

DOE Oversight Bureau, New Mexico Environment Department

**Direct Penetrating Radiation Monitoring at
the Waste Isolation Pilot Plant**

**Conducted by the
New Mexico Environment Department DOE Oversight Bureau
for Calendar Year 2014**

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Final Report

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The purpose of this communication is to transmit direct penetrating radiation (DPR) dose levels collected at the Waste Isolation Pilot Plant during the calendar year 2014. The data measurements were obtained using the E-PERM® electret ionization chamber system from Rad Elec Inc.

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Introduction

On average, Americans receive a radiation dose of about 620 mrem each year. Half of this dose (310 mrem) comes from natural background radiation: radon in the air, cosmic rays and the Earth itself. The other half comes from man-made sources of radiation: medical, commercial, and industrial sources (Doses in our Daily Lives, U.S. Nuclear Regulatory Commission website <http://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html>, accessed August 4, 2014).

The environmental dose standard for the Waste Isolation Pilot Plant (WIPP) facility is established in Title 40 Code of Federal Regulations (CFR) Part 191, Subpart A, "Environmental Standards for Management and Storage." The standard sets the regulatory limit for external radiation to a member of the public outside the exclusive use area boundary at 25 mrem per year to the whole body and 75 mrem to any critical organ.

In a 1995 memorandum of understanding between the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE), the DOE agreed that the WIPP facility would comply with 40 CFR Part 61, Subpart H, "National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities." The National Emissions Standards for Hazardous Air Pollutants (NESHAP) standard for radionuclides requires that the emissions of radionuclides to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent (EDE) of 10 mrem per year.

The New Mexico Environment Department (NMED) DOE Oversight Bureau (DOE-OB or the Bureau) has measured and compiled Direct Penetrating Radiation (DPR) dose levels recorded at NMED DOE-OB monitoring sites during calendar year (CY) 2014. The Bureau maintains fourteen (14) monitoring sites located at WIPP, in the Exclusive Use Area, and six (6) sites at other locations off-site in the WIPP region (Table 1, Figures 1 and 2) that are sampled quarterly.

Table 1. Location and operational details of Direct Penetrating Radiation monitoring stations located inside the WIPP Exclusive Use Area and in the WIPP vicinity.

Location	Location Description	Operational History
DPR 01	Exclusive Use Area, Parking lot	CY2006 Q-3 to present
DPR 02	Exclusive Use Area, Railroad Entrance	CY2006 Q-3 to present
DPR 03	Exclusive Use Area, Southwest Fence Corner	CY2007 Q-1 to present
DPR 04	Exclusive Use Area, South Fence Center	CY2007 Q-1 to present
DPR 05	Exclusive Use Area, Near Southeast Fence Corner	CY2006 Q-3 to present
DPR 06	Exclusive Use Area, Far Southeast Fence Corner	CY2006 Q-3 to present
DPR 07	Exclusive Use Area, East Fence Mid	CY2007 Q-1 to present
DPR 08	Exclusive Use Area, Northeast Fence Corner	CY2007 Q-1 to present
DPR 09	Exclusive Use Area, North-Northeast Fence	CY2007 Q-1 to present
DPR 10	Exclusive Use Area, North Fence Salt Pile	CY2007 Q-1 to present
DPR 11	Exclusive Use Area, Northwest Fence Corner	CY2006 Q-3 to present

DPR 12	Exclusive Use Area, Waste Handling Building, Loading Dock West	CY2006 Q-3 to present
DPR 13	Exclusive Use Area, Waste Handling Building, Loading Dock Center	CY2006 Q-3 to present
DPR 14	Exclusive Use Area, Waste Handling Building, Loading Dock East	CY2006 Q-3 to present
DPR 15	Carlsbad, NM - Canal St.	CY2006 Q-3 to CY2012 Q2 ¹
DPR 16	Loving Weigh Station	CY2007 Q3, CY2009 Q-3 to present
DPR 17	Malaga Volunteer Fire Department	CY2008 Q-1 to present
DPR 18	Hobbs Highway / North Access Road	CY2009 Q-1 to present
DPR 19	Southeast Control Tower	CY2011 Q-4 to present
DPR 20	Carlsbad, NM - Guadalupe St. (interior)	CY2012 Q-3 to present
DPR 21	Carlsbad, NM - Guadalupe St. (exterior)	CY2012 Q-3 to present

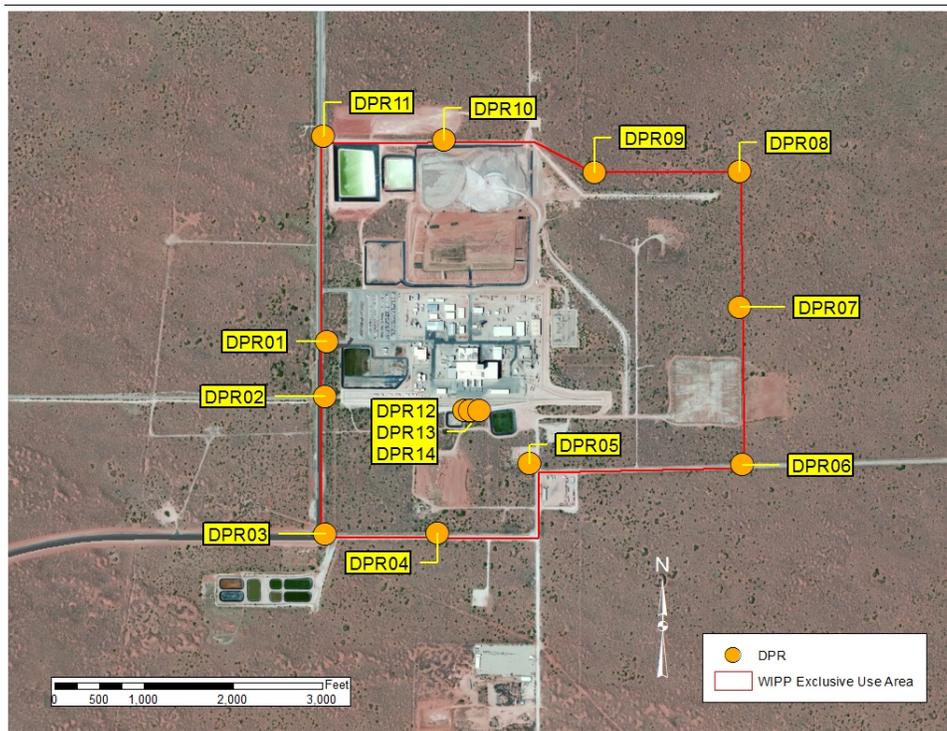


Figure 1. Location of DPR monitors maintained by the DOE Oversight Bureau at the WIPP.

