



## DEPARTMENT OF THE ARMY

OFFICE OF ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT  
U.S. ARMY FORT MONMOUTH  
P.O. 148  
OCEANPORT, NEW JERSEY 07757

November 10, 2015

Ms. Linda Range  
New Jersey Department of Environmental Protection  
Case Manager  
Bureau of Southern Field Operations  
401 East State Street, 5<sup>th</sup> Floor  
PO Box 407  
Trenton, NJ 08625

**Re: Request to Discontinue Long Term Monitoring of Groundwater at FTMM-03 and FTMM-61, Fort Monmouth, New Jersey**

**Attachments:**

- A. Figure 1 Layout of FTMM-03 Closed Solid Waste Landfill and Table 1 FTMM-03 Groundwater Analytical Results - 2013 and 2014
- B. Figure 1 Layout of FTMM-61 B37 Building 283 Gasoline Storage and Table 1 FTMM-61 Groundwater Analytical Results - 2013 and 2014

**Previous Correspondence and Reports (not attached):**

1. NJDEP letter to U.S. Army dated July 3, 2014, *re: Final Baseline Groundwater Sampling Report (August 2013)*.
2. U.S. Army letter to NJDEP dated November 26, 2014, *re: NJDEP Comments on the Final Baseline Groundwater Sampling Report (August 2013)*.
3. NJDEP letter to U.S. Army dated February 5, 2015, *re: Approval November 26, 2014 Response to Comments on the Final Baseline Groundwater Sampling Report (August 2013)*.

Dear Ms. Range:

In preparation for the 2015 annual groundwater sampling event scheduled to begin the week of November 16, 2015 at Fort Monmouth (FTMM), the U.S. Army is requesting the New Jersey Department of Environmental Protection (NJDEP) approval to discontinue long term monitoring (LTM) of the groundwater at two of the Installation Restoration Program (IRP) sites, specifically FTMM-03 and FTMM-61 based on the 2014 data. In the August 2013 Final Baseline Groundwater Sampling Report both sites were recommended (and agreed by the NJDEP) for one additional round of sampling at select wells in 2014, followed by discontinuing LTM if concentrations continue to below the NJDEP Ground Water Quality Standards (GWQS). The 2014 annual sampling has been completed and the data demonstrates that the groundwater concentrations are below the GWQS at these two sites. Therefore, further LTM should be discontinued. (Please note that the 2014 Annual Sampling Report is currently under review by the USACE.) Summarized below is relevant background information and the 2014 sampling results for each site.

### **FTMM-03**

The recommendations in the August 2013 Final Baseline Groundwater Sampling Report included sampling well M3MW02 for volatile organic compounds (VOCs) and TAL metals one additional time and discontinue LTM of the groundwater at 11 of the 12 wells including the abandonment of well M3MW07. (The location locations of the monitoring wells within FTMM-03 are shown on the Figure provided in **Attachment A**.) Prior to the acceptance of these recommendations, the NJDEP requested (Correspondence 1) the analytical data associated with the temporary well point investigation conducted to investigate the source of the exceedances of vinyl chloride (VC) detected in well MW3MW07. VC was not detected in the five temporary well point groundwater samples. In addition, a replacement monitoring well, M3MW07A, was installed adjacent to M3MW07 to determine if VC maybe leaching from the PVC pipe used to construct the well in 2010. VC was not detected in the sample collected from M3MW07A. The temporary well point data along with a site map showing the location the wells points was submitted to the NJDEP (Correspondence 2). The NJDEP approved of the recommendations for FTMM-03 in their February 2015 letter (Correspondence 3) based on this data.

At the time of the 2014 groundwater sampling event, the Army had not yet received approval from the NJDEP regarding the abandonment of M3MW07 so this well was sampled in 2014 for VOCs.

