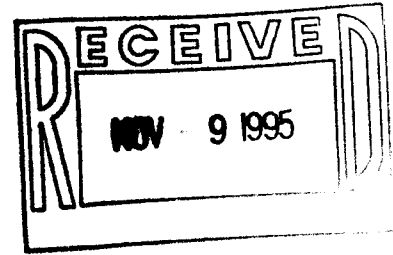




11/8/95
Department of Energy

Carlsbad Area Office
P. O. Box 3090
Carlsbad, New Mexico 88221



Mr. David Neleigh, Chief (6PD-N)
New Mexico/Federal Facilities
U.S. Environmental Protection Agency, Region VI
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

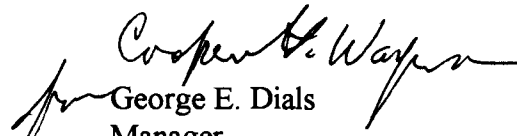
Dear Mr. Neleigh:

Enclosed is the No-Migration Determination Annual Report for the period September 1, 1994 through August 31, 1995 (DOE/WIPP 95-2141). This report has been prepared in accordance with your guidance provided to this office, dated September 7, 1995, and contains only summaries of new data or activities pertinent to Performance Assessment. Specifically, the report provides relevant information on waste characterization data, the experimental program, and volatile organic compound monitoring data.

The report is being transmitted to meet the requirements of the Conditional No-Migration Determination for the WIPP (55FR47700, November 14, 1990).

Should you have any questions regarding this report, please contact E. Kent Hunter of my staff at (505) 234-7456.

Sincerely,


George E. Dials
Manager

Enclosure

cc w/enclosure:

Elliot Laws, EPA, Washington, D.C.
✓ Steve Zappe, NMED, Santa Fe, NM
James Turi, EM-33
Cooper Wayman, CAO

cc w/o enclosure:

Mike McFadden, CAO
Mike Daugherty, CAO



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**No-Migration Determination Annual Report
for the Period September 1, 1994 through August 31, 1995
DOE/WIPP 95-2141**

Preface

In accordance with Environmental Protection Agency (EPA) guidance contained in a letter from Mr. D. Neleigh to Mr. G. E. Dials, dated September 7, 1995, this report consists of "... summaries of new data or activities pertinent to the PA." Therefore, the following sections provide relevant information pertaining to: waste characterization data, the experimental program, and volatile organic compound (VOC) monitoring data.

Waste Characterization Data

New waste characterization data that has been developed and verified are available in the *Draft No-Migration Variance Petition* (DOE/CAO-95-2043), dated May 31, 1995. These data consist primarily of drum headspace VOC concentrations. Additional data have been obtained since that date and will be contained within the *Final No-Migration Variance Petition* (NMVP). This document will be delivered to the EPA by June 30, 1996.

Experimental Program

In April 1994, the WIPP adopted *Systems Prioritization Methodology* (SPM) to identify and prioritize data collection programs to support a demonstration of compliance with the disposal regulations of 40 CFR §191 and 40 CFR §268.6. From the SPM process, eight experimental programs were chosen to confirm parameters to be used in PA models. The eight programs currently being performed include the following:

- Colloids
- Culebra Fracture/Matrix Flow
- Multi-Well Tracer
- Rock Mechanics
- Seals Studies
- Blow-out Releases
- Actinide Source Term Including Oxidation State +VI
- Chemical Retardation in the Culebra

Final results from these experimental programs are anticipated by March 31, 1996. Information derived from the experiments will be used, as appropriate, and incorporated in the PA model and reflected within the Parameters (PAR) Appendices of the Final NMVP and the Final Compliance Certification Application (CCA). The CCA is scheduled to be delivered to the EPA by October 31, 1996.

Volatile Organic Compound (VOC) Monitoring Program

During this reporting period, no changes were made to the number of air sampling stations used or to the frequency of sampling. Data continue to be collected for the purpose of establishing baseline ambient VOC concentrations at the WIPP. Pertinent VOC data will also be made available in the Final NMVP.

Samples were collected at three locations during the last year. Summary concentrations for five target VOCs are presented on Page 3 of this report. Minimum, maximum, and average concentrations are presented by target compound and monitoring location.

VOC MONITORING PROGRAM DATA SUMMARY

Station VOC-1

Concentration (ppbv) Total Samples Collected = 21										
	Freon 113		CH ₂ Cl ₂		TCA		CCl ₄		TCE	
Minimum	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Maximum	1.9		2.3	B	4.0		2.2		3.8	
Average	0.44		0.42		0.49		0.21		0.30	

Station VOC-2

Concentration (ppbv) Total Samples Collected = 20										
	Freon 113		CH ₂ Cl ₂		TCA		CCl ₄		TCE	
Minimum	0.10	U	0.12	J	0.10	U	0.10	U	0.10	U
Maximum	0.32	B	0.47	B	0.15	J	0.10	U	0.10	U
Average	0.20		0.24		0.11		0.10		0.10	

Station VOC-8

Concentration (ppbv) Total Samples Collected = 20										
	Freon 113		CH ₂ Cl ₂		TCA		CCl ₄		TCE	
Minimum	0.10	U	0.15	JB	0.10	U	0.10	U	0.10	U
Maximum	2.7	B	0.42	B	4.5		0.10	U	0.28	
Average	0.41		0.23		1.1		0.10		0.11	

ppbv - parts per billion by volume
Freon 113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

TCA - 1,1,1-Trichloroethane
CCl₄ - Carbon tetrachloride