ENTERED

## Allen, Pam, NMENV

**From:** Maestas, Ricardo, NMENV
**Sent:** Friday, May 02, 2014 10:16 AM
**To:** Allen, Pam, NMENV
**Subject:** FW: Sampling data for today's call
**Attachments:** Station A and B Filter Readings 2 23 14.xlsx; Station A Data Graph 23 Feb 14.pdf; Rev 4 Environmental Status 2014-02-23 1230PM.xlsx

Email and att for WIPP file

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**From:** Smith, Coleman, NMENV
**Sent:** Tuesday, February 25, 2014 2:20 PM
**To:** Maestas, Ricardo, NMENV
**Cc:** Holmes, Steve, NMENV
**Subject:** FW: Sampling data for today's call

Coleman A. Smith, Ph.D.
Environmental Scientist/Chemist
New Mexico Environment Department
Hazardous Waste Bureau, WIPP Project
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, New Mexico 87505
(505) 476-6045

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**From:** Oba Vincent [mailto:oba.vincent@cbfo.doe.gov]
**Sent:** Monday, February 24, 2014 3:23 PM
**To:** Smith, Coleman, NMENV
**Cc:** Kliphuis, Trais, NMENV; Roger Nelson - WIPPNet; George Basabilvazo - WIPPNet
**Subject:** FW: Sampling data for today's call

Coleman

Nice talking with you today. I will add you to the daily distribution.

Thanks

Oba

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**From:** Oba Vincent
**Sent:** Monday, February 24, 2014 11:15 AM
**To:** 'Kliphuis, Trais'; 'peake.tom@epa.gov'; 'Edwards, Jonathan'; 'Walsh, Jonathan'; 'Perrin, Alan'; 'Bob.Kehrman@wipp.ws'; 'Rick.Chavez@wipp.ws'; 'Stone.Nick@epa.gov'
**Cc:** George Basabilvazo - WIPPNet; Reynolds, Tammy - NWP (Tammy.Reynolds@wipp.ws)
**Subject:** Sampling data for today's call

Attached is the sample data for today's call. We do have some new data to share from the environmental samplers and the station A and B sample results. I also included a graph of the Station A results since the event.

Results were obtained from air samples collected on 18 Feb from the Mills Ranch (2.7 DPM), Smith Ranch (4.2 DPM), and Carlsbad (1.3 DPM) sampling locations.



140256

Thanks

Oba

# Preliminary Information – Not for Public Release

## Station A (A-2-3) Before the HEPA Filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/14/14 | 2/14/14 @ 0742 | 2/15/14 0630 | A23021414 | Tennelec XLB | 10 Mins | 4.4M | 1.2M | 021514/0649 | | | | WIPP Labs |
| 2/15/14 | 2/15/14 0630 | 2/15/14 0840 | A23021514 | Tennelec XLB | 10 Mins | 225K | 46.8K | 021514/0916 | | | | WIPP Labs |
| 2/15/14 | 2/15/14 0840 | 2/15/14 1510 | A23021514 0840 | Tennelec XLB | 10 Mins | 285K | 54K | 021514/1541 | | | | SRS Lab |
| 2/15/14 | 2/15/14 1510 | 2/15/14 2330 | A23021514 1510 | Tennelec XLB | 10 Mins | 124050 | 24481 | 021614/0012 | | | | SRS Lab |
| 2/15/14 | 2/15/14 2330 | 2/16/14 0850 | A23021514 2330 | Tennelec XLB | 10 Mins | 47283 | 10558 | 021614/0917 | | | | On Site |
| 2/16/14 | 2/16/14 0850 | 2/16/14 1648 | A23021614 0850 | Tennelec XLB | 10 Mins | 12215 | 2842 | 121614/1927 | | | | On Site |
| 2/16/14 | 2/16/14 1648 | 2/17/14 0015 | A23021614 1650 | Tennelec XLB | 10 Mins | 4051 | 1256 | 021714/0046 | | | | On Site |
| 2/17/14 | 2/17/14 0015 | 2/17/14 0820 | A23021714 0015 | Tennelec XLB | 10 Mins | 1802 | 638 | 021714/0942 | 1723 | 573 | 021714/1012 | On Site |
| 2/17/14 | 2/17/14 0820 | 2/17/14 1620 | A23021714 0820 | Tennelec XLB | 10 Mins | 1048 | 621 | 021714/1705 | | | | On Site |
| 2/17/14 | 2/17/14 1620 | 2/18/14 0010 | A23021714 1620 | Tennelec XLB | 10 Mins | 802 | 633 | 021814/0051 | 633<br>592 | 230<br>210 | 021814/1012<br>021814/0751 | On Site |
| 2/18/14 | 2/18/14 0010 | 2/18/14 0820 | A23021814 0010 | Tennelec XLB | 10 Mins | 326 | 338 | 021814/0928 | 237<br>212 | 157<br>116 | 021814/1202<br>021814/1824 | On Site |
| 2/18/14 | 2/18/14 0820 | 2/18/14 1605 | A23021814 0820 | Tennelec XLB | 10 Mins | 609 | 780 | 021814/1624 | 258 | 118 | 021914/0315 | On Site |
| 2/18/14 | 2/18/14 1605 | 2/19/14 0035 | A23021814 1605 | Tennelec XLB | 10 Mins | 346 | 340 | 021914/0143 | 227 | 143 | 021914/0547 | On Site |