Groundwater samples were collected from monitoring wells M3MW02 and M3MW07 using low-flow purging and sampling (LFPS) on October 2 and 3, 2014 for the analysis of VOCs and M3MW02 was also sampled for TAL metals. VOCs were not detected in the sample from M3MW02 above their GWQS. Only one metal, aluminum (685 µg/L) was detected above its NJDEP GWQS of 200 µg/L in M3MW02. The aluminum concentration is attributed to the abundance of this metal in glauconitic soils that underlie the Site and not indicative of the overall groundwater quality at FTMM-03. VC was detected in M3MW07 at an estimated concentration of 4 µg/L. The 2013 and 2014 analytical results for both wells are provided on Table 1 included in **Attachment A**. Therefore, the Army recommends discontinuing LTM at FTMM-03 based on the 2014 data results and will continue with the abandonment of well M3MW07 as agreed by the NJDEP in their February 2015 letter (Correspondence 3).

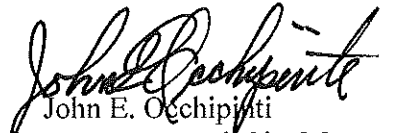
### **FTMM-61**

The recommendation provided in the 2013 Final Baseline Groundwater Sampling Report and approved by the NJDEP (Correspondence 3) were implemented during 2014 sampling event. The recommendations implemented were discontinuing LTM of three (283MW01, 283MW03, 283MW04) of the four wells and sampling well M283MW02 for VOCs one additional time. (The locations of the monitoring wells within FTMM-61 are shown on the Figure provided in **Attachment B**.) A groundwater sample was collected from monitoring well 283MW02 using LFPS on October 2, 2014. VOCs were not detected above their GWQS in the sample. The 2013 and 2014 analytical results for well M283MW02 are provided on Table 1 included in **Attachment B**. Therefore, the Army recommends discontinuing LTM based on the 2014 data results.

Linda S. Range, NJDEP  
Request to Discontinue LTM Sampling at FTMM-03 and FTMM-63  
November 10, 2015  
Page 3 of 3

In summary, we request that long term monitoring is discontinued at FTMM-03 and FTMM-61. The technical Point of Contact (POC) for this matter is Cris Grill at (617) 449-1583 or by email at [cris.grill@parsons.com](mailto:cris.grill@parsons.com). Should you have any questions or require additional information, please contact me by phone (732- 383-5104) or by email at [john.e.occhipinti.civ@mail.mil](mailto:john.e.occhipinti.civ@mail.mil).

