

# State of New Mexico ENVIRONMENT DEPARTMENT

DOE Oversight Bureau Carlsbad Field Office

604B N. Canal, Carlsbad, New Mexico 88220 Tel: (575)-887-6851, Fax (575)-887-6862



# Direct Penetrating Radiation Monitoring at the Waste Isolation Pilot Plant/ New Mexico conducted by NMED/DOE OB for the First Calendar Quarter 2009, May 18, 2009

The New Mexico Environment Department (NMED) DOE Oversight Bureau has compiled and assessed direct penetrating radiation (DPR) data collected during the first calendar quarter 2009. The accompanying data report shows DPR dose levels at various locations surrounding the Waste Isolation Pilot Plant, at the Oversight Bureau Office in Carlsbad, and at the Malaga Volunteer Fire Department. The data were obtained using RadElect gamma radiation monitoring electrets.

Graph-1 compares NMED DPR results by location for the first calendar quarter and includes on-site and off-site averages, including ± Standard Deviations.

#### Response

Questions and or comments may be addressed to Thomas Kesterson by phone at (575)-887-6851, by e-mail at thomasl.kesterson@state.nm.us, or to the address in the above letterhead.

Enclosures: (1) Graph – DPR 1st Calendar Qtr 2009, Quarterly Dose

(2) First Calendar Quarter 2009 Results as Measured by Electrets

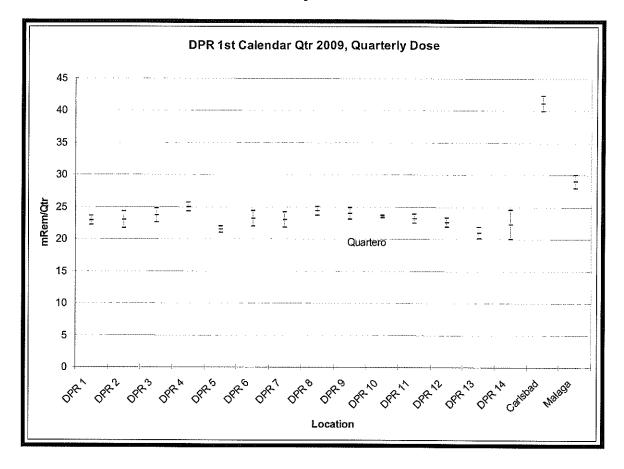
Distribution: Jody Plum, DOE

Dan Ferguson, DOE

Tom Skibitski, Chief, DOE-OB

Barry Birch, NMED DOE-OB, SOS

Graph – 1



## Table-1: Direct Penetrating Radiation as Measured by Electrets CY 2009 Q-1

New Mexico Environment Department, DOE Oversight Bureau, WIPP Section

#### WIPP 1

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 776	12/31/08 8:39 AM	4/1/09 7:39 AM	90.96	41	22.0
SBZ 783	12/31/08 8:39 AM	4/1/09 7:39 AM	90.96	43	23.2
SBZ 790	12/31/08 8:39 AM	4/1/09 7:39 AM	90.96	42	23.4
		Average	22.9		

#### WIPP 2

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 900	12/31/08 8:51 AM	4/1/09 7:43 AM	90.95	46	24.3
SBZ 901	12/31/08 8:51 AM	4/1/09 7:43 AM	90.95	44	23.0
SBZ 906	12/31/08 8:51 AM	4/1/09 7:43 AM	90.95	42	21.8
		Average	Quarterly D	ose in mRad	23.0

#### WIPP 3

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 889	12/31/08 8:59 AM	4/1/09 8:04 AM	90.96	46	24.9
SBZ 893	12/31/08 8:59 AM	4/1/09 8:04 AM	90.96	44	23.4
SBZ 892	12/31/08 8:59 AM	4/1/09 8:04 AM	90.96	43	22.8
		Average	Quarterly D	ose in mRad:	23.7

#### WIPP 4

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 861	12/31/08 9:10 AM	4/1/09 8:15 AM	90.96	47	25.6
SBZ 858	12/31/08 9:10 AM	4/1/09 8:15 AM	90.96	44	24.3
SBZ 860	12/31/08 9:10 AM	4/1/09 8:15 AM	90.96	46	25.1
		Average	Quarterly D	ose in mRad:	25.0

#### WIPP 5

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 796	12/31/08 9:19 AM	4/1/09 8:24 AM	90.96	38	21.0
SBZ 802	12/31/08 9:19 AM	4/1/09 8:24 AM	90.96	39	22.0
SBZ 803	12/31/08 9:19 AM	4/1/09 8:24 AM	90.96	38	21.6
		Average	Quarterly D	ose in mRad	21.5