# Preliminary Information – Not for Public Release

## Station A (A-2-3) Before the HEPA Filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/19/14 | 2/19/14 0035 | 2/19/14 0823 | A23021914 0040 | Tennelec XLB | 10 Mins | 224 | 320 | 021914/0952 | 136 | 143 | 021914/1222 | On Site |
| 2/19/14 | 2/19/14 0823 | 2/19/14 1600 | A23021914 0823 | Tennelec XLB | 10 Mins | 264 | 443 | 021914/1708 | 130 | 137 | 021914/2046 | On-Site |
| 2/19/14 | 2/19/14 1600 | 2/20/14 0018 | A23021914 1600 | Tennelec XLB | 10 Mins | 286 | 378 | 022014/0124 | 150 | 119 | 02214/0352 | On-Site |
| 2/19/14 | 2/19/14 0018 | 2/20/14 0817 | A23022014 0018 | Tennelec XLB | 10 Mins | 290 | 219 | 022014/1010 | 216 | 146 | 022014/1256 | On-Site |
| 2/20/14 | 2/20/14 0817 | 2/20/14 1624 | A23022014 0817 | Tennelec XLB | 10 Mins | 135 | 131 | 0222014/183 | 107 | 85 | 022014/2204 | On-Site |
| 2/20/14 | 2/20/14 1624 | 2/21/14 0012 | A23022014 1624 | Tennelec XLB | 10 Mins | 231 | 103 | 022114/0154 | 203 | 84 | 022114/0505 | On-Site |
| 2/21/14 | 2/21/14 0012 | 2/21/14 0845 | A23022114 0012 | Tennelec XLB | 10 Mins | 330 | 146 | 022114/1027 | 286 | 105 | 022114/1532 | On-Site |
| 2/21/14 | 2/21/2014 0845 | 2/21/2014 1620 | A230221140845 | Tennelec XLB | 10 Mins | 253 | 199 | 022114/1654 | 175 | 86 | 022114/2000 | On-Site |
| 2/21/14 | 2/21/2014 1620 | 2/22/2014 0050 | A230221141620 | Tennelec XLB | 10 Mins | 388 | 549 | 022114/0124 | 215 | 154 | 022114/0400 | On-Site |
| 2/22/14 | 2/22/2014 0050 | 2/22/2014 0830 | A230222140050 | Tennelec XLB | 10 Mins | 421 | 599 | 022214/0906 | 180 | 154 | 022214/1150 | On-Site |
| 2/22/14 | 2/22/2014 0830 | 2/22/2014 1650 | A230222140830 | Tennelec XLB | 10 Mins | 243 | 337 | 022214/1713 | 140 | 166 | 022214/2004 | On-Site |
| 2/22/14 | 2/22/2014 1650 | 2/23/2014 0011 | A230222141650 | Tennelec XLB | 10 Mins | 487 | 626 | 022314/0047 | 208 | 129 | 022314/0401 | On-Site |
| 2/23/14 | 2/23/2014 0011 | 2/23/2014 0830 | A230223140011 | Tennelec XLB | 10 Mins | 328 | 504 | 022314/0906 | | | | On-Site |
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# Preliminary Information – Not for Public Release