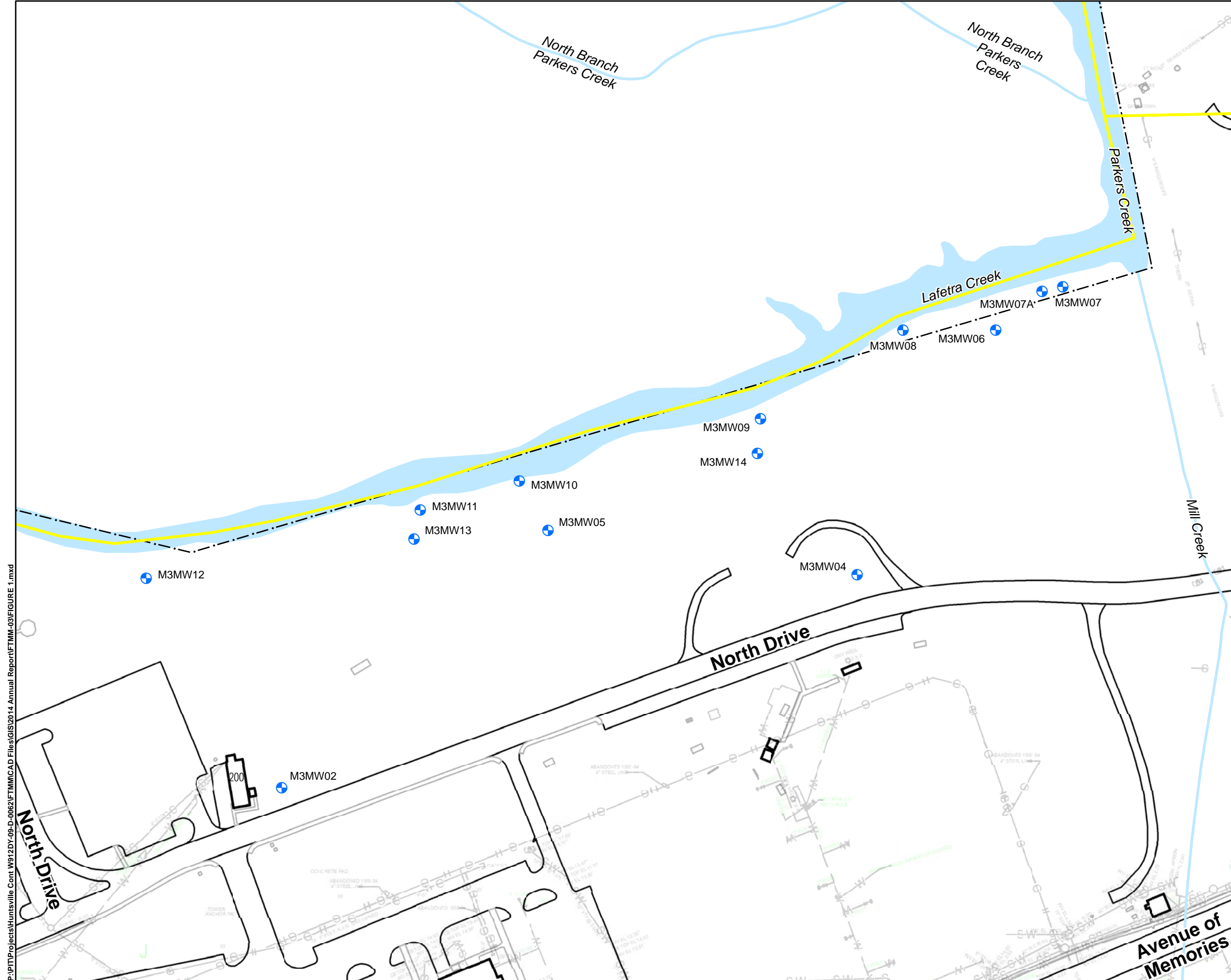
Sincerely,

  
John E. Occhipinti  
Fort Monmouth Site Manager

cc: Delight Balducci, HQDA ACSIM  
Joseph Pearson, Calibre  
James Moore, USACE  
Cris Grill, Parsons

**Attachment A**

**Figure 1 - Layout of FTMM-03 and  
Table 1 - FTMM-03 Groundwater Analytical Results - 2013 and 2014**



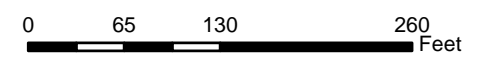
- LEGEND:**
- Shallow Monitoring Well
  - FTMM-03 Landfill Revised Boundary
  - Surface Water Feature
  - Municipal Boundary
  - Installation Boundary
  - W Water Line
  - S Sanitary Sewer Line
  - SW Storm Sewer Line
  - G Gas Line

**DRAFT**

N



1 inch = 130 feet



Source: FTMM Supplied CAD, 2013.

**PARSONS**  
401 Diamond Drive NW,  
Huntsville AL

**Fort Monmouth**  
New Jersey

**LAYOUT OF FTMM-03  
CLOSED SOLID WASTE LANDFILL**

CREATED BY:  
RR  
DATE:  
OCT. 2015  
PROJECT NUMBER:  
748810-01000

REVIEWED BY:  
ME  
FIGURE NUMBER:  
FIGURE 1  
FILE:  
FIGURE 1.mxd

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**Table 1**  
**Groundwater Analytical Results - 2013 and 2014**  
**Site FTMM-03 Closed Solid Waste Landfill**  
**Annual (Fourth Quarter) 2014 Groundwater Sampling Report**  
**Fort Monmouth, New Jersey**

