

Kohler Review

BACKGROUND

WHAT IS C-8?

- AMMONIUM PERFLUOROOCTANOATE - $\text{CF}_3(\text{CF}_2)_6\text{C}(=\text{O})\text{O}^- \text{NH}_4^+$
- FC-143
- FC-118 (20% SOLUTION)
- CAS NO. 3825-26-1

WHAT IS IT USED FOR?

- DISPERSING AGENT - POLYMERIZATION (USED SINCE LATE 1950'S OR EARLY 1960'S)

WHERE IS IT USED?

- "TEFLON" POLYMERS - ALL POLYMERIZATION BATCHES
- "TEFLON" COPOLYMERS - FEP POLYMERIZATION

HOW IS IT RELEASED TO ENVIRONMENT?

- AIR - FINE POWDER AND FEP DRYERS
- WATER - DISPERSION & FEP SUPERNATE STREAMS
 - FLOAT TANKS
 - FEP COAGULATORS
 - POLYMERIZATION UNIT STREAMS
- LAND - SUPERNATE PONDS (NOW CLOSED)
 - SOLIDS (SOME WET) SENT TO LANDFILLS

/SLG
6/26/91

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BACKGROUND

WHAT IS C-8?

- 0 AMMONIUM PERFLUOROOCTANOATE - $\text{CF}_3 (\text{CF}_2)_6 \text{C} \begin{array}{l} \text{=O} \\ \text{-O-} \end{array} \text{NH}_4^+$
- 0 FC-143
- 0 FC-118 (20% SOLUTION)
- 0 CAS NO. 3825-26-1

WHAT IS IT USED FOR?

- 0 DISPERSING AGENT - POLYMERIZATION (USED SINCE LATE 1950'S OR EARLY 1960'S)

WHERE IS IT USED?

- 0 TEFLON® POLYMERS - ALL POLYMERIZATION BATCHES
- 0 TEFLON® COPOLYMERS - FEP POLYMERIZATION
- 0 VITON®, KALREZ® FLUOROELASTOMERS

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TOXICOLOGY

● LIMITS

	<u>ug/m³</u>	<u>ppb</u>
- TLV	100	5.6
- AEL	10	0.56
- CEGA	0.3	0.0015
- CEGW	-	1.0

● CALCULATED DOSE

- AEL	100 ug/day
- CEG	6 ug/day

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C-8 DETECTED

WASHINGTON WORKS SITE

PPM

- SUPERNATE POND AREA
 - CONTAMINATED SOIL 100
 - GROUNDWATER (-20 FT.) 100
- WEST END OF SITE - WELLS 27 & 4
 - GROUNDWATER (-75 FT.) PPB
2-4
- NO. 5 OUTFALL
 - DISCHARGE TO OHIO RIVER 40

WASHINGTON WORKS EMPLOYEES

PPM

- 1991 (VOLUNTARY TESTING) UP TO 5

DRINKING WATER (LPSD)