## Table-1: Direct Penetrating Radiation as Measured by Electrets CY 2009 Q-1

New Mexico Environment Department, DOE Oversight Bureau, WIPP Section

#### WIPP 6

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 829	12/31/08 9:47 AM	4/1/09 8:35 AM	90.95	40	22.0
SBZ 834	12/31/08 9:47 AM	4/1/09 8:35 AM	90.95	43	24.5
SBZ 835	12/31/08 9:47 AM	4/1/09 8:35 AM	90.95	41	23.0
		Average Quarterly Dose in mRad:			23.2

#### WIPP 7

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 877	12/31/08 10:04 AM	4/1/09 8:57 AM	90.95	42	24.4
SBZ 873	12/31/08 10:04 AM	4/1/09 8:57 AM	90.95	42	22.2
SBZ 876	12/31/08 10:04 AM	4/1/09 8:57 AM	90.95	41	22.3
		Average	Quarterly D	ose in mRad:	23.0

#### WIPP 8

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 853	12/31/08 11:06 AM	4/1/09 9:31 AM	90.93	45	24.4
SBZ 855	12/31/08 11:06 AM	4/1/09 9:31 AM	90.93	47	25.4
SBZ 856	12/31/08 11:06 AM	4/1/09 9:31 AM	90.93	102	
		Average	Quarterly D	ose in mRad:	24.9

#### WIPP 9

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 894	12/31/08 11:09 AM	4/1/09 9:33 AM	90.93	46	25.1
SBZ 895	12/31/08 11:09 AM	4/1/09 9:33 AM	90.93	43	23.5
SBZ 897	12/31/08 11:09 AM	4/1/09 9:33 AM	90.93	43	23.5
		Average Quarterly Dose in mRad:			24.0

#### **WIPP 10**

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 886	12/31/08 11:12 AM	4/1/09 9:36 AM	90.93	43	23.4
SBZ 887	12/31/08 11:12 AM	4/1/09 9:36 AM	90.93	43	23.3
SBZ 888	12/31/08 11:12 AM	4/1/09 9:36 AM	90.93	43	23.6
		Average	Quarterly D	ose in mRad	23.5

Table-1: Direct Penetrating Radiation as Measured by Electrets CY 2009 Q-1

New Mexico Environment Department, DOE Oversight Bureau, WIPP Section WIPP 11

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 816	12/31/08 8:14 AM	4/1/09 7:25 AM	90.97	43	23.9
SBZ 818	12/31/08 8:14 AM	4/1/09 7:25 AM	90.97	43	23.2
SBZ 822	12/31/08 8:14 AM	4/1/09 7:25 AM	90.97	41	22.6
		Average	Quarterly D	ose in mRad·	23.2

#### **WIPP 12**

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 804	12/31/08 9:27 AM	4/1/09 10:06 AM	91.03	41	21.8
SBZ 805	12/31/08 9:27 AM	4/1/09 10:06 AM	91.03	39	23.3
SBZ 814	12/31/08 9:27 AM	4/1/09 10:06 AM	91.03	41	22.7
		Average	22.6		

#### **WIPP 13**

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 737	12/31/08 9:32 AM	4/1/09 10:10 AM	91.03	40	21.6
SBZ 740	12/31/08 9:32 AM	4/1/09 10:10 AM	91.03	38	21.6
SBZ 745	12/31/08 9:32 AM	4/1/09 10:10 AM	91.03	39	20.0
Average Quarterly Dose in mRad				24.9	

#### **WIPP 14**

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 753	12/31/08 9:37 AM	4/1/09 10:08 AM	91.02	36	24.9
SBZ 757	12/31/08 9:37 AM	4/1/09 10:08 AM	91.02	44	21.3
SBZ 764	12/31/08 9:37 AM	4/1/09 10:08 AM	91.02	38	20.6
Average Quarterly Dose in mRad:				22.3	

#### WIPP 15 Carlsbad

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 842	12/31/08 1:34 PM	4/1/09 11:39 AM	90.92	38	40.7
SBZ 844	12/31/08 1:34 PM	4/1/09 11:39 AM	90.92	70	40.2
SBZ 845	12/31/08 1:34 PM	4/1/09 11:39 AM	90.92	68	42.4
	Average Quarterly Dose in mRad:				41.1

#### **WIPP 17 Malaga**

Electret Number	Start Date and Time	Finish Date and Time	# of Days:	Voltage Drop	Quarterly Dose
SBZ 847	12/31/08 2:43 PM	4/2/09 8:51 AM	91.76	57	30.1
SBZ 852	12/31/08 2:43 PM	4/2/09 8:51 AM	91.76	55	28.8
SBZ 880	12/31/08 2:43 PM	4/2/09 8:51 AM	91.76	54	28.2
		Average Quarterly Dose in mRad:			