¹ Sampling at DPR 15 was discontinued after CY2012 Q2 when NMED moved their office from the Canal Street location to the Guadalupe Street location

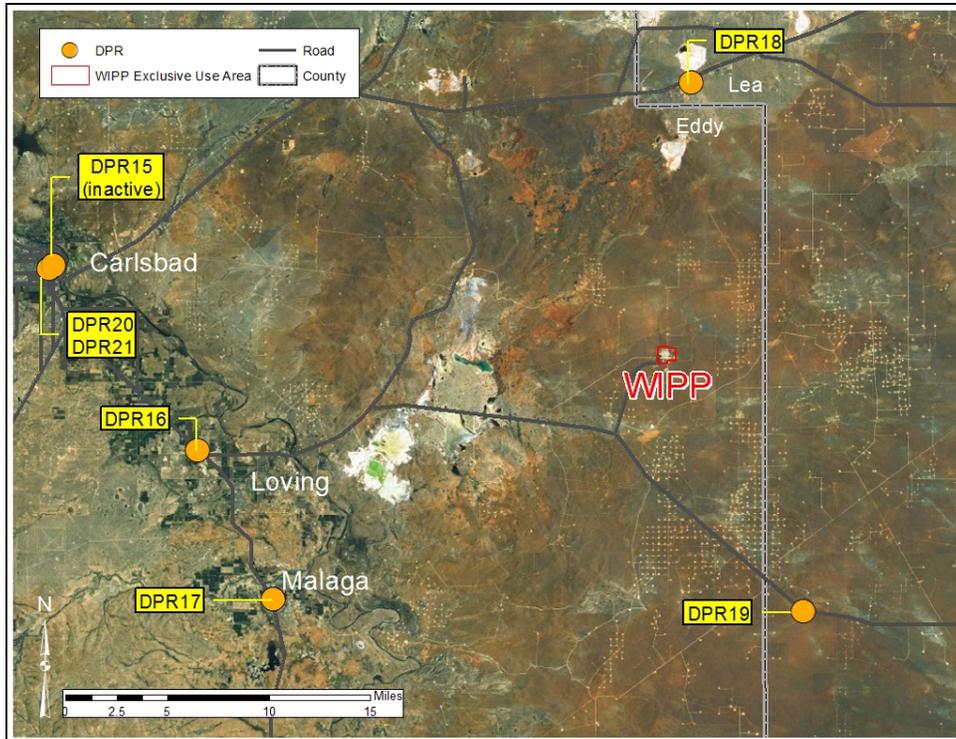


Figure 2. Location of DPR monitors maintained by the DOE Oversight Bureau in the area surrounding WIPP.

The data were obtained using the E-PERM® electret ionization chamber system from Rad Elec Inc. The electret passive ion chamber uses the principle of ion pair production resulting from gamma photons interacting with air molecules to reduce the voltage of a charged Teflon™ disk. The chambers are housed in aluminum canisters designed to block gamma radiation from radon. Using a predetermined formula, the voltage drop indicates the amount of radiation passing through the chamber. NMED DOE-OB's monitoring program reads electret passive ion chambers at the end of each quarter, converts reading into quarterly dose values presented in units of millirads (mrad).

A rad is a unit of absorbed radiation dose, regardless of its source. The rem (Roentgen equivalent man) is a commonly used unit of ionizing radiation dose that uses a quality factor based on the source of radiation as it interacts with human body tissue. In the case of gamma radiation, the quality factor is one, and thus one rad is equal to one rem.

The quarterly dose rates have been normalized to reflect an actual quarter of 91.25 days. Normalized quarterly dose rates are summed for an estimated annual dose rate.

Results

A summary of the DPR results for each station by quarter, average quarterly dose and total doses for CY 2014 are presented in Table 2 and Figure 3. For the complete dataset, see Appendix 1.

First Quarter:

DPR results at the WIPP ranged from a minimum average quarterly dose of 25.9 mrad at the WIPP Waste Handling Building, Loading Dock East (DPR14), to a maximum average quarterly dose of 36.5 mrad at the Southwest Fence Corner (DPR03). The largest measurement in the vicinity of WIPP was 36.4 mrad, measured at the control site at the NMED Carlsbad Guadalupe Street Office – Interior location (DPR20).

Second Quarter:

DPR results at the WIPP ranged from a minimum average quarterly dose of 22.6 mrad at the WIPP Far Southeast Fence Corner (DPR06), to a maximum average quarterly dose of 34.5 mrad at the North Fence Salt Pile (DPR10). The largest measurement in the vicinity of WIPP was 32.5 mrad, measured at NMED Carlsbad Guadalupe Street Office – Interior location (DPR20).

Third Quarter:

DPR results at the WIPP ranged from a minimum average quarterly dose of 20.9 mrad at the Northwest Fence Corner (DPR11), to a maximum average quarterly dose of 40.4 mrad at the Southwest Fence Corner (DPR03). The largest measurement in the region of WIPP was 33.3 mrad, measured at NMED Guadalupe St. Office Exterior, NM (DPR21).

Fourth Quarter:

DPR results at the WIPP ranged from a minimum average quarterly dose of 21.1 mrad at the WIPP Northwest Fence Corner (DPR11), to a maximum average quarterly dose of 29.4 at N Fence Salt Pile (DPR10) The largest measurement in the region surrounding WIPP was 61.1 mrad at NMED Guadalupe St. Office Interior (DPR20).

Annual Summary:

A review of the historical DPR data collected at WIPP in the surrounding region identified several potential outliers in the dataset. In these instances, one of the three electrets at a location had a voltage drop that was significantly higher or lower than the other two electrets. Potential outliers were compared to the quarterly average across all stations, and data that exceeded 2 and 3 standard deviations from the mean are identified in Table 2. Potential outliers have not been excluded from the results reported or analyzed.

Table 2. NMED DOE-OB DPR Results by Quarter, Average Quarterly Dose, and Total Annual Dose by Station Location for Calendar Year (CY) 2014. No data is reported if the data were disqualified (DQ)². (*) indicates that one of the three electrets' calculated dose exceeds two standard deviations of the mean quarterly average for all stations without a disqualifying event listed in the field notes. (**) indicates that one of the three electrets' calculated dose exceeds three standard deviations of the mean quarterly average for all stations without a disqualifying event listed in the field notes. Total annual doses were not calculated if one or more quarter's data was DQ.