PPB

- 1984 - 1989 0.7 - 2.2
- 1991 3.8*

LETART LANDFILL

PPM

- SURFACE WATER
 - LEACHATE POND OVERFLOW 2-3
- GROUNDWATER
 - WELL SAMPLES 0.05 - 0.7

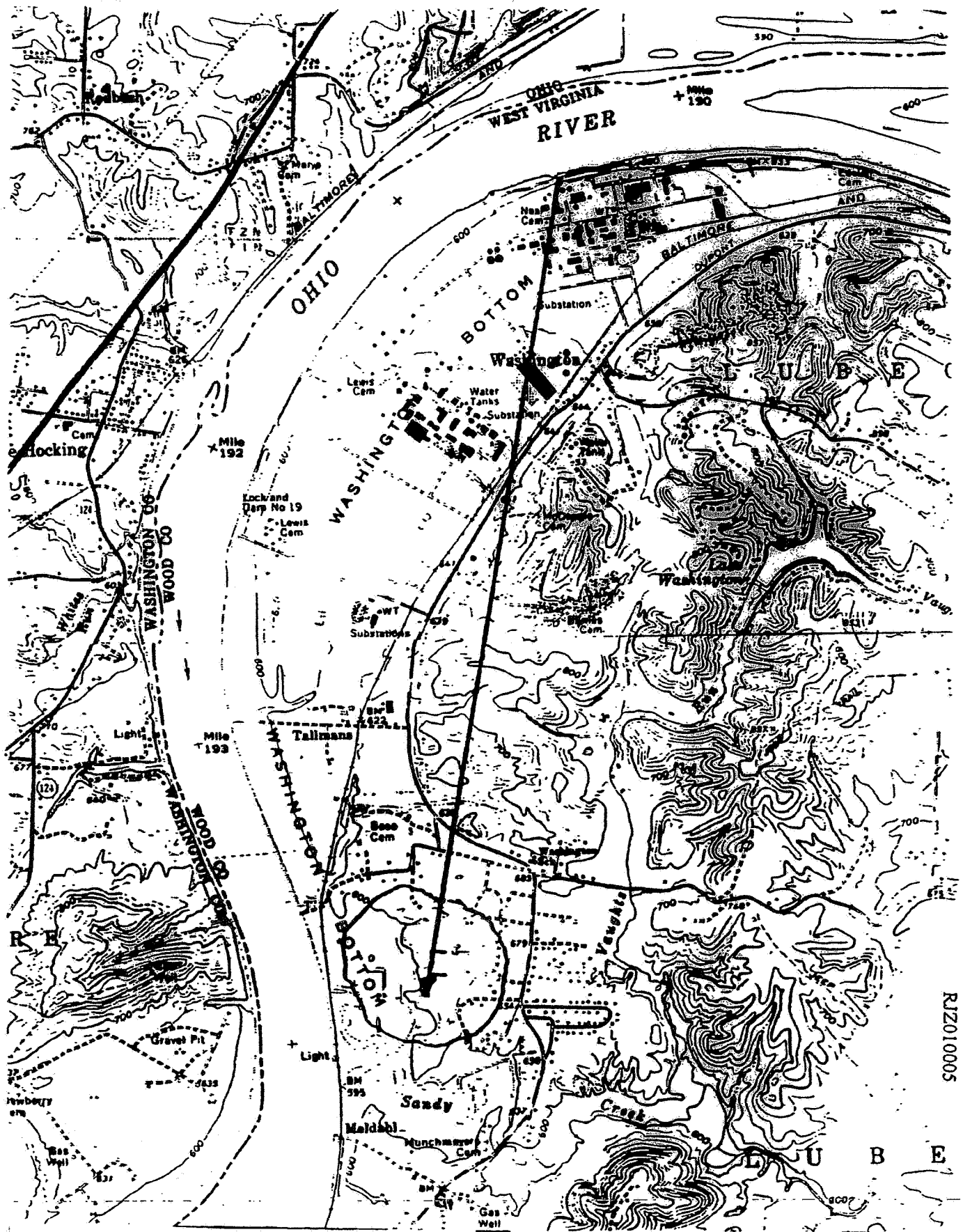
DRY RUN LANDFILL

PPM

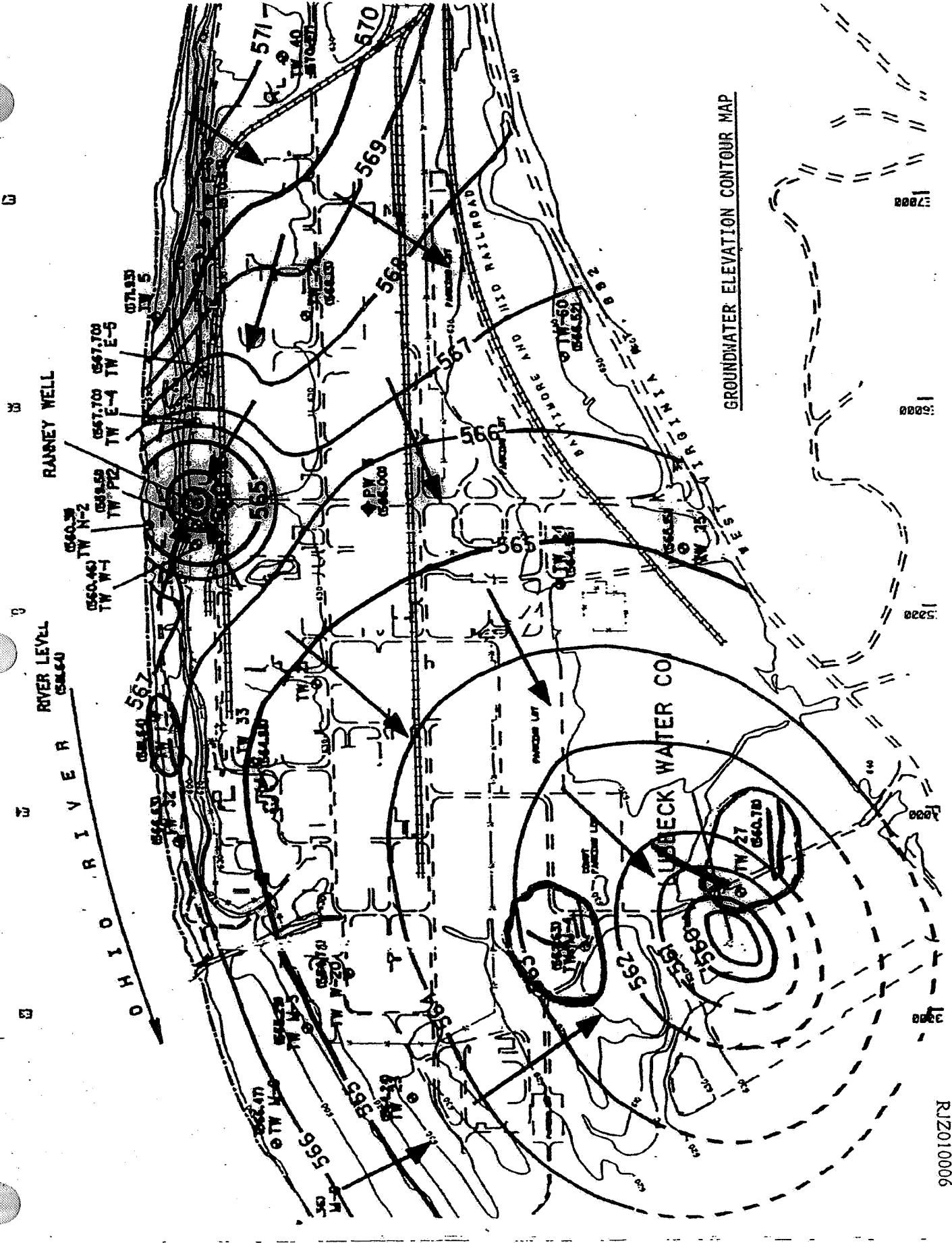
- SUPERNATE SLUDGE 75-100
- SURFACE WATER
 - UPPER POND 2-3
 - SEDIMENTATION BASIN 2-3
 - DISCHARGE STREAM AT PROPERTY LINE 0.04 - .2
- GROUNDWATER
 - MONITOR WELLS PPB
2-5