| Loc ID                    | NJ Ground Water Quality Criteria | 2014-05 USEPA MCL | Weston 1995 Background (Main Post) | M3MW02              |                      | M3MW04           | M3MW05           | M3MW06           | M3MW07           |                        |
|---------------------------|----------------------------------|-------------------|------------------------------------|---------------------|----------------------|------------------|------------------|------------------|------------------|------------------------|
|                           |                                  |                   |                                    | FTMM-3-GW-M3MW02-21 | FTMM-3-GW-M3MW102-21 | FTMM-3-GW-M3MW04 | FTMM-3-GW-M3MW05 | FTMM-3-GW-M3MW06 | FTMM-3-GW-M3MW07 | FTMM-3-GW-M3MW07-13.85 |
| Sample ID                 |                                  |                   |                                    | 10/3/2014           | 10/3/2014            | 8/23/2013        | 8/23/2013        | 8/23/2013        | 8/23/2013        | 10/2/2014              |
| Sample Date               |                                  |                   |                                    | SA                  | DU                   | SA               | SA               | SA               | SA               | SA                     |
| QA/QC                     |                                  |                   |                                    | Low Flow            | Low Flow             | Low Flow         | Low Flow         | Low Flow         | Low Flow         | Low Flow               |
| Sample Method             |                                  |                   |                                    |                     |                      |                  |                  |                  |                  |                        |
| Propylbenzene             | 100                              | NLE               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| sec-Butylbenzene          | 100                              | NLE               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Styrene                   | 100                              | 100               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Tert Butyl Alcohol        | 100                              | NLE               | -                                  | < 20                | < 20                 | NA               | NA               | NA               | NA               | < 20                   |
| tert-Butylbenzene         | 100                              | NLE               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Tetrachloroethene         | 1                                | 5                 | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Toluene                   | 600                              | 1,000             | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Total Xylenes             | 1,000                            | 10,000            | -                                  | NA                  | NA                   | < 3              | < 3              | < 3              | < 3              | NA                     |
| Trans-1,2-Dichloroethene  | 100                              | 100               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Trans-1,3-Dichloropropene | 1                                | NLE               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Trichloroethene           | 1                                | 5                 | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Trichlorofluoromethane    | 2,000                            | NLE               | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | < 1              | < 1                    |
| Vinyl chloride            | 1                                | 2                 | -                                  | < 1                 | < 1                  | < 1              | < 1              | < 1              | <b>2.9 J</b>     | <b>4 J</b>             |
| <b>TIC VOCs (mg/l)</b>    |                                  |                   |                                    |                     |                      |                  |                  |                  |                  |                        |
| Total TIC, Volatile       | 500                              | NLE               | -                                  | ND                  | ND                   | ND               | ND               | ND               | ND               | ND                     |
| <b>Inorganics (µg/l)</b>  |                                  |                   |                                    |                     |                      |                  |                  |                  |                  |                        |
| Aluminum                  | 200                              | NLE               | 121,000                            | <b>685</b>          | <b>660</b>           | <b>288</b>       | <b>258</b>       | <b>63.1 J</b>    | < 25             | NA                     |
| Antimony                  | 6                                | 6                 | 20.7                               | < 30                | <b>3.8 J</b>         | < 4              | <b>2.7 J</b>     | <b>3.3 J</b>     | < 4              | NA                     |