## Station A (A-2-3) Before the HEPA Filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
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# Preliminary Information-Not for Public Release

## Station B (B-1-3) Downstream of the HEPA filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/14/14 | 2/14/14 0754 | 2/15/14 0835 | B13021414 | Tennelec XLB | 10 Mins | 28205 | 5877 | 021514/0850 | | | | WIPP Labs |
| 2/15/14 | 2/15/14 0835 | 2/15/14 1445 | B13021514 | Tennelec XLB | 10 Mins | 36194 | 7340 | | | | | SRS Labs |
| 2/15/14 | 2/15/14 1445 | 2/15/14 2305 | B130215141445 | Tennelec XLB | 10 Mins | 671 | 142 | 021714/1056 | | | | On-Site |
| 2/15/14 | 2/15/14 2305 | 2/16/14 0904 | B130215142305 | Tennelec XLB | 10 Mins | 300 | 152 | 021614/0932 | 253<br>245<br>240 | 63<br>59<br>49 | 021614/1127<br>021614/1250<br>021614/1741 | On-Site |
| 2/16/14 | 2/16/14 0904 | 2/16/14 1705 | B130216140904 | Tennelec XLB | 10 Mins | 144 | 67 | 021614/1755 | | | | On-Site |
| 2/16/14 | 2/16/14 1705 | 2/17/201 4 0030 | B130216141705 | Tennelec XLB | 10 Mins | 72 | 54 | 021714/0046 | 62 | 18 | 021714/1203 | On-Site |
| 2/17/14 | 2/17/14 0030 | 2/17/14 0805 | B130216140030 | Tennelec XLB | 10 Mins | 43 | 26 | 021714/0930 | 30<br>32 | 23<br>16 | 021714/0955<br>021714/1400 | On-Site |
| 2/17/14 | 2/17/14 0805 | 2/17/14 1600 | B130217140805 | Tennelec XLB | 10 Mins | 78 | 35 | 021714/1650 | 58<br>24 | 20<br>13 | 021714/1958<br>021814/1823 | On-Site |
| 2/17/14 | 2/17/14 1600 | 2/18/14 0030 | B130217141600 | Tennelec XLB | 10 Mins | 65 | 55 | 021814/0051 | 45<br>36 | 18<br>12 | 021814/0423<br>021814/0751 | On-Site |
| 2/18/14 | 2/18/14 0030 | 2/18/14 0901 | B130218140030 | Tennelec XLB | 10 Mins | 42 | 61 | 021814/0928 | 23 | 12 | 021814/1202 | On-Site |
| 2/18/14 | 2/18/14 0901 | 2/18/14 1655 | B130218140901 | Tennelec XLB | 10 Mins | 41 | 29 | 021814/1754 | 28 | 7 | 021914/0315 | On-Site |
| 2/18/14 | 2/18/14 1655 | 2/19/14 0105 | B130218141655 | Tennelec XLB | 10 Mins | 42 | 36 | 021914/0144 | 20 | 7 | 021914/0547 | On-Site |
| 2/19/14 | 2/19/14 0105 | 2/19/14 0900 | B130219140105 | Tennelec XLB | 10 Mins | 33 | 44 | 021914/0952 | 20 | 15 | 021914/1222 | On-Site |