NMED DPR Location	Q1 CY 2014 Dose (mrad)	Q2 CY 2014 Dose (mrad)	Q3 CY 2014 Dose (mrad)	Q4 CY 2014 Dose (mrad)	CY 2014 Average Quarterly Dose (mrad)	CY 2014 Total Annual Dose (mrad)
DPR 01	29.2	26.7	DQ	23.6	26.5	
DPR 02	31.4	30.8	22.8	24.6	27.4	109.6
DPR 03	36.5*	28.4	40.4**	23.9	32.3	129.2
DPR 04	27.5	27.7	24.3	DQ	26.5	
DPR 05	30.8	29.6	27.9	23.7	28.0	112
DPR 06	28.9	22.6	24.5	DQ	24.7	
DPR 07	30.9	29.8	25.8*	24.2	27.7	110.7
DPR 08	30.7	27.6	23.9	DQ	27.4	
DPR 09	27.9	31.0	24.0	26.2	27.3	109.1
DPR 10	28.7	34.5	30.3	29.4	30.7	122.9
DPR 11	27.8	26.6	20.9	21.1	24.1	96.4
DPR 12	28.0	30.6	22.6	25.7	26.7	106.9
DPR 13	27.0	29.1	23.8	25.1	26.3	105
DPR 14	25.9	24.6	21.2	22.8	23.6	94.5
DPR 16	33.3	31.9	DQ	31.9	32.4	
DPR 17	32.4	28.1	27.0	26.0	28.4	113.5
DPR 18	32.0	30.3*	31.4	28.8	30.6	122.5
DPR 19	30.9	27.9	23.8	33.6**	29.1	116.2
DPR 20	36.4	32.5	28.3	61.1**	39.6	158.3
DPR 21	28.8	30.3	33.3	26.2	29.7	118.6

² Data is disqualified if the canister or electrets have been found to have been tampered with in any way. Details of the conditions for disqualification are provided in Appendix 1. Disqualified data are not included in any further analysis.

There was no observable trend in the calculated doses measured at individual stations from CY2014 Q-1 to CY2014 Q-4. There were significant differences in the calculated doses among stations (Figure 3). Post hoc analyses indicate that the doses measured at DPR 20 (Guadalupe Office Interior) were significantly higher than at DPR 14 (Waste Handling Building, Loading Dock East).

In general, the locations sampled off-site of WIPP, in and around the Carlsbad region, had slightly higher quarterly doses (quarterly average 31.57 ± 7.08 , n=23) than the stations located in the Exclusive Use Area on-site at WIPP (quarterly average 27.15 ± 3.91 , n=52).

Data collected during CY 2014 are comparable with historical data (Figure 4). The average quarterly dose across all locations and all quarters in CY 2014 was 28.50 ± 5.45 (n=75). The average quarterly dose across all locations and all quarters from 2006 through 2013 was 26.54 ± 3.22 (n=481). It's important to note that some stations have been sampled quarterly since 2006, while other locations have only been sampled since 2012 (Table 1), so the sample size varies at each location (Figure 4).

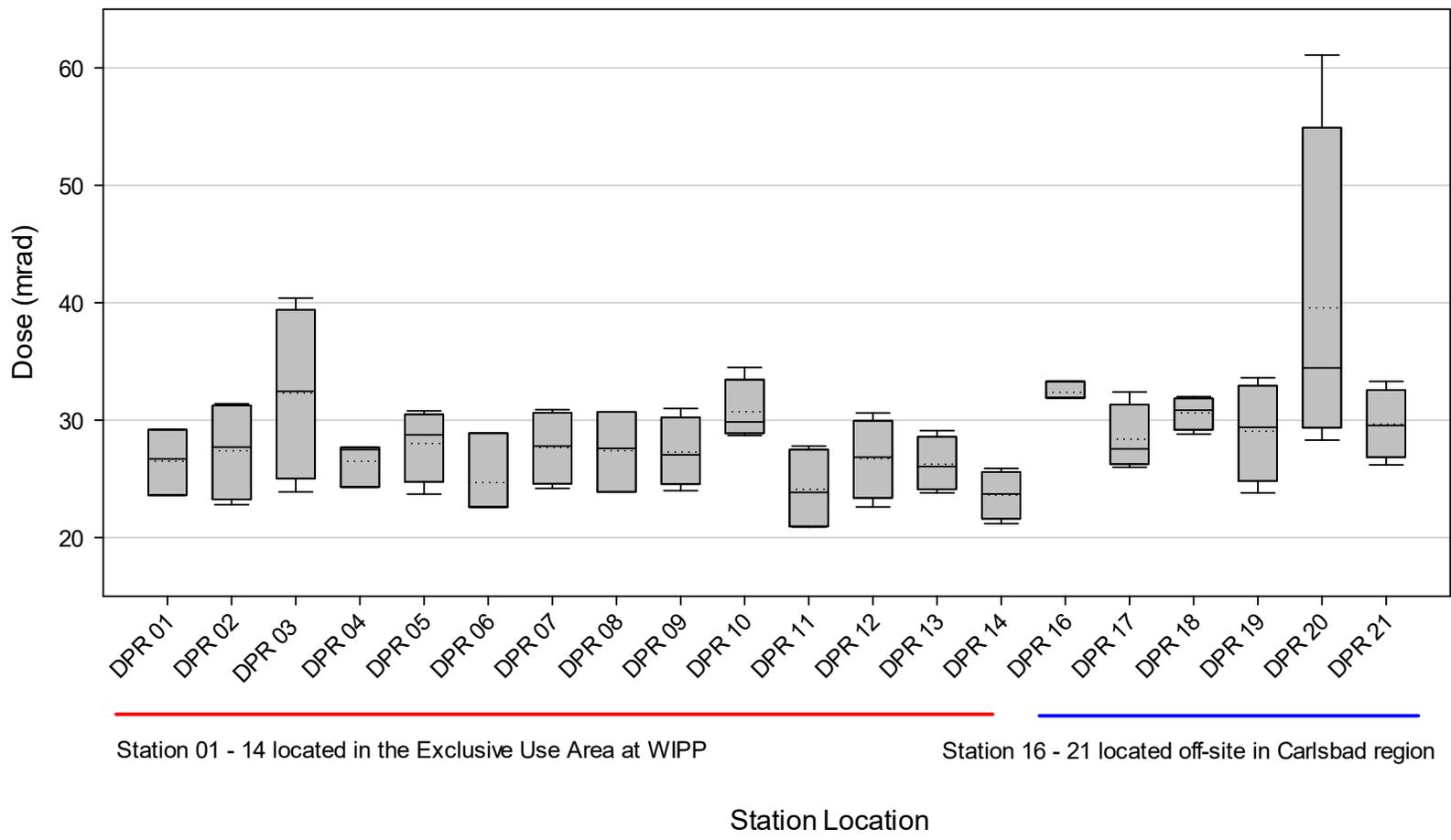


Figure 3. Average quarterly dose calculations for each DPR monitoring location sampled during CY 2014. Box plots depicting the 10th, 25th, 75th, and 90th percentiles; the solid middle line is the median, the dotted middle line is the mean.