| Arsenic                   | 3                                | 10                | 89.3                               | < 5                 | < 5                  | < 5              | < 5              | < 5              | < 5              | NA                     |
| Barium                    | 6,000                            | 2,000             | 699                                | <b>48.6 J</b>       | <b>47.7 J</b>        | <b>104</b>       | <b>151</b>       | <b>15.9 J</b>    | <b>455</b>       | NA                     |
| Beryllium                 | 1                                | 4                 | 2.1                                | <b>0.905 J</b>      | <b>0.837 J</b>       | <b>0.256 J</b>   | < 0.3            | < 0.3            | < 0.3            | NA                     |
| Cadmium                   | 4                                | 5                 | 9.5                                | <b>0.483 J</b>      | <b>0.203 J</b>       | <b>2.6</b>       | < 0.4            | <b>0.278 J</b>   | < 0.4            | NA                     |
| Calcium                   | NLE                              | NLE               | 45,400                             | <b>4,930</b>        | <b>4,620</b>         | <b>35,300</b>    | <b>43,100</b>    | <b>12,600</b>    | <b>532,000</b>   | NA                     |
| Chromium                  | 70                               | 100               | 191                                | < 5                 | < 5                  | <b>1.7</b>       | <b>2.4</b>       | <b>1.5</b>       | <b>1</b>         | NA                     |
| Cobalt                    | 100                              | NLE               | 18.3                               | <b>5.5 J</b>        | <b>4.9 J</b>         | <b>15.7</b>      | < 1              | < 1              | < 1              | NA                     |
| Copper                    | 1,300                            | 1,300             | 65.6                               | < 10                | < 10                 | < 4              | <b>4.1 J</b>     | <b>3.2 J</b>     | <b>4.7 J</b>     | NA                     |
| Iron                      | 300                              | NLE               | 431,000                            | <b>101</b>          | <b>97.8 J</b>        | <b>1,110</b>     | <b>28,700</b>    | <b>897</b>       | <b>43,900</b>    | NA                     |
| Lead                      | 5                                | 15                | 22.7                               | < 2.5               | < 2.5                | < 2              | <b>0.952 J</b>   | < 2              | < 2              | NA                     |
| Magnesium                 | NLE                              | NLE               | 62,700                             | <b>10,200</b>       | <b>9,910</b>         | <b>8,300</b>     | <b>5,360</b>     | <b>4,100</b>     | <b>68,200</b>    | NA                     |
| Manganese                 | 50                               | NLE               | 331                                | <b>32.4</b>         | <b>31</b>            | <b>32.9</b>      | <b>180</b>       | <b>57.2</b>      | <b>2,600</b>     | NA                     |
| Mercury                   | 2                                | 2                 | 0.26                               | < 0.1               | < 0.1                | < 0.08           | < 0.08           | < 0.08           | < 0.08           | NA                     |
| Nickel                    | 100                              | NLE               | 187                                | <b>55.3</b>         | <b>50.5</b>          | <b>61.2</b>      | < 5              | <b>2.3 J</b>     | <b>0.86 J</b>    | NA                     |
| Potassium                 | NLE                              | NLE               | 137,000                            | <b>3,090</b>        | <b>2,990</b>         | <b>8,170</b>     | <b>4,390</b>     | <b>4,830</b>     | <b>24,100</b>    | NA                     |
| Selenium                  | 40                               | 50                | 29.6                               | < 10                | < 10                 | < 5              | <b>3.2 J</b>     | <b>2.8 J</b>     | <b>4.5 J</b>     | NA                     |
| Silver                    | 40                               | NLE               | ND                                 | < 5                 | < 5                  | <b>0.785 J</b>   | <b>0.664 J</b>   | <b>0.464 J</b>   | <b>1 J</b>       | NA                     |
| Sodium                    | 50,000                           | NLE               | 21,500                             | <b>12,300</b>       | <b>12,200</b>        | <b>32,600</b>    | <b>16,300</b>    | <b>31,800</b>    | <b>1,020,000</b> | NA                     |
| Thallium                  | 2                                | 2                 | 5.5                                | < 10                | < 10                 | < 10             | < 10             | < 10             | < 10             | NA                     |
| Vanadium                  | NLE                              | NLE               | 108                                | < 25                | < 25                 | <b>0.711 J</b>   | <b>2.5 J</b>     | <b>0.6 J</b>     | < 0.6            | NA                     |
| Zinc                      | 2,000                            | NLE               | 233                                | <b>102</b>          | <b>96.8</b>          | <b>117</b>       | <b>16.5 J</b>    | <b>76.7</b>      | <b>135</b>       | NA                     |