# Preliminary Information-Not for Public Release

## Station B (B-1-3) Downstream of the HEPA filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/19/14 | 2/19/14 0900 | 2/19/14 1627 | B130219140900 | Tennelec XLB | 10 Mins | 36 | 34 | 021914/1708 | 25 | 10 | 021914/2036 | On-Site |
| 2/19/14 | 2/19/14 1627 | 2/20/14 0035 | B130219141627 | Tennelec XLB | 10 Mins | 45 | 46 | 022014/0107 | 25 | 9 | 022014/0359 | On-Site |
| 2/20/14 | 2/20/14 0035 | 2/20/14 0852 | B130220140035 | Tennelec XLB | 10 Mins | 52 | 21 | 022014/1035 | 38 | 14 | 022014/1226 | On-Site |
| 2/20/14 | 2/20/14 0852 | 2/20/14 1654 | B130220140852 | Tennelec XLB | 10 Mins | 98 | 22 | 022014/1838 | 101 | 23 | 022014/2211 | On-Site |
| 2/20/14 | 2/20/14 1654 | 2/21/14 0038 | B130220141654 | Tennelec XLB | 10 Mins | 40 | 19 | 022114/0204 | 33 | 11 | 022114/0521 | On-Site |
| 2/21/14 | 2/21/14 0038 | 2/21/14 0820 | B130221140038 | Tennelec XLB | 10 Mins | 30 | 6 | 022114/1027 | 27 | 12 | 022114/1532 | On-Site |
| 2/21/14 | 2/21/14 0820 | 2/21/14 1600 | B130221140820 | Tennelec XLB | 10 Mins | 37 | 15 | 022114/1654 | 41 | 12 | 022114/2028 | On-Site |
| 2/21/14 | 2/21/14 1600 | 2/22/14 0019 | B130221141600 | Tennelec XLB | 10 Mins | 50 | 28 | 022214/0125 | 42 | 14 | 022214/0358 | On-Site |
| 2/22/14 | 2/22/14 0019 | 2/22/14 0810 | B130222140019 | Tennelec XLB | 10 Mins | 30 | 22 | 022214/0946 | 19 | 12 | 022214/1151 | On-Site |
| 2/22/14 | 2/22/14 0810 | 2/22/14 1615 | B130222140810 | Tennelec XLB | 10 Mins | 28 | 17 | 022214/1713 | 22 | 10 | 022214/2004 | On-Site |
| 2/22/14 | 2/22/14 1615 | 2/22/14 2356 | B130222141615 | Tennelec XLB | 10 Mins | 32 | 33 | 022314/0047 | 22 | 9 | 022314/0404 | On-Site |
| 2/22/14 | 2/22/14 2356 | 2/23/14 0810 | B130222142356 | Tennelec XLB | 10 Mins | 21 | 3 | 022314/0938 | | | | On-Site |
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# Preliminary Information-Not for Public Release

## Station B (B-1-3) Downstream of the HEPA filters

| Date | Time Installed | Time Removed | Filter ID | Inst Model | Count Time | Alpha (dpm) | Beta (dpm) | First Count | Alpa (dpm) | Beta (dpm) | Re-count | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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# Environmental Air Filter Analytical Status

(current as of 2/23/14 12:45 PM)

| Location | | Filter Install Date | Filter Retrieval Date | Gross α / β Count | | ISOLO Spectrum Analyzer | Radiochemistry | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Field Smears and Surveys of Sampling Equipment and Area | * Initial 10 Minute DPM Gross α / β Count > 200 α > 600 β | Preliminary DPM / Final DPM | WIPP Labs Data Am-241 Sample Date | WIPP Labs Data Am-241 (pCi) | WIPP Labs Data Am-241 (dpm) | WIPP Labs Data Pu-238 Sample Date | WIPP Labs Data Pu-238 (pCi) | WIPP Labs Data Pu-238 (dpm) | WIPP Labs Data Pu-239/240 Sample Date | WIPP Labs Data Pu-239/240 (pCi) | WIPP Labs Data Pu-239/240 (dpm) |
| WIPP Farfield (WFF) | AL-WFF-20140212-1.1 | 2/11/2014 | 2/15/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | 36 | 2/20/2014 | 22.0 | 48.84 | 2/20/2014 | 1.65 | 3.66 | | | 0.00 |
| | | | | | | | | 22.0 +/- 2.34 | | | 1.65 +/- 0.596 | | | | |
| WIPP Farfield (WFF) | AL-WFF-20140219-1.1 | 2/15/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 2.4 | | | | | | | | | |
| WIPP East (WEE) | AL-WEE-20140212-1.1 | 2/11/2014 | 2/17/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | 7.29 | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 4.4 | | | | | | | | | |
| WIPP South (WSS) | AL-WSS-20140212-1.1 | 2/11/2014 | 2/17/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | 7.47 | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 3.7 | | | | | | | | | |
| Mills Ranch (MLR) | AL-MLR-20140212-1.1 | 2/11/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 2.7 | | | | | | | | | |
| Smith Ranch (SMR) | AL-SMR-20140212-1.1 | 2/11/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 4.2 | | | | | | | | | |
| Carlsbad (CBD) | AL-CBD-20140212-1.1 | 2/11/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 1.6 | | | | | | | | | |
| South East Control (SEC) | AL-SEC-20140212-1.2 | 2/11/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 1.3 | | | | | | | | | |
| South East Control (SEC) Co-located sample | AL-SEC-20140212-2.2 | 2/11/2014 | 2/18/2014 | Field Smears and Surveys at accepted levels | Within Radon Background | | | About three weeks | #VALUE! | | | 0.00 | | | 0.00 |
| | | | | | | 1.5 | | | | | | | | | |

* These are screening values that will inform filter counting staff that there appears to be reading that could be above background and further evaluation is necessary.

