

UNUSUAL OCCURRENCE (CRITIQUE) REPORT

CONTRACTOR: WESTINGHOUSE HANFORD COMPANY

1. REPORT NUMBER: WHC-UO-90-018-EFSG-01

INITIAL REPORT STATUS: INITIAL REPORT DATE: May 1, 1990

INTERIM REPORT STATUS: INTERIM REPORT DATE: None

FINAL REPORT STATUS: Complete FINAL REPORT DATE: May 22, 1990

EVENT/OCCURRENCE DATE: April 19, 1990 EVENT/OCCURRENCE TIME:
-10:30 a.m. - ~10:45 a.m.
-11:05 a.m. - ~12:05 p.m.

DIVISION/DEPARTMENT OR PROJECT: Environmental Field Services/Environmental Health and Pesticide Services

2. FACILITY, SYSTEM AND/OR EQUIPMENT:
N/A

3. SUBJECT OF EVENT/OCCURRENCE:
Alleged Aerial Herbicide Drift Contamination

4. APPARENT CAUSE: A heightened awareness and sensitivity related to aerial application of herbicides and chemical hazards.

DESIGN:

IDENTIFY:

MATERIAL:

IDENTIFY:

PERSONNEL:

PROCEDURE:

OTHER: x



5. DESCRIPTION OF EVENT/OCCURRENCE:

On Thursday, April 19, 1990, an aerial application of 2,4-D, Banvel, and R-11 surfactant was applied by Aero Air (a WHC contractor) to 216-A-25 and the border of the barrow pit from 9:35 a.m. to 10:15 a.m. (see attachment 1). Ground wind readings as identified in the herbicide

application records were out of the south at 0 - 4 mph as measured with a hand-held wind gauge at the east end of 216-A-25. The temperature was 58 degrees. A total of 50 acres were treated.

After leaving the 216-A-25 area and on the way to the BC cribs spray site at 10:30 a.m., a remaining one-fourth acre of touch-up from the previous day's spraying was completed at 216-A-34 and 216-A-18 (see attachment 2). The PNL wind data, measured at 30' elevation, was out of the west at 10 mph. Spraying was limited to these facilities. Helicopter overflight of 200 East Area proper (inside perimeter fences) did not occur.

From 11:05 a.m. to 12:05 p.m., the same herbicide tank mix was applied to the 216-BC cribs. Ground wind readings were measured with a hand-held wind gauge at the northwest corner of BC cribs at 0 - 4 mph out of the west. PNL wind data, measured at 30' elevation, was out of the west/southwest at 10 mph. The temperature was 70 degrees. A total of 85.5 acres were treated.

From 1:20 p.m. to 2:10 p.m., the same herbicide tank mix was applied to 216-S-16 and barrow pit, 216-S-16 ditch, 216-U-11 and barrow pit. Ground wind readings were 0 - 4 mph out of the southeast. The temperature was 70 degrees. A total of 76.9 acres were treated.

From 2:30 p.m. to 3:30 p.m., the same herbicide tank mix was applied to 216-S-17 and barrow pit, 216-S-10 and barrow pit, 216-S-10 and barrow pit. Ground wind readings were 0 - 4 mph out of the southeast. The temperature was 71 degrees. A total of 75.2 acres were treated.

Approximately six personnel (three KEH and three WHC) alleged that they suffered flu-like symptoms from the aerial applications.

6. OPERATING CONDITIONS OF FACILITY AT TIME OF EVENT/OCCURRENCE:

N/A.

7. IMMEDIATE EVALUATION:

The causal factor which prompted employees to complain of illness symptoms is unknown. All employees who were allegedly affected were interviewed by SQS/Safety.

8. IMMEDIATE ACTION TAKEN AND RESULTS:

On April 24, 1990, an internal letter was issued to WHC SQS/Safety. The letter contained all available data regarding the aerial application on April 19, 1990. A copy of the herbicide application records, the PNL wind data, Material Safety Data Sheets for all chemicals, maps of the areas, chemical application and mixing rates, Washington State Department of Agriculture (WSDA) opinion/recommendations, as well as a DSI from a witness watching the application, were all provided.

On April 24, 1990, a call was placed to the WSDA to request their opinion/recommendation. The WSDA recommended that an inspection of the vegetation inhabiting the alleged contaminated area be conducted to try to identify any foliage displaying the obvious symptoms (epinasty/chlorosis) associated with '2,4-D'/Dicamba poisoning.

On April 24, 1990, an inspection of the foliage in the 2750 East Area parking lot was conducted. The foliage showed no symptoms or indications of herbicide damage. Due to previous applications of herbicides conducted in the vicinity of 216-A-18 and 216-A-34 and the susceptibility of vegetation to 2,4-D/Dicamba, no field inspections were conducted in these two areas.

On April 27, 1990, the Environmental Health and Pesticide Services Manager was instructed to write an Unusual Occurrence Report (UOR) on the incident.

9. IS FURTHER EVALUATION AND/OR CORRECTIVE ACTION NECESSARY? YES:
NO:

IF YES, BEFORE FURTHER OPERATION? YES:
NO:

IF YES, BY WHOM?:

WHEN?:

10. FINAL EVALUATION:

All data indicates no possibility of herbicide exposure. All medical testing and analyses results showed no indication of herbicide exposure.

LESSONS LEARNED:

Area notification prior to herbicide application is necessary to prevent employee alarm

11. CORRECTIVE ACTION TAKEN: See No. 8

CORRECTIVE ACTION RECOMMENDED: In the future, Hanford Site employees will be notified prior to aerial herbicide applications through the available Hanford Site communication systems.

Any employee alleging personal chemical contamination shall be directed to HEHF for the appropriate medical evaluation and analyses.

TO BE SUPPLIED:

A-6000-373{EF} WEF015
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DESCRIPTION:

12. PROGRAMMATIC/PROJECT COST AND SCHEDULE IMPACT:

As a result of the alleged herbicide-drift complaints by various personnel, the credibility of the aerial herbicide spray program has been scrutinized and the normal activities and operations of the program potentially delayed. Herbicide program delays resulting from employee contamination allegations will seriously jeopardize the integrity of the radiological control normally provided by the timely aerial application of herbicides to Radiation Area Reduction Program stabilized burial sites.

13. IMPACT UPON NATIONAL CODES AND STANDARDS, INCLUDING NE STANDARDS:

N/A

14. SIMILAR UNUSUAL OCCURRENCE REPORT NUMBERS:

Unknown

15. SIGNATURES:

ORIGINATOR: D. D. Teel DATE: 5/24/90
D. D. Teel, Scientist
Environmental Health & Pesticide Services

APPROVED BY: J. V. Mohatt DATE: 5/24/90
J. V. Mohatt, Manager
Environmental Health & Pesticide Services

APPROVED BY: W. H. Price DATE: 5/25/90
W. H. Price, Manager
Environmental Field Services Group

APPROVED BY: L. C. Brown DATE: 5/25/90
L. C. Brown, Manager
Environmental Engineering, Technology & Permitting

APPROVED BY: R. E. Lerch DATE: 5-29-90
R. E. Lerch, Manager
Environmental Division

APPROVED BY: J. R. Bell DATE: 5/29/90
J. R. Bell
SQS/Safety

DOES NOT CONTAIN CLASSIFIED OR
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

APPROVED BY: _____ DATE: _____
Reviewing Official / ADC: [Signature]
Date: 5/29/90