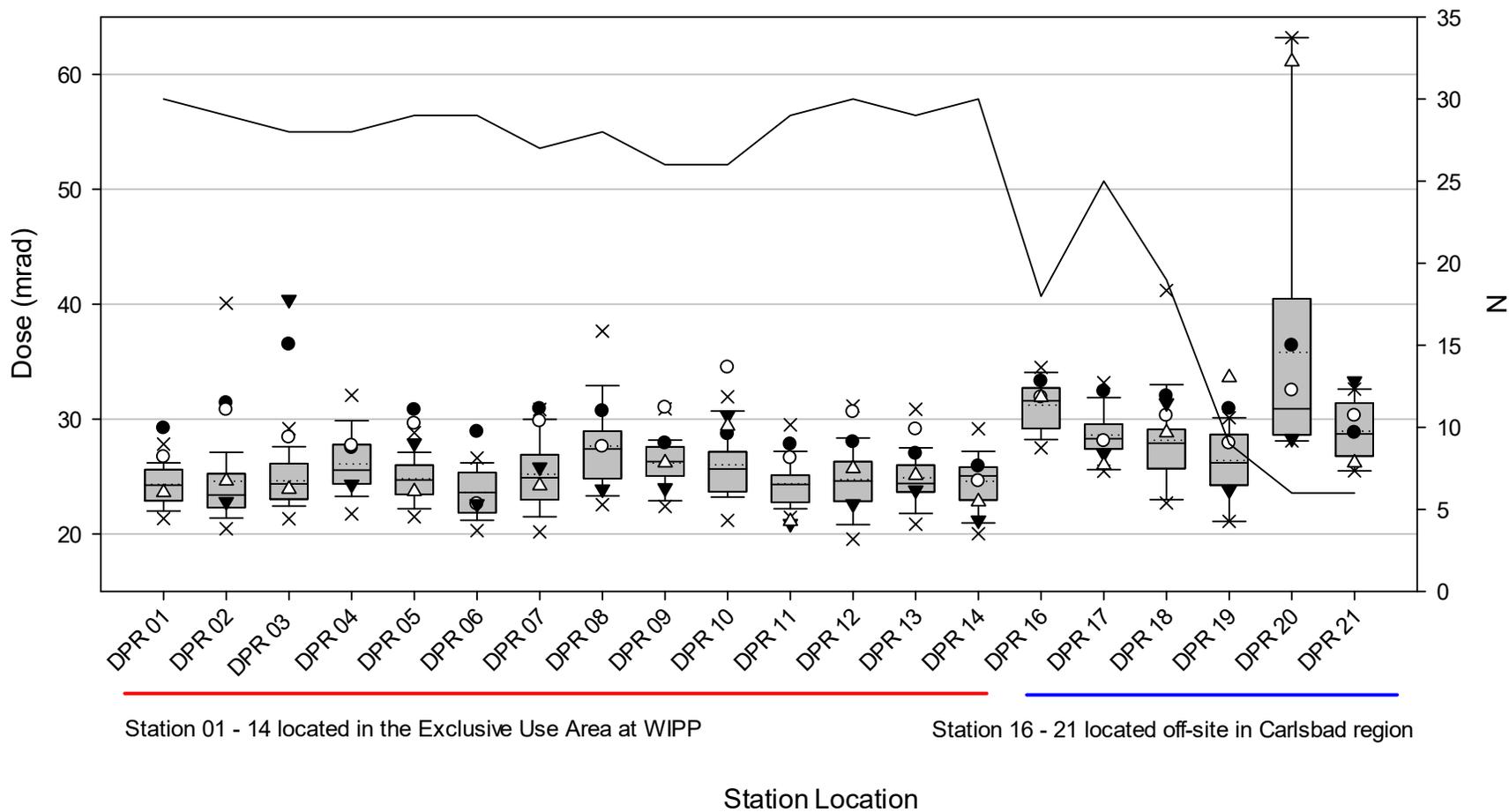


Figure 4. Quarterly dose calculations (● = Q1, ○ = Q2, ▼ = Q3, and △ = Q4) for each DPR monitoring location in CY 2014 compared to historical averages, all available quarterly doses 2006-2013. Box plots depicting the 10th, 25th, 75th, and 90th percentiles; the solid middle line is the median, the dotted middle line is the mean; X = potential outliers. N = the number of quarterly samples between 2006 and 2013 (black line).

Conclusions

The doses calculated from the NMED DPR locations located at WIPP and in the surrounding region during CY 2014 are comparable with historical results obtained by the DOE Oversight Bureau since 2006. There were some spikes observed above the historical averages from some on-site locations, but overall the 2014 data fall within the range of expected doses.

If you sum the quarterly dose rates measured during CY 2014, the annual direct penetrating radiation dosages measured by the NMED at WIPP and in the region surrounding Carlsbad range from 94.5 to 158.3 mrad. In the case of gamma radiation, the quality factor is one, and thus one rad is equal to one rem. These observed dose rates are less than the average U.S. natural background annual dose of 310 mrem.

Reference

Department of Energy and Environmental Protection Agency. "Memorandum of Understanding Between the U.S. EPA and the U.S. DOE Concerning the Clean Air Act Emission Standards for Radionuclides 40 CFR § 61, Including Subparts H, I, Q & T." Signed by Mary D. Nichols, EPA Assistant Administrator for Air and Radiation: September 29, 1994. Signed by Tara O'Toole, DOE Assistant Secretary for Environment, Safety, and Health, April 5, 1995

Appendix 1 -

Direct Penetrating Radiation Quarterly Dose Rates for CY 2014. Data that have been disqualified are highlighted grey. A brief explanation for the disqualification is provided. (*) indicates that the calculated dose exceeds two standard deviations of the mean quarterly average for all stations without a disqualifying event listed in the field notes. (**) indicates that the calculated dose exceeds three standard deviations of the mean quarterly average for all stations without a disqualifying event listed in the field notes.

CY2014 First Quarter:

DPR01		Parking Lot Entrance		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 841	1/9/14 8:12	3/28/14 9:42 AM	50	31.3
SGJ 022	1/9/14 8:10	3/28/14 9:42 AM	44	28.0
SGJ 058	1/9/14 8:10	3/28/14 9:42 AM	44	28.1
Average Quarterly Dose in mrad:				29.2

DPR02		Railroad Track Entrance		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 428	1/9/14 8:24	3/28/14 9:14 AM	48	31.9
SFK 437	1/9/14 8:24	3/28/14 9:14 AM	46	30.7
SFK 438	1/9/14 8:24	3/28/14 9:14 AM	48	31.4
Average Quarterly Dose in mrad:				31.4

DPR03		Southwest Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 736	1/7/14 17:19	3/27/14 4:56 PM	87	54.2*
SHC 673	1/7/14 17:19	3/27/14 4:56 PM	43	26.3
SHC 676	1/7/14 17:19	3/27/14 4:56 PM	47	28.9
Average Quarterly Dose in mrad:				36.5

DPR04		South Fence Center		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 550	1/7/14 17:11	3/28/14 9:18 AM	24.7	28.2
SHC 704	1/7/14 17:11	3/28/14 9:18 AM	47	28.5
SHC 685	1/7/14 17:11	3/28/14 9:18 AM	42	25.6
Average Quarterly Dose in mrad:				27.5

DPR05		Near Southeast Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 991	1/7/14 16:28	3/28/14 9:04 AM	49	30.5
SHC 816	1/7/14 16:28	3/28/14 9:04 AM	54	32.9
SHC 657	1/7/14 16:28	3/28/14 9:04 AM	48	29.1
Average Quarterly Dose in mrad:				30.8