# Environmental Surface Water Analytical Status

(current as of 2/20/14 04:25 PM)

| Location | Sample ID | Media | Sample Date | Lab Submittal Date | Radiochemistry | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Pu-238 Bq/g x $10^{-4}$ | | Pu-239/240 Bq/g x $10^{-4}$ | |
| | | | | | | Baseline Value** | Sample | Baseline Value** | Sample |
| Evaporation Basin A | WS-EBA-20140219-1.2 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| Evaporation Basin A | WS-EBA-20140219-2.2 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| Salt Pile Evaporation Pond | WS-SPE-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| Salt Storage Extension Basin I | WS-EB1-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| Salt Storage Extension II | WS-EB2-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| SWIC Pond 1 | WS-PD1-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| SWIC Pond 2 | WS-PD2-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |
| Blank | WS-BLK-20140219-1.1 | Surface water | 2/19/2014 | 2/19/2014 | About three weeks | Mean = -0.004 | Value = | Mean = -0.006 | Value = |
| | | | | | | σ = 0.085 | TPU = | σ = 0.041 | TPU = |

** These values are from the DOE/WIPP 92-037, Attachment 1, Statistical Summary of the Radiological Baseline for the WIPP, Table 5-1. These values were derived from the summary statistics for samples at all locations in the baseline. The Units are noted as Becquerels per gram x $10^{-4}$ .

TPU = Total Propagated Uncertainty

Surface water samples for this statistical baseline summary were obtained from three groups for geographic variability. The statistical baseline presented above is for all locations: 1) Stock Tanks, 2) Pecos River, and 3) Laguna Grande de la Sal.

# Environmental Soil Sample Analytical Status

(current as of 2/20/14 03:30 PM)

| Location/Depth | Sample ID | Matrix Sample Date | | Lab Submittal Date | Radiochemistry | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Am-241 Bq/g x $10^{-3}$ | | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value | Sample | Baseline Value | Sample | Baseline Value | Sample |
| Far Field Surface Sample (0-2 cm) | SS-WFF-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Intermediate Sample (2-5 cm) | SI-WFF-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Deep Sample (5-10 cm) | SD-WFF-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP East Surface Sample (0-2 cm) | SS-WEE-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP East Intermediate Sample (2-5 cm) | SI-WEE-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP East Deep Sample (5-10 cm) | SD-WEE-20140213-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Surface Sample (0-2 cm) | SS-WSS-20140214-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Intermediate Sample (2-5 cm) | SI-WSS-20140214-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Deep Sample (5-10 cm) | SD-WSS-20140214-1.1 | Soil | 2/13/2014 | 2/17/2014 | Three Weeks (3/10/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Surface Sample (0-2 cm) | SS-WFF-20140217-1.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Intermediate Sample (2-5 cm) | SI-WFF-20140217-1.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Deep Sample (5-10 cm) | SD-WFF-20140217-1.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Surface Sample (0-2 cm) | SS-WFF-20140217-2.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Intermediate Sample (2-5 cm) | SI-WFF-20140217-2.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Far Field Deep Sample (5-10 cm) | SD-WFF-20140217-2.2 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |

# Environmental Soil Sample Analytical Status

(current as of 2/20/14 03:30 PM)

| Location/Depth | Sample ID | Matrix Sample Date | | Lab Submittal Date | Radiochemistry | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Am-241 Bq/g x $10^{-3}$ | | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value | Sample | Baseline Value | Sample | Baseline Value | Sample |
| WIPP East Surface Sample (0-2 cm) | SS-WEE-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |

# Environmental Soil Sample Analytical Status

(current as of 2/20/14 03:30 PM)

| Location/Depth | Sample ID | Matrix Sample Date | | Lab Submittal Date | Radiochemistry | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Am-241 Bq/g x $10^{-3}$ | | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value | Sample | Baseline Value | Sample | Baseline Value | Sample |
| WIPP East Intermediate Sample (2-5 cm) | SI-WEE-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP East Deep Sample (5-10 cm) | SD-WEE-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Surface Sample (0-2 cm) | SS-WSS-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Intermediate Sample (2-5 cm) | SI-WSS-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| WIPP South Deep Sample (5-10 cm) | SD-WSS-20140217-1.1 | Soil | 2/17/2014 | 2/18/2014 | Three weeks (3/11/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Mills Ranch Surface Sample (0-2 cm) | SS-MLR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Mills Ranch Intermediate Sample (2-5 cm) | SI-MLR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Mills Ranch Deep Sample (5-10 cm) | SD-MLR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Smith Ranch Surface Sample (0-2 cm) | SS-SMR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Smith Ranch Intermediate Sample (2-5 cm) | SI-SMR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Smith Ranch Deep Sample (5-10 cm) | SD-SMR-20140220-1.1 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Southeast Control Surface Sample (0-2 cm) | SS-SEC-20140220-1.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Southeast Control Intermediate Sample (2-5 cm) | SI-SEC-20140220-1.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Southeast Control Deep Sample (5-10 cm) | SD-SEC-20140220-1.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |

# Environmental Soil Sample Analytical Status

(current as of 2/20/14 03:30 PM)

| Location/Depth | Sample ID | Matrix Sample Date | | Lab Submittal Date | Radiochemistry | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Am-241 Bq/g x $10^{-3}$ | | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value | Sample | Baseline Value | Sample | Baseline Value | Sample |
| Southeast Control Surface Sample (0-2 cm) | SS-SEC-20140220-2.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |

# Environmental Soil Sample Analytical Status

(current as of 2/20/14 03:30 PM)

| Location/Depth | Sample ID | Matrix Sample Date | | Lab Submittal Date | Radiochemistry | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Am-241 Bq/g x $10^{-3}$ | | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value | Sample | Baseline Value | Sample | Baseline Value | Sample |
| Southeast Control Intermediate Sample (2-5 cm) | SI-SEC-20140220-2.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |
| Southeast Control Deep Sample (5-10 cm) | SD-SEC-20140220-2.2 | Soil | 2/20/2014 | 2/20/2014 | Three weeks (3/14/14) | Mean = 1.7 | Value = | Mean = -0.1 | Value = | Mean = 0.20 | Value = |
| | | | | | | σ = 2.0 | TPU = | σ = 1.1 | TPU = | σ = 0.73 | TPU = |

* These values are from the DOE/WIPP 92-037, Attachment 1, Statistical Summary of the Radiological Baseline for the WIPP, Table 4-1. These values were derived from adding the mean plus the standard deviation value. The Units are noted as Becquerels per gram x $10^{-3}$

** Soils sample radiochemistry statistics are a summary of samples obtained in three groups representing different geographic groups on a regional scale: 1) within 1 kilometer of the Waste Handling Building, 2) 8 kilometers centered at the WIPP site, and 3) Area coverage of approximately 10,000 square kilometers.

