 2259 UNCLAS OFFICIAL USE ONLY

NECESSARY TO COVER COST EXCLUSIVE OF TRANSPORTATION WEST OF HONOLULU AND LOGISTIC SUPPORT AT BIKINI. THE POSSIBILITY OF CHARTERING A TRUST TERRITORIES' VESSEL FOR TRANSPORTATION OF PERSONNEL AND EQUIPMENT BETWEEN KWAJALEIN AND BIKINI IS BEING INVESTIGATED. PRELIMINARY ESTIMATES INDICATE THIS COST WOULD BE ABOUT \$5,000, IF THE EFFORT COULD BE COORDINATED WITH THE NORMAL SCHEDULE OF THE VESSEL. MORE DETAILED INFORMATION ON SUPPORT COSTS AS WELL AS ALTERNATE TRANSPORTATION AND SUPPORT METHODS ARE BEING INVESTIGATED BY THIS OFFICE IN THE EVENT THAT WE ARE DIRECTED TO INITIATE THE REMONITORING EFFORT.

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