DPR06 Far Southeast Fence Corner

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 982	1/7/14 4:19 PM	3/28/14 9:55 AM	48	29.6
SHC 667	1/7/14 4:19 PM	3/28/14 9:55 AM	50	30.5
SHC 665	1/7/14 4:19 PM	3/28/14 9:55 AM	43	26.5
Average Quarterly Dose in mrad:				28.9

DPR07 East Fence Mid

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 674	1/7/14 3:42 PM	3/28/14 8:53 AM	56	34.2
SGJ 037	1/7/14 3:42 PM	3/28/14 8:53 AM	43	26.3
SHC 755	1/7/14 3:42 PM	3/28/14 8:53 AM	53	32.3
Average Quarterly Dose in mrad:				30.9

DPR08 Northeast Fence Corner

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 431	1/7/14 15:06	3/28/14 9:58 AM	47	30.4
SFK 510	1/7/14 15:06	3/28/14 9:58 AM	49	31.4
SFK 533	1/7/14 15:06	3/28/14 9:58 AM	48	30.4
Average Quarterly Dose in mrad:				30.7

DPR09 North-Northeast Fence

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFC 074	11/4/13 5:59 AM	3/28/14 9:32 AM	71	26.4
SFC 097	11/4/13 5:59 AM	3/28/14 9:32 AM	75	28.3
SFC 204	11/4/13 5:59 AM	3/28/14 9:32 AM	77	28.9
Average Quarterly Dose in mrad:				27.9

DPR10 North Fence Salt Pile

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 658	10/11/13 6:38 AM	3/28/14 9:01 AM	99	29.7
SHC 765	10/11/13 6:38 AM	3/28/14 9:01 AM	94	28.1
SHC 793	10/11/13 6:38 AM	3/28/14 9:01 AM	93	28.2
Average Quarterly Dose in mrad:				28.7

DPR11 Northwest Fence Corner

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 083	1/7/14 3:15 PM	3/28/14 9:25 AM	45	27.9
SGJ 042	1/7/14 3:15 PM	3/28/14 9:25 AM	43	26.9
SGJ 986	1/7/14 3:15 PM	3/28/14 9:25 AM	46	28.6
Average Quarterly Dose in mrad:				27.8

DPR12 Waste Handling Building Loading Dock (West)				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 344	1/9/14 8:18 AM	3/28/14 8:58 AM	39	26.0
SFK 441	1/9/14 8:18 AM	3/28/14 8:58 AM	43	29.2
SFK 580	1/9/14 8:18 AM	3/28/14 8:58 AM	42	29.0
Average Quarterly Dose in mrad:				28.0

DPR13 Waste Handling Building Loading Dock (Center)				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFC 094	1/9/14 8:30 AM	3/28/14 4:45 PM	39	26.9
SGI 997	1/9/14 8:30 AM	3/28/14 4:45 PM	43	27.3
SGJ 041	1/9/14 8:30 AM	3/28/14 4:45 PM	42	26.9
Average Quarterly Dose in mrad:				27.0

DPR14 Waste Handling Building Loading Dock (East)				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 473	1/9/14 8:36 AM	3/28/14 9:07 AM	39	26.6
SFK 574	1/9/14 8:36 AM	3/28/14 9:07 AM	37	25.2
SFK 578	1/9/14 8:36 AM	3/28/14 9:07 AM	38	25.9
Average Quarterly Dose in mrad:				25.9

DPR16 Loving Weigh Station				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFC 147	1/7/14 4:38 PM	3/28/14 4:58 PM	52	33.9
SFC 195	1/7/14 4:38 PM	3/28/14 4:58 PM	51	33.1
SFC 212	1/7/14 4:38 PM	3/28/14 4:58 PM	50	33.0
Average Quarterly Dose in mrad:				33.3

DPR17 Malaga Volunteer Fire Department				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 380	1/7/14 5:02 PM	3/28/14 4:52 PM	47	28.8
SFK 543	1/7/14 5:02 PM	3/28/14 4:52 PM	55	34.1
SFK 524	1/7/14 5:02 PM	3/28/14 4:52 PM	56	34.3
Average Quarterly Dose in mrad:				32.4

DPR18 Hobbs Hwy / North Access Rd				
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 001	1/7/14 4:47 PM	3/28/14 9:49 AM	50	30.9
SFK 581	1/7/14 4:47 PM	3/28/14 9:49 AM	45	29.4
SHC 767	1/7/14 4:47 PM	3/28/14 9:49 AM	58	35.6
Average Quarterly Dose in mrad:				32.0

DPR19		Southeast Control		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 410	1/7/14 4:51 PM	3/28/14 4:48 PM	47	30.7
SFK 443	1/7/14 4:51 PM	3/28/14 4:48 PM	47	30.7
SFK 562	1/7/14 4:51 PM	3/28/14 4:48 PM	49	31.3
Average Quarterly Dose in mrad:				30.9

DPR20		NMED Guadalupe St. Office Interior		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 364	1/9/14 8:48 AM	3/28/14 4:01 PM	51	35.9
SFK 514	1/9/14 8:48 AM	3/28/14 4:01 PM	54	38.5
SFK 542	1/9/14 8:48 AM	3/28/14 4:01 PM	50	34.8
Average Quarterly Dose in mrad:				36.4

DPR21		NMED Guadalupe St. Office Exterior		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 450	1/9/14 9:20 AM	3/28/14 4:12 PM	37	24.9
SFK 466	1/9/14 9:20 AM	3/28/14 4:12 PM	45	30.1
SFK 486	1/9/14 9:20 AM	3/28/14 4:12 PM	47	31.3
Average Quarterly Dose in mrad:				28.8

QY2014 Second Quarter:

DPR01		Parking Lot Entrance		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 650	3/25/14 16:42	7/2/14 2:28 PM	53	27.8
SHC 659	3/25/14 16:42	7/2/14 2:28 PM	52	27.1
SHC 726	3/25/14 16:42	7/2/14 2:28 PM	48	25.2
Average Quarterly Dose in mrad:				26.7

DPR02		Railroad Track Entrance		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 754	3/25/14 16:49	7/2/14 2:26 PM	67	35.4
SHC 835	3/25/14 16:49	7/2/14 2:26 PM	56	29.3
SHC 856	3/25/14 16:49	7/2/14 2:26 PM	53	27.7
Average Quarterly Dose in mrad:				30.8

DPR03		Southwest Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 330	3/25/14 16:53	7/2/14 2:24 PM	49	26.9
SFK 351	3/25/14 16:53	7/2/14 2:24 PM	52	29.1
SFK 458	3/25/14 16:53	7/2/14 2:24 PM	52	29.2
Average Quarterly Dose in mrad:				28.4

DPR04		South Fence Center		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 527	3/25/14 16:57	7/2/14 2:21 PM	44	25.9
SGI 976	3/25/14 16:57	7/2/14 2:21 PM	48	25.8
SHC 768	3/25/14 16:57	7/2/14 2:21 PM	59	31.2
Average Quarterly Dose in mrad:				27.7