TPU = Total Propagated Uncertainty

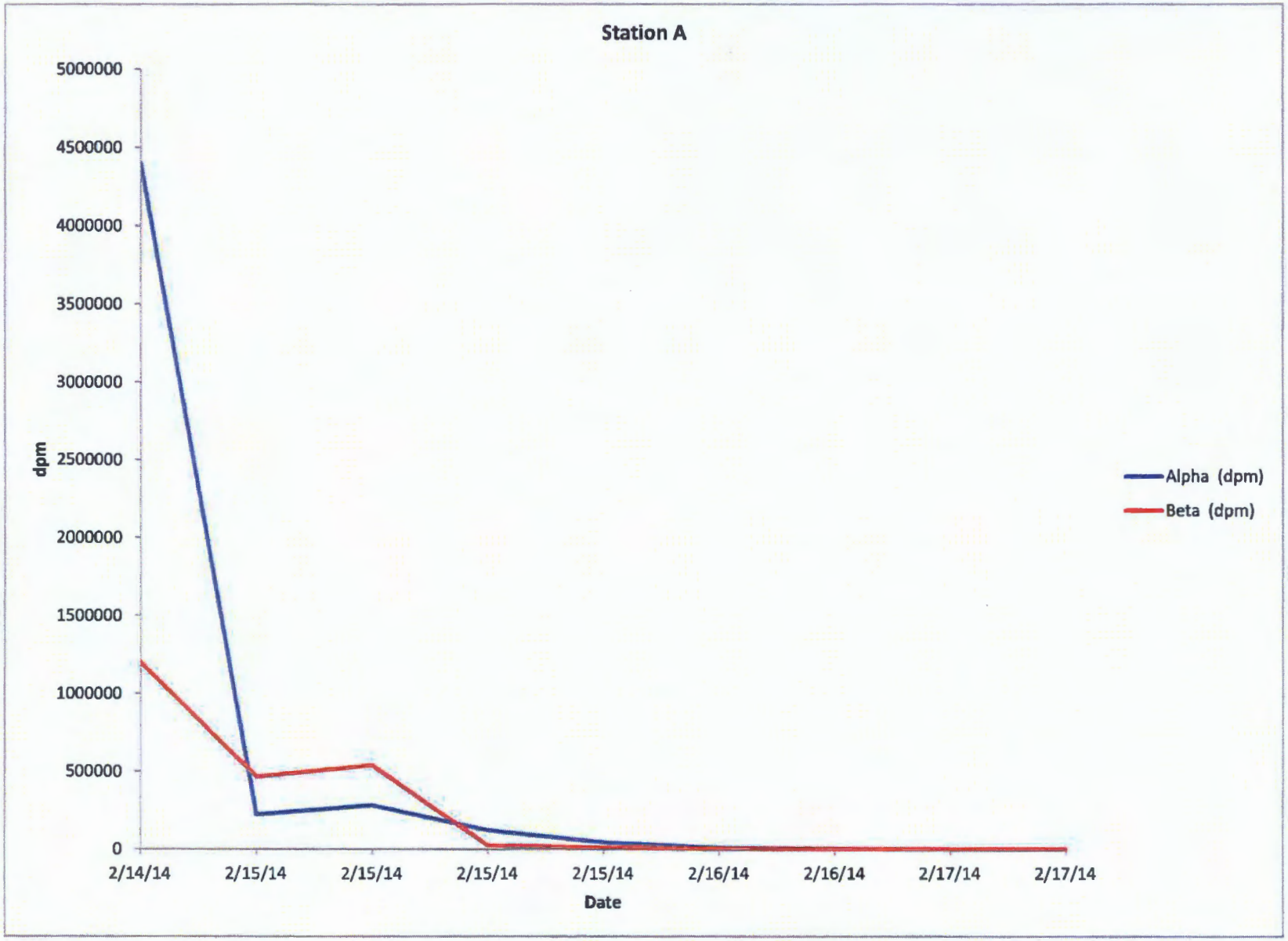
# Environmental Vegetation Analytical Status

(current as of 2/20/14 04:25 PM)

| Location | Sample ID | Media | Sample Date | Lab Submittal Date | Radiochemistry | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Data from WIPP Labs | Pu-238 Bq/g x $10^{-3}$ | | Pu-239/240 Bq/g x $10^{-3}$ | |
| | | | | | | Baseline Value** | Sample | Baseline Value** | Sample |
| WIPP Far Field | BV-WFF-20140212-1.2 | Vegetation | 2/21/2014 | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| WIPP Far Field | BV-WFF-20140219-2.2 | Vegetation | 2/21/2014 | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| WIPP East | BV-WEE-20140212-1.1 | Vegetation | | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| WIPP South | BV-WSS-20140212-1.1 | Vegetation | | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| Smith Ranch | BV-SMR-20140212-1.1 | Vegetation | | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| Mills Ranch | BV-MLR-20140212-1.1 | Vegetation | | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |
| Southeast Control | BV-SEC-20140212-1.2 | Vegetation | | 2/24/2014 | About three weeks | Mean = 0.0 | Value = | Mean = 0.37 | Value = |
| | | | | | | σ = 1.8 | TPU = | σ = 0.36 | TPU = |

** These values are from the DOE/WIPP 92-037, Attachment 1, Statistical Summary of the Radiological Baseline for the WIPP, Table 7-1. These values were derived from the summary statistics for samples at all three (3) locations that were sampled twice for the baseline. The Units are noted as Becquerels per gram x $10^{-3}$.