**Table 1**  
**Groundwater Analytical Results - 2013 and 2014**  
**Site FTMM-03 Closed Solid Waste Landfill**  
**Annual (Fourth Quarter) 2014 Groundwater Sampling Report**  
**Fort Monmouth, New Jersey**

| Loc ID                    | NJ Ground Water Quality Criteria | 2014-05 USEPA MCL | Weston 1995 Background (Main Post) | M3MW07A           |                   | M3MW08           | M3MW09           | M3MW10           | M3MW11           | M3MW12           | M3MW13           | M3MW14           |
|---------------------------|----------------------------------|-------------------|------------------------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                           |                                  |                   |                                    | FTMM-3-GW-M3MW07A | FTMM-3-GW-M3MW17A | FTMM-3-GW-M3MW08 | FTMM-3-GW-M3MW09 | FTMM-3-GW-M3MW10 | FTMM-3-GW-M3MW11 | FTMM-3-GW-M3MW12 | FTMM-3-GW-M3MW13 | FTMM-3-GW-M3MW14 |
| Sample ID                 |                                  |                   |                                    | 8/23/2013         | 8/23/2013         | 8/23/2013        | 8/23/2013        | 8/23/2013        | 8/23/2013        | 8/23/2013        | 8/23/2013        | 8/23/2013        |
| Sample Date               |                                  |                   |                                    | SA                | DU                | SA               | SA               | SA               | SA               | SA               | SA               | SA               |
| QA/QC                     |                                  |                   |                                    | Low Flow          | Low Flow          | Low Flow         | Low Flow         | Low Flow         | Low Flow         | Low Flow         | Low Flow         | Low Flow         |
| Sample Method             |                                  |                   |                                    |                   |                   |                  |                  |                  |                  |                  |                  |                  |
| Propylbenzene             | 100                              | NLE               | -                                  | < 1               | < 1               | < 1              | < 1              | <b>0.26 J</b>    | < 1              | < 1              | < 1              | < 1              |
| sec-Butylbenzene          | 100                              | NLE               | -                                  | < 1               | < 1               | < 1              | <b>0.3 J</b>     | <b>0.66 J</b>    | < 1              | < 1              | <b>0.3 J</b>     | <b>1.2 J</b>     |
| Styrene                   | 100                              | 100               | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Tert Butyl Alcohol        | 100                              | NLE               | -                                  | NA                | NA                | NA               | NA               | NA               | NA               | NA               | NA               | NA               |
| tert-Butylbenzene         | 100                              | NLE               | -                                  | <b>0.31 J</b>     | <b>0.35 J</b>     | <b>0.32 J</b>    | <b>0.47 J</b>    | <b>0.49 J</b>    | < 1              | < 1              | <b>0.5 J</b>     | <b>0.81 J</b>    |
| Tetrachloroethene         | 1                                | 5                 | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Toluene                   | 600                              | 1,000             | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Total Xylenes             | 1,000                            | 10,000            | -                                  | < 3               | < 3               | < 3              | < 3              | <b>0.21 J</b>    | < 3              | < 3              | < 3              | < 3              |
| Trans-1,2-Dichloroethene  | 100                              | 100               | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Trans-1,3-Dichloropropene | 1                                | NLE               | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Trichloroethene           | 1                                | 5                 | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Trichlorofluoromethane    | 2,000                            | NLE               | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Vinyl chloride            | 1                                | 2                 | -                                  | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| <b>TIC VOCs (mg/l)</b>    |                                  |                   |                                    |                   |                   |                  |                  |                  |                  |                  |                  |                  |
| Total TIC, Volatile       | 500                              | NLE               | -                                  | ND                | ND                | ND               | ND               | <b>8.7 JN</b>    | ND               | ND               | ND               | <b>20.6 JN</b>   |
| <b>Inorganics (µg/l)</b>  |                                  |                   |                                    |                   |                   |                  |                  |                  |                  |                  |                  |                  |