*Revised analytical method

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GROUNDWATER ELEVATION CONTOUR MAP

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COMMUNICATIONS WITH REGULATORY AGENCIES

<u>DATE</u>	<u>AGENCY</u>	<u>PERMIT</u>	<u>DISCLOSURE</u>
6/9/81	WV-DNR WATER RESOURCES EPA, REGION III	NPDES WV0001279 NO. 005	FC-143 0.1 MG/L BIRTH DEFECTS
6/5/85	EPA, REGION III WV-DNR	RCRA WVD045875291	FC-143 ANAEROBIC PONDS PPB-AQUIFER
9/2/86	WV-DNR (5 COPIES) SENT TO EPA, REGION III	NPDES WV0001279 NO. 002 NO. 005	SURFACTANTS
7/30/87 9/15/87 12/17/87	WV-DNR, DIVISION OF WATER RESOURCES	NPDES WV0001279 CLOSE PONDS WV NO. IWL-6287-82 RECEIVE SLUDGE	FC-143 85 PPM 7,100 TONS
6/30/89	LPSD WV-PSC	NONE	FC-143 1-2 PPB IN AQUIFER
9/21/89	WV-DNR (5 COPIES) SENT TO EPA, REGION III	NPDES WV0076066-PERMIT APPLICATION	FC-143 1-3 PPM IN STREAM/WELLS
2/9/90	EPA, REGION III WV-DNR WV-APCC	RCRA WVD045875291 (CORRECTIVE ACTION)	LUBECK PUBLIC SUPPLY WELLS PPB - C8
8/23/90	WV-DNR WASTE MGMT	NPDES-PERMITS WV0076244 WV0076066 WV NO. 3495	FC-143 85 PPM IN SLUDGE
12/14/90	EPA, REGION III WV-DNR WV-APCC	RCRA WVD045875291 (CORRECTIVE ACTION)	ANAEROBIC PONDS DISCUSSION C-8 PPM DETAILED REVIEW

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STEPS TO REDUCE EXPOSURES

EMPLOYEES

- CONVERTED TO LIQUID C-8 (20% IN WATER)
- EMPHASIS PROGRAM ON SKIN EXPOSURE

COMMUNITY

- INSTALLED AIR SCRUBBER ON F.P. DRYERS
- CLOSED SUPERNATE PONDS - 1988
- PURCHASED LPSD WELLS
 - TURNOVER EXPECTED - 10/91
- RCRA "CORRECTIVE ACTION" PERMIT
 - VERIFICATION INVESTIGATION WORK PLAN
 - SUBMITTED 2/90
 - SUPERNATE PONDS ARE SHMU
 - CONTINUE PUMPING LPSD WELLS INTO PLANT PROCESS WATER
 - U OF D STUDY (ELECTRO-CHEMICAL "IN-SITU" TREATMENT)

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CONCLUSIONS -Kahr's

- TOXICOLOGY HAS BEEN DISCLOSED
- PRESENCE OF C-8 IN THE AQUIFER HAS BEEN REPORTED TO REGULATORY AGENCIES AND THE LPSD
- DISCHARGE FROM SITE AND LANDFILLS IS REGULATED BY NPDES PERMITS
- NO 8(e) NOTIFICATION IS WARRANTED AT THIS TIME
 ↳ EPA
- NO HEALTH HAZARD EXISTS BASED ON INFORMATION WE HAVE TODAY
- MOVING THE WATER SUPPLY FOR THE LUBECK SYSTEM SHOULD REDUCE EXPOSURE
- EVALUATE OUR POSITION WHEN 3M - NOEL STUDY RESULTS ARE AVAILABLE THIS FALL
- NO ADDITIONAL NOTIFICATIONS ARE NEEDED

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