TPU = Total Propagated Uncertainty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4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
dpm
2/14/14
2/15/14
2/15/14
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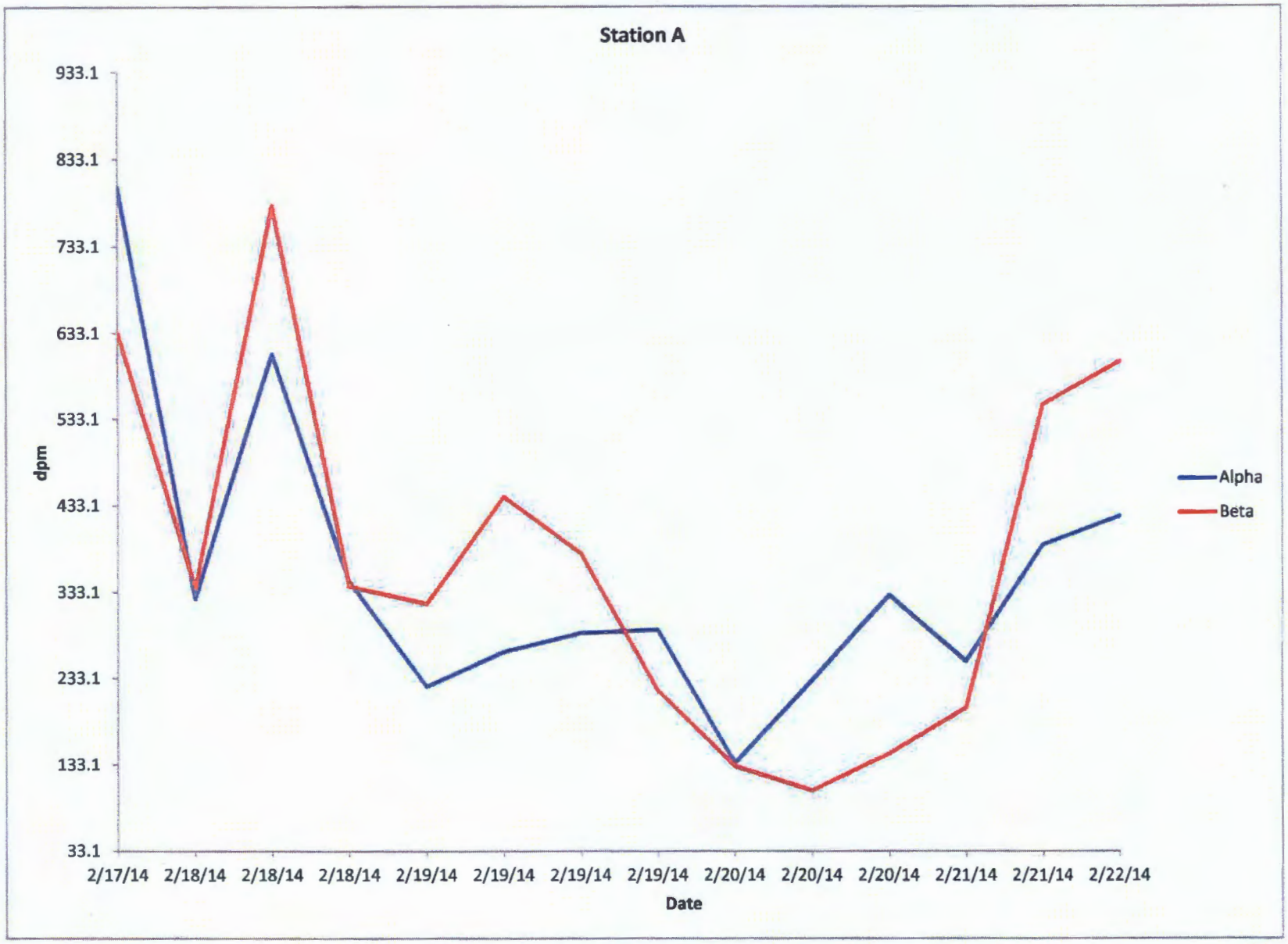
2/17/14
Date
Alpha (dpm)
Beta (dpm)


Station A
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833.1
733.1
633.1
533.1
433.1
333.1
233.1
133.1
33.1
dpm
2/17/14
2/18/14
2/18/14
2/18/14
2/19/14
2/19/14
2/19/14
2/19/14
2/20/14
2/20/14
2/20/14
2/21/14
2/21/14
2/22/14
Date
Alpha
Beta