DPR05		Near Southeast Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 044	3/25/14 17:02	7/2/14 2:19 PM	58	31.0
SGJ 109	3/25/14 17:02	7/2/14 2:19 PM	49	26.2
SHC 688	3/25/14 17:02	7/2/14 2:19 PM	60	31.7
Average Quarterly Dose in mrad:				29.6

DPR06		Far Southeast Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 477	3/25/14 5:11 PM	7/2/14 2:13 PM	42	24.7
SFK 478	3/25/14 5:11 PM	7/2/14 2:13 PM	38	21.0
SFK 512	3/25/14 5:11 PM	7/2/14 2:13 PM	40	22.2
Average Quarterly Dose in mrad:				22.6

DPR07		East Fence Mid		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 481	3/25/14 5:15 PM	7/2/14 2:16 PM	55	30.6
SFK 500	3/25/14 5:15 PM	7/2/14 2:16 PM	52	28.8
SFK 533	3/25/14 5:15 PM	7/2/14 2:16 PM	54	29.9
Average Quarterly Dose in mrad:				29.8

DPR08		Northeast Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFC 049	3/25/14 17:19	7/2/14 2:12 PM	48	26.9
SFC 084	3/25/14 17:19	7/2/14 2:12 PM	51	29.2
SFC 103	3/25/14 17:19	7/2/14 2:12 PM	47	26.7
Average Quarterly Dose in mrad:				27.6

DPR09		North-Northeast Fence		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 046	3/25/14 5:21 PM	7/2/14 2:10 PM	57	30.5
SGJ 055	3/25/14 5:21 PM	7/2/14 2:10 PM	52	27.9
SGJ 061	3/25/14 5:21 PM	7/2/14 2:10 PM	64	34.4
Average Quarterly Dose in mrad:				31.0

DPR10		North Fence Salt Pile		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 957	3/25/14 5:24 PM	7/2/14 2:08 PM	55	29.4
SHC 689	3/25/14 5:24 PM	7/2/14 2:08 PM	69	36.2
SHC 778	3/25/14 5:24 PM	7/2/14 2:08 PM	72	37.9
Average Quarterly Dose in mrad:				34.5

DPR11		Northwest Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 666	3/25/14 5:32 PM	7/2/14 2:05 PM	52	28.0
SHC 678	3/25/14 5:32 PM	7/2/14 2:05 PM	45	24.0
SHC 780	3/25/14 5:32 PM	7/2/14 2:05 PM	52	27.8
Average Quarterly Dose in mrad:				26.6

DPR12		Waste Handling Building Loading Dock (West)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 644	3/25/14 5:36 PM	7/2/14 2:02 PM	54	28.2
SHC 743	3/25/14 5:36 PM	7/2/14 2:02 PM	50	26.2
SHC 777	3/25/14 5:36 PM	7/2/14 2:02 PM	71	37.3
Average Quarterly Dose in mrad:				30.6

DPR13		Waste Handling Building Loading Dock (Center)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 672	3/25/14 5:41 PM	7/2/14 1:57 PM	54	28.3
SHC 799	3/25/14 5:41 PM	7/2/14 1:57 PM	51	26.7
SHC 863	3/25/14 5:41 PM	7/2/14 1:57 PM	62	32.4
Average Quarterly Dose in mrad:				29.1

DPR14		Waste Handling Building Loading Dock (East)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 645	3/25/14 5:44 PM	7/2/14 1:50 PM	46	24.0
SHC 715	3/25/14 5:44 PM	7/2/14 1:50 PM	47	24.5
SHC 849	3/25/14 5:44 PM	7/2/14 1:50 PM	48	25.1
Average Quarterly Dose in mrad:				24.6

DPR16		Loving Weigh Station		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 488	3/25/14 5:47 PM	7/2/14 1:34 PM	58	32.2
SFK 526	3/25/14 5:47 PM	7/2/14 1:34 PM	57	31.6
SFK 539	3/25/14 5:47 PM	7/2/14 1:34 PM	57	31.9
Average Quarterly Dose in mrad:				31.9

DPR17		Malaga Volunteer Fire Department		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 519	3/25/14 5:50 PM	7/2/14 1:59 PM	49	26.6
SFK 525	3/25/14 5:50 PM	7/2/14 1:59 PM	52	28.0
SFK 559	3/25/14 5:50 PM	7/2/14 1:59 PM	54	29.8
Average Quarterly Dose in mrad:				28.1

DPR18		Hobbs Hwy / North Access Rd		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 354	3/25/14 5:54 PM	7/2/14 1:48 PM	95	53.4**
SFK 406	3/25/14 5:54 PM	7/2/14 1:48 PM	11	6.1**
SFK 502	3/25/14 5:54 PM	7/2/14 1:48 PM	56	31.4
Average Quarterly Dose in mrad:				30.3

DPR19		Southeast Control		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 958	3/25/14 5:57 PM	7/2/14 1:46 PM	53	28.4
SGJ 103	3/25/14 5:57 PM	7/2/14 1:46 PM	52	27.9
SGJ 104	3/25/14 5:57 PM	7/2/14 1:46 PM	51	27.4
Average Quarterly Dose in mrad:				27.9

DPR20		NMED Guadalupe St. Office Interior		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 542	3/27/14 4:01 PM	7/2/14 1:36 PM	51	29.6
SHC 656	3/27/14 4:01 PM	7/2/14 1:36 PM	64	33.1
SHC 812	3/27/14 4:12 PM	7/2/14 1:36 PM	67	34.7
Average Quarterly Dose in mrad:				32.5

DPR21		NMED Guadalupe St. Office Exterior		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 450	3/27/14 4:12 PM	7/2/14 1:52 PM	51	29.7
SFK 466	3/27/14 4:12 PM	7/2/14 1:52 PM	51	29.4
SFK 486	3/27/14 4:12 PM	7/2/14 1:52 PM	55	31.6
Average Quarterly Dose in mrad:				30.3

CY2014 Third Quarter:

DPR01		Parking Lot Entrance (DQ) - Canister found disassembled		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 022	6/30/14 5:13 PM	10/1/14 12:05 PM	183	107.1
SGJ 058	6/30/14 5:13 PM	10/1/14 12:05 PM	65	37.4
SHC 841	6/30/14 5:13 PM	10/1/14 12:05 PM	50	27.9
Average Quarterly Dose in mrad:				57.5

