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NCBC GULFPORT
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TELECOMMUNICATION TRANSCRIPTION REGARDING HERBICIDE ORANGE
MONITORING PROGRAM NCBC GULFPORT MS
10/13/1981
NCBC GULFPORT

TELECOPY AUTOVON 363-2495

OCTOBER 13, 1981

FOR: PUBLIC AFFAIRS OFFICER
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI
AUTOVON 563-2293

FROM: OFFICE OF PUBLIC AFFAIRS
HEADQUARTERS AIR FORCE ENGINEERING AND SERVICES CENTER
TRINDALL AIR FORCE BASE, FLORIDA 32403
AUTOVON 570-6476

FOR TRANSMITTAL TO MR. JIMMIE BELL, BILOXI DAILY HERALD:

WE APPRECIATE YOUR DESIRE TO PREPARE AN ACCURATE NEWS STORY ON THE HERBICIDE ORANGE MONITORING PROGRAM AT GULFPORT. WE UNDERSTAND THAT IN THE INTEREST OF ACCURACY YOU MAY ASK US TO REVIEW YOUR ARTICLE--WE WILL BE HAPPY TO ASSIST IN ANY WAY WE CAN.

YOUR POINT OF CONTACT ON ALL MATTERS REGARDING THIS SUBJECT IS THE PUBLIC AFFAIRS OFFICER AT THE NAVAL CONSTRUCTION BATTALION CENTER, MS. JACKIE DEVINE. WE WILL WORK CLOSELY WITH HER TO RESPOND PROMPTLY TO ANY ADDITIONAL QUERIES YOU MAY HAVE.

WE ARE SENDING YOU BY MAIL COPIES OF HERBICIDE ORANGE STUDIES DONE BY THE AIR FORCE OCCUPATIONAL AND ENVIRONMENTAL HEALTH LAB AT BROOKS AIR FORCE BASE, TEXAS. WE FEEL THESE STUDIES MAY BE HELPFUL AS YOU PREPARE YOUR ARTICLE.

THE FOLLOWING ARE RESPONSES TO YOUR QUESTIONS OF SEPTEMBER 30, 1981:

QUESTION: WHEN WAS THE MONITORING FIRST ORDERED FOR THE GULFPORT CENTER AS IT RELATES TO THE STORAGE OF AGENT ORANGE AT THE CENTER?

RESPONSE: VARIOUS AIR FORCE AND CONTRACT LABORATORIES HAVE BEEN CONDUCTING ENVIRONMENTAL SURVEYS AND ANALYSES OF THE SOILS, PLANTS, AND THE AQUATIC SYSTEMS IN AND AROUND THE HERBICIDE ORANGE STORAGE AREA SINCE 1970. THE OBJECTIVES OF THIS MONITORING ARE TO ASSURE THAT CONTAMINATION IS CONTAINED AND POSES NO HEALTH RISK, AND TO DETERMINE IF NATURAL DEGRADATION IS OCCURRING AND AT WHAT RATE (SEE OEHL TR-79-169, PAGES 7-16 AND 24-30)

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PAGE 2

QUESTION: HOW WAS THE MONITORING FUNDED? THROUGH WHAT FEDERAL PROGRAM? COST?

RESPONSE: THE DEPARTMENT OF DEFENSE HAS FUNDED VARIOUS PROGRAMS AT THE CENTER INCLUDING INITIAL SITE MONITORING, REDRUMMING OF THE ENTIRE INVENTORY IN 1972, THE AT-SEA INCINERATION OF HERBICIDE ORANGE IN 1977, AND THE PRESENT SITE MONITORING. CURRENT COST FOR THE SITE MONITORING AND EVALUATION AT GULFPORT IS APPROXIMATELY \$20,000 YEARLY (SEE Oehl TR-79-169, PAGES 1-11 AND 7-16)

QUESTION: HOW IS IT PHYSICALLY CARRIED OUT, SPECIFICALLY AS TO EQUIPMENT, PERSONNEL, AND TIME REQUIRED?

RESPONSE: SOIL SAMPLES ARE OBTAINED BY REMOVING A 12 X 12 X 3 INCH DEEP SAMPLE USING A HAMMER AND CHISEL. SIEVING THE SOIL TO REMOVE ROCKS, AND PLACING THE SOIL IN AN ALL-GLASS CONTAINER WITH AN ALUMINUM-LINED LID. SEDIMENT SAMPLES ARE TAKEN FROM DRAINAGE DITCHES, AND BIOLOGICAL SAMPLES---SUCH AS MINNOWS, TADPOLES, ETC.--- ARE TAKEN WITH A DIP NET. SEDIMENT SAMPLES AND BIOLOGICAL SAMPLES ARE SIMILARLY PLACED IN ALL-GLASS JARS WITH ALUMINUM-LINED LIDS. IT TAKES TWO DAYS FOR ONE PERSON TO COLLECT THE SAMPLES NEEDED.

QUESTION: WHAT TYPE SAMPLES ARE OBTAINED?

RESPONSE: SOIL SAMPLES ARE TAKEN FROM THE STORAGE SITE. SEDIMENT AND BIOLOGICAL SAMPLES ARE TAKEN FROM THE DRAINAGE DITCH SYSTEM.

QUESTION: HOW OFTEN ARE SAMPLES OBTAINED?

RESPONSE: SEMIANNUALLY. THE NEXT SAMPLING IS NOVEMBER-DECEMBER 1981.

QUESTION: DOES THE MONITORING EXTEND BEYOND THE CONFINES OF THE CENTER? DOES IT GO INTO NEIGHBORHOODS IN SURROUNDING AREAS?

RESPONSE: SAMPLING POINTS IV AND V EXTEND BEYOND THE CONFINES OF THE CENTER. SAMPLING SITE IV IS 9,000 FEET FROM THE STORAGE AREA WHERE THE DRAINAGE DITCH ENTERS CANAL NUMBER ONE. SAMPLING SITE V IS 12,000 FEET FROM THE STORAGE AREA WHERE CANAL NUMBER ONE ENTERS TURKEY CREEK. (SEE Oehl TR-79-169, PAGE 26)

QUESTION: PLEASE PUT IN WRITING THAT VEGETATION GROWS WHERE THE AGENT ORANGE WAS LOCATED. ALSO PLEASE CONFIRM IF TOMATO PLANTS TO THE SOUTH OF THE CENTER HAVE EVER BEEN KNOWN TO WILT OR DIE AS A RESULT OF THE STORAGE OF THE DEFOLIANT AT THE CENTER.

RESPONSE: TOMATO PLANTS ARE AMONG THE MOST SENSITIVE PLANTS TO THE CHEMICALS IN HERBICIDE ORANGE. DURING THE DEDRUMMING OPERATION IN 1977, TEST TOMATO PLANTS AROUND THE SITE AT 1,000 FEET SHOWED SLIGHT TO MODERATE DAMAGE. PLANTS AT A GREATER DISTANCE SHOWED ONLY MINIMAL DAMAGE. NO INSTANCES OF TOMATO PLANT DAMAGE FROM HERBICIDE ORANGE SOUTH OF THE CENTER, OFF THE INSTALLATION, ARE KNOWN. YES, VEGETATION IS GROWING WELL ON THE FORMER HERBICIDE ORANGE STORAGE SITE AND IN THE ASSOCIATED DRAINAGE SYSTEM.

QUESTION: PLEASE PUT IN WRITING THAT AGENT ORANGE WAS NAMED FOR THE STRIPE ON THE CAN IN WHICH IT WAS STORED, AND IS ACTUALLY A DARK, REDDISH BROWN.

RESPONSE: HERBICIDE ORANGE IS A REDDISH-BROWN TO TAN COLORED LIQUID. IT WAS FORMULATED TO CONTAIN A 50:50 MIXTURE OF THE N-BUTYL ESTERS OF 2,4-DICHLOROPHENOXYACETIC ACID (2,4-D) AND 2,4,5-TRICHLORO-PHENOXYACETIC ACID (2,4,5-T). BECAUSE OF THIS COMPLEX NOMENCLATURE, IT WAS IDENTIFIED WITH AN ORANGE STRIPE ON DRUM CONTAINERS. OTHER HERBICIDES WERE IDENTIFIED WITH DIFFERENT COLOR STRIPES.

QUESTION: PLEASE EXPLAIN WHAT IS ACTUALLY BEING SOUGHT IN THE STUDIES AS IT RELATES TO IMPURITIES. YOUR TECHNICAL JARGON (REFER- RING TO CONVERSATION WITH AIR FORCE CAPTAIN CHANNELL) IS MORE ACCURATE SOUNDING THAN MY INTERPRETATION OF WHAT YOU SAID.

RESPONSE: THE EFFECTIVENESS OF PHENOXY HERBICIDES (2,4-D AND 2,4,5-T) AS PLANT GROWTH REGULATORS WAS DETERMINED IN 1944. THE OUTSTANDING EFFECTIVENESS OF THESE TWO HERBICIDES IN CONTROLLING THE GROWTH OF BROAD-LEAVED PLANTS AND WEEDS, COUPLED WITH THEIR LOW MAMMALIAN TOXICITY AND LOW APPLICATION RATES, RESULTED IN THEIR RAPID ACCEPTANCE IN WORLD AGRICULTURE AND BY UTILITY COMPANIES IN MAINTAINING RIGHTS-OF-WAY.

THE FIRST MILITARY SHIPMENT OF HERBICIDES (PURPLE AND BLUE) WERE RECEIVED IN VIETNAM IN JANUARY 1962. IN APRIL 1970 THE SECRETARIES OF INTERIOR AND HEALTH, EDUCATION AND WELFARE JOINTLY ANNOUNCED THE SUSPENSION OF CERTAIN USES OF 2,4,5-T SINCE STUDIES INDICATED 2,4,5-T WAS A TERATOGEN. SUBSEQUENT STUDIES SHOWED THE TERATOGENIC EFFECTS CAME FROM A TOXIC CONTAMINANT IN 2,4,5-T IDENTIFIED AS 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD OR DIOXIN).