DPR02		Railroad Track Entrance			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 428	6/30/14 5:18 PM	10/1/14 11:55 AM	36	21.3	
SFK 437	6/30/14 5:18 PM	10/1/14 11:55 AM	42	25.1	
SFK 438	6/30/14 5:18 PM	10/1/14 11:55 AM	38	22.1	
Average Quarterly Dose in mrad:				22.8	
DPR03		Southwest Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 673	6/30/14 5:20 PM	10/1/14 11:50 AM	65	36.2	
SHC 676	6/30/14 5:20 PM	10/1/14 11:50 AM	48	26.7	
SHC 736	6/30/14 5:20 PM	10/1/14 11:50 AM	103	58.4**	
Average Quarterly Dose in mrad:				40.4	
DPR04		South Fence Center			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 550	6/30/14 5:22 PM	10/1/14 12:00 PM	41	24.7	
SHC 685	6/30/14 5:22 PM	10/1/14 12:00 PM	43	23.9	
SHC 704	6/30/14 5:22 PM	10/1/14 12:00 PM	44	24.3	
Average Quarterly Dose in mrad:				24.3	
DPR05		Near Southeast Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFI 991	6/30/14 5:26 PM	10/1/14 11:34 AM	39	22.0	
SHC 816	6/30/14 5:26 PM	10/1/14 11:34 AM	49	27.2	
SHC 657	6/30/14 5:26 PM	10/1/14 11:34 AM	62	34.4	
Average Quarterly Dose in mrad:				27.9	
DPR06		Far Southeast Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 477	3/25/14 5:11 PM	7/2/14 2:13 PM	42	20.2	
SFK 478	3/25/14 5:11 PM	7/2/14 2:13 PM	38	24.2	
SFK 512	3/25/14 5:11 PM	7/2/14 2:13 PM	40	29.0	
Average Quarterly Dose in mrad:				24.5	
DPR07		East Fence Mid			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SGJ 037	6/30/14 5:33 PM	10/1/14 10:04 AM	69	38.6	
SHC 674	6/30/14 5:33 PM	10/1/14 10:04 AM	14	7.4*	
SHC 755	6/30/14 5:33 PM	10/1/14 10:04 AM	56	31.2	
Average Quarterly Dose in mrad:				25.8	

DPR08		Northeast Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 431	6/30/14 5:33 PM	10/1/14 10:07 AM	43	25.6	
SFK 510	6/30/14 5:33 PM	10/1/14 10:07 AM	44	25.9	
SFK 533	6/30/14 5:33 PM	10/1/14 10:07 AM	35	20.2	
Average Quarterly Dose in mrad:				23.9	
DPR09		North-Northeast Fence			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFC 074	6/30/14 5:39 PM	10/1/14 10:11 AM	38	22.9	
SFC 097	6/30/14 5:39 PM	10/1/14 10:41 AM	41	25.3	
SFC 204	6/30/14 5:39 PM	10/1/14 10:41 AM	39	23.9	
Average Quarterly Dose in mrad:				24.0	
DPR10		North Fence Salt Pile			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 658	6/30/14 5:40 PM	10/1/14 10:45 AM	55	31.2	
SHC 765	6/30/14 5:40 PM	10/1/14 10:45 AM	49	27.7	
SHC 793	6/30/14 5:40 PM	10/1/14 10:45 AM	56	32.1	
Average Quarterly Dose in mrad:				30.3	
DPR11		Northwest Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SGJ 042	6/30/14 5:43 PM	10/1/14 12:10 PM	34	19.3	
SGJ 083	6/30/14 5:43 PM	10/1/14 12:10 PM	38	21.4	
SGJ 986	6/30/14 5:43 PM	10/1/14 12:10 PM	39	22.1	
Average Quarterly Dose in mrad:				20.9	
DPR12		Waste Handling Building Loading Dock (West)			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 344	6/30/14 5:45 PM	10/1/14 11:45 AM	35	20.8	
SFK 441	6/30/14 5:45 PM	10/1/14 11:45 AM	36	21.8	
SHC705	6/30/14 5:45 PM	10/1/14 11:45 AM	46	25.3	
Average Quarterly Dose in mrad:				22.6	
DPR13		Waste Handling Building Loading Dock (Center)			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SGI 997	6/30/14 5:47 PM	10/1/14 10:20 AM	35	19.8	
SGJ 041	6/30/14 5:47 PM	10/1/14 10:20 AM	41	23.5	
SHC 653	6/30/14 5:47 PM	10/1/14 10:20 AM	51	28.1	
Average Quarterly Dose in mrad:				23.8	

DPR14		Waste Handling Building Loading Dock (East)			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 473	6/30/14 5:49 PM	10/1/14 11:40 AM	36	22.0	
SFK 574	6/30/14 5:49 PM	10/1/14 11:40 AM	33	20.1	
SFK 578	6/30/14 5:49 PM	10/1/14 11:40 AM	35	21.4	
Average Quarterly Dose in mrad:				21.2	
DPR16		Loving Weigh Station (DQ) - Water found in canister			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFC 147	6/30/14 5:51 PM	10/1/14 10:25 AM	89	55.1	
SFC 195	6/30/14 5:51 PM	10/1/14 10:25 AM	46	27.8	
SHC 740	6/30/14 5:51 PM	10/1/14 10:25 AM	74	40.8	
Average Quarterly Dose in mrad:				41.2	
DPR17		Malaga Volunteer Fire Department			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 380	6/30/14 5:54 PM	10/1/14 10:30 AM	43	24.4	
SFK 524	6/30/14 5:54 PM	10/1/14 10:30 AM	48	27.3	
SFK 543	6/30/14 5:54 PM	10/1/14 10:30 AM	51	29.4	
Average Quarterly Dose in mrad:				27.0	
DPR18		Hobbs Hwy / North Access Rd			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 581	6/30/14 5:56 PM	10/1/14 10:35 AM	44	26.6	
SGJ 001	6/30/14 5:56 PM	10/1/14 10:35 AM	58	33.2	
SHC 767	6/30/14 5:56 PM	10/1/14 10:35 AM	61	34.5	
Average Quarterly Dose in mrad:				31.4	
DPR19		Southeast Control			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 410	6/30/14 5:58 PM	10/1/14 11:25 AM	44	26.5	
SFK 443	6/30/14 5:58 PM	10/1/14 11:25 AM	40	24.0	
SFK 562	6/30/14 5:58 PM	10/1/14 11:25 AM	36	21.0	
Average Quarterly Dose in mrad:				23.8	
DPR20		NMED Guadalupe St. Office Interior			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 656	7/2/14 1:36 PM	10/1/14 11:29 AM	48	27.1	
SHC 691	7/2/14 1:42 PM	10/1/14 11:29 AM	55	30.5	
SHC 812	7/2/14 1:36 PM	10/1/14 11:29 AM	49	27.4	
Average Quarterly Dose in mrad:				28.3	

DPR21		NMED Guadalupe St. Office Exterior			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 709	7/2/14 1:54 PM	10/1/14 10:45 AM	48	26.8	
SHC 774	7/2/14 1:54 PM	10/1/14 10:45 AM	64	36.0	
SHC 785	7/2/14 1:54 PM	10/1/14 10:45 AM	66	37.2	
Average Quarterly Dose in mrad:				33.3	

CY2014 Fourth Quarter:

DPR01		Parking Lot Entrance			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 650	9/29/2014 12:33	12/29/2014 13:16	41	22.3	
SHC 659	9/29/2014 12:33	12/29/2014 13:16	46	25.0	
SHC 726	9/29/2014 12:34	12/29/2014 13:16	43	23.5	
Average Quarterly Dose in mrad:				23.6	