AS A RESULT, THE DEFENSE DEPARTMENT SUSPENDED THE USE OF HERBICIDE ORANGE. AT THE TIME OF SUSPENSION, THE AIR FORCE HAD AN INVENTORY OF 0.85 MILLION GALLONS AT THE GULFPORT NCBC. THIS MATERIAL REMAINED IN STORAGE UNTIL 1977, AWAITING AN ENVIRONMENTALLY SAFE AND EFFICIENT MANNER OF DISPOSAL.

DURING THIS TIME SOME LEAKAGE OCCURRED, RESULTING IN SOIL CONTAMINATION AT THE STORAGE SITE. WE ARE CONCERNED ABOUT THE TCDD.

PAGE 4

AND ARE MONITORING THE SITE TO ASSURE OURSELVES AND THE PUBLIC THAT IT IS INDEED CONTAINED AND CONTROLLED, AND THAT IT IS DEGRADING NATURALLY.

ONLY ABOUT ONE TO TWO ACRES OF THE TWELVE ACRE STORAGE SITE WAS FOUND TO BE CONTAMINATED IN THE 1979 STUDY. (SEE OEHL-TR-79-169, PAGE 31) ACCORDING TO THE REPORT, TCDD LEVELS AT THAT TIME WERE DECREASING.

SINCE THAT REPORT, WE HAVE STABILIZED THE DRAINAGE DITCHES WITH GRAVEL TO PREVENT SOIL EROSION, AND WE HAVE INSTALLED SILT TRAPS.

ACTIONS WE HAVE TAKEN BASED ON RECOMMENDATIONS IN THE 1979 STUDY (SEE OEHL TR-79-169, PAGES 32 AND 33) APPEAR TO BE WORKING.

-30-

FOR PUBLIC AFFAIRS OFFICER, NCBC GULFPORT: THANKS FOR YOUR HELP. WE WILL WORK WITH YOU SHOULD ADDITIONAL QUERIES DEVELOP. ACTION OFFICERS HERE AT THIS HEADQUARTERS ARE LT MATTHEW DURHAM, CHIEF OF MEDIA RELATIONS, AND CAPTAIN DAVID L. GEARY, DIRECTOR OF PUBLIC AFFAIRS.

END OF TELECOPY

HEADQUARTERS AIR FORCE ENGINEERING AND SERVICES CENTER (AFESC)

UPDATE ON

ENVIRONMENTAL CHEMISTRY OF HERBICIDE ORANGE

BACKGROUND

Past Herbicide Orange storage sites at the Naval Construction Battalion Center, Gulfport, Mississippi; and Johnston Island, Pacific Ocean; and those areas of Eglin AFB, Florida, which were used for ranch hand operational testing are now contaminated with 2, 3, 7, 8 - tetrachlorodibenzo-p-dioxin (TCDD) which was a highly toxic contaminant of the herbicide. SAF/MI has stressed the need to determine possible methods for assuring that TCDD is not transported off the federal installations and to decontaminate the sites. The AFESC Engineering and Services Laboratory (ESL) has been given overall responsibility for monitoring and reclamation research.

STATUS

- The ESL has continued the site monitoring program by collecting samples from the Naval Construction Battalion Center and Johnston Island according to established protocols.
- The ESL, working with Eglin AFB and Occupational and Environmental Health Laboratory personnel, has established a sampling program at Eglin AFB.
- A letter of request for support in implementing a research program along with the Statement of Operational Need was forwarded from AF/LEE to AF/RDQ on 2 March 1981. A letter stating that action will be taken to validate the Statement of Operational Need as an AF SON was forwarded from AF/RDQ to AF/LEE on 2 April 1981.
- A statement of work for the contractual analysis of herbicide orange samples in support of the site monitoring effort has been forwarded to base contracting. A start work date of 1 July 1981 is anticipated. Samples requiring analysis before this date can be handled on a one time emergency basis.
- Site monitoring samples are scheduled to be collected on a semiannual basis. Sample collections for 1981 are scheduled for May and November.
- The Herbicide Orange program is being coordinated with administrative and research personnel of the Environmental Protection Agency.
- A letter from Maj Gen Ord AMD/CC to Maj Gen Bond AD/CC dated 31 March 1981 recommended a "threshold effect" or "no effect" level

of dioxin for human exposure of two parts per billion. This was based on the known "no effect" level in rodents and the assumption that man is much more resistant than are lower animals. This letter also recommended that:

- The northern one-half of test area C-52A be used in an unrestricted fashion for mission support activities.
- The southern one-half of test area C-52A be used to support mission activities with the only restriction being that of limiting off-road vehicular traffic.
- All efforts be extended to prevent erosion-causing activities on Grid I.

EGLIN
AF BASE

Capt Channell
AFESC/RDVC/4298
7 April 1981