DPR02		Railroad Track Entrance			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SHC 754	9/29/2014 12:06	12/29/2014 13:31	43	23.7	
SHC 835	9/29/2014 12:07	12/29/2014 13:31	48	26.1	
SHC 856	9/29/2014 12:05	12/29/2014 13:31	44	23.9	
Average Quarterly Dose in mrad:				24.6	

DPR03		Southwest Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SFK 330	9/29/2014 12:08	12/29/2014 13:21	43	24.7	
SFK 351	9/29/2014 12:09	12/29/2014 13:21	40	23.4	
SFK 458	9/29/2014 12:10	12/29/2014 13:21	40	23.6	
Average Quarterly Dose in mrad:				23.9	

DPR04		South Fence Center (DQ) - Canister on ground, lid removed			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SGI 976	9/29/2014 12:20	12/29/2014 13:25	44	24.7	
SHC 768	9/29/2014 12:20	12/29/2014 13:25	55	30.5	
SHC 771	9/29/2014 12:20	12/29/2014 13:25	66	36.0	
Average Quarterly Dose in mrad:				30.4	

DPR05		Near Southeast Fence Corner			Quarterly Dose
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Normalized	
SGJ 044	9/29/2014 12:13	12/29/2014 12:55	38	21.1	
SGJ 109	9/29/2014 12:13	12/29/2014 12:55	41	22.9	
SHC 688	9/29/2014 12:13	12/29/2014 12:55	49	27.0	
Average Quarterly Dose in mrad:				23.7	

DPR06		Far Southeast Fence Corner (DQ) - Canister dented		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 478	9/29/2014 12:16	12/29/2014 13:20	39	22.5
SFK 512	9/29/2014 12:16	12/29/2014 13:19	43	25.0
SHC 761	9/29/2014 12:17	12/29/2014 13:19	52	28.2
Average Quarterly Dose in mrad:				25.2

DPR07		East Fence Mid		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 481	9/29/2014 12:42	12/29/2014 13:13	41	23.9
SFK 500	9/29/2014 12:42	12/29/2014 13:13	41	23.7
SFK 553	9/29/2014 12:45	12/29/2014 13:13	43	25.0
Average Quarterly Dose in mrad:				24.2

DPR08		Northeast Fence Corner (DQ) - Water found in canister		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFC 049	9/29/2014 12:44	12/29/2014 13:05	39	22.9
SFC 084	9/29/2014 12:44	12/29/2014 13:05	45	27.2
SFC 103	9/29/2014 12:44	12/29/2014 13:05	40	23.8
Average Quarterly Dose in mrad:				24.7

DPR09		North-Northeast Fence		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGJ 046	9/29/2014 12:18	12/29/2014 12:45	40	22.3
SGJ 055	9/29/2014 12:18	12/29/2014 12:45	48	26.9
SGJ 061	9/29/2014 12:19	12/29/2014 12:45	52	29.3
Average Quarterly Dose in mrad:				26.2

DPR10		North Fence Salt Pile		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 957	9/29/2014 12:10	12/29/2014 13:23	46	25.6
SHC 689	9/29/2014 12:11	12/29/2014 13:23	59	32.4
SHC 778	9/29/2014 12:11	12/29/2014 13:23	55	30.3
Average Quarterly Dose in mrad:				29.4

DPR11		Northwest Fence Corner		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 666	9/29/2014 12:30	12/29/2014 13:26	44	24.7
SHC 678	9/29/2014 12:31	12/29/2014 13:26	40	18.5
SHC 780	9/29/2014 12:30	12/29/2014 13:26	43	20.0
Average Quarterly Dose in mrad:				21.1

DPR12		Waste Handling Building Loading Dock (West)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 644	9/29/2014 12:40	12/29/2014 13:28	44	23.9
SHC 743	9/29/2014 12:40	12/29/2014 13:28	47	25.7
SHC 777	9/29/2014 12:40	12/29/2014 13:28	50	27.5
Average Quarterly Dose in mrad:				25.7

DPR13		Waste Handling Building Loading Dock (Center)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 672	9/29/2014 12:46	12/29/2014 13:29	45	24.6
SHC 799	9/29/2014 12:46	12/29/2014 13:29	40	21.7
SHC 863	9/29/2014 12:46	12/29/2014 13:29	53	29.0
Average Quarterly Dose in mrad:				25.1

DPR14		Waste Handling Building Loading Dock (East)		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 645	9/29/2014 12:21	12/29/2014 13:10	42	22.8
SHC 715	9/29/2014 12:21	12/29/2014 13:10	42	22.8
SHC 849	9/29/2014 12:21	12/29/2014 13:10	42	22.9
Average Quarterly Dose in mrad:				22.8

DPR16		Loving Weigh Station		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 725	9/29/2014 12:25	12/29/2014 13:00	64	34.1
SFK 526	9/29/2014 12:25	12/29/2014 13:00	48	27.7
SFK 539	9/29/2014 12:25	12/29/2014 13:00	58	33.9
Average Quarterly Dose in mrad:				31.9

DPR17		Malaga Volunteer Fire Department		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 519	9/29/2014 12:28	12/29/2014 13:00	48	26.9
SFK 525	9/29/2014 12:28	12/29/2014 13:00	43	23.8
SFK 559	9/29/2014 12:29	12/29/2014 13:00	48	27.4
Average Quarterly Dose in mrad:				26.0

DPR18		Hobbs Hwy / North Access Rd		
Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SFK 354	9/29/2014 12:38	12/29/2014 13:33	44	25.8
SFK 406	9/29/2014 12:38	12/29/2014 13:33	58	33.8
SFK 502	9/29/2014 12:38	12/29/2014 13:33	46	26.7
Average Quarterly Dose in mrad:				28.8

DPR19 Southeast Control

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SGI 958	9/29/2014 12:49	12/29/2014 13:36	99	56.1**
SHC 659	9/29/2014 12:33	12/29/2014 13:36	39	21.7
SHC 726	9/29/2014 12:34	12/29/2014 13:36	41	22.9
Average Quarterly Dose in mrad:				33.6

DPR20 NMED Guadalupe St. Office Interior

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 656	10/1/2014 11:29	12/29/2014 13:37	103	60.4**
SHC 691	10/1/2014 11:29	12/29/2014 13:37	110	63.1**
SHC 812	10/1/2014 11:29	12/29/2014 13:37	103	59.8**
Average Quarterly Dose in mrad:				61.1

DPR21 NMED Guadalupe St. Office Exterior

Electret ID	Start Date and Time	Finish Date and Time	Voltage Drop	Quarterly Dose Normalized
SHC 774	10/1/2014 10:45	12/29/2014 13:39	48	26.5
SHC 785	10/1/2014 10:45	12/29/2014 13:39	52	28.9
SHC 709	10/1/2014 10:45	12/29/2014 13:39	42	23.1
Average Quarterly Dose in mrad:				26.2