| Aluminum                  | 200                              | NLE               | 121,000                            | < 25              | < 25              | <b>40.4 J</b>    | <b>224</b>       | < 25             | < 25             | < 25             | <b>70.3 J</b>    | < 25             |
| Antimony                  | 6                                | 6                 | 20.7                               | < 4               | < 4               | < 4              | < 4              | < 4              | < 4              | < 4              | < 4              | <b>2.1 J</b>     |
| Arsenic                   | 3                                | 10                | 89.3                               | < 5               | < 5               | < 5              | < 5              | < 5              | < 5              | <b>2.3 J</b>     | < 5              | <b>2.1 J</b>     |
| Barium                    | 6,000                            | 2,000             | 699                                | <b>369</b>        | <b>358</b>        | <b>383</b>       | <b>377</b>       | <b>862</b>       | <b>429</b>       | <b>96.6</b>      | <b>575</b>       | <b>241</b>       |
| Beryllium                 | 1                                | 4                 | 2.1                                | < 0.3             | < 0.3             | < 0.3            | < 0.3            | < 0.3            | < 0.3            | < 0.3            | < 0.3            | < 0.3            |
| Cadmium                   | 4                                | 5                 | 9.5                                | < 0.4             | < 0.4             | < 0.4            | < 0.4            | < 0.4            | < 0.4            | < 0.4            | < 0.4            | < 0.4            |
| Calcium                   | NLE                              | NLE               | 45,400                             | <b>247,000</b>    | <b>237,000</b>    | <b>76,400</b>    | <b>49,900</b>    | <b>128,000</b>   | <b>161,000</b>   | <b>23,300</b>    | <b>79,300</b>    | <b>50,600</b>    |
| Chromium                  | 70                               | 100               | 191                                | <b>0.561 J</b>    | <b>0.613 J</b>    | <b>0.47 J</b>    | <b>1.2</b>       | <b>0.532 J</b>   | <b>0.605 J</b>   | < 1              | <b>0.223 J</b>   | <b>0.399 J</b>   |
| Cobalt                    | 100                              | NLE               | 18.3                               | < 1               | < 1               | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              | < 1              |
| Copper                    | 1,300                            | 1,300             | 65.6                               | <b>1.6 J</b>      | <b>1.1 J</b>      | <b>1.7 J</b>     | <b>25</b>        | < 4              | <b>3.3 J</b>     | < 4              | < 4              | < 4              |
| Iron                      | 300                              | NLE               | 431,000                            | <b>58,600</b>     | <b>57,300</b>     | <b>45,100</b>    | <b>64,700</b>    | <b>86,000</b>    | <b>76,400</b>    | <b>43,000</b>    | <b>43,600</b>    | <b>71,400</b>    |
| Lead                      | 5                                | 15                | 22.7                               | < 2               | < 2               | < 2              | <b>7.8</b>       | < 2              | < 2              | < 2              | < 2              | < 2              |
| Magnesium                 | NLE                              | NLE               | 62,700                             | <b>46,000</b>     | <b>45,000</b>     | <b>16,600</b>    | <b>12,400</b>    | <b>23,000</b>    | <b>23,400</b>    | <b>4,640</b>     | <b>21,100</b>    | <b>11,400</b>    |
| Manganese                 | 50                               | NLE               | 331                                | <b>1,810</b>      | <b>1,770</b>      | <b>664</b>       | <b>769</b>       | <b>669</b>       | <b>1,140</b>     | <b>114</b>       | <b>401</b>       | <b>628</b>       |
| Mercury                   | 2                                | 2                 | 0.26                               | < 0.08            | < 0.08            | < 0.08           | < 0.08           | < 0.08           | < 0.08           | < 0.08           | < 0.08           | < 0.08           |
| Nickel                    | 100                              | NLE               | 187                                | < 5               | < 5               | < 5              | <b>3.5 J</b>     | < 5              | <b>35.5</b>      | < 5              | < 5              | < 5              |
| Potassium                 | NLE                              | NLE               | 137,000                            | <b>14,800</b>     | <b>14,700</b>     | <b>7,290</b>     | <b>8,350</b>     | <b>11,900</b>    | <b>10,400</b>    | <b>9,960</b>     | <b>12,100</b>    | <b>7,400</b>     |
| Selenium                  | 40                               | 50                | 29.6                               | <b>4.1 J</b>      | <b>2 J</b>        | <b>3.8 J</b>     | <b>4.2 J</b>     | < 5              | < 5              | < 5              | < 5              | < 5              |
| Silver                    | 40                               | NLE               | ND                                 | <b>0.875 J</b>    | <b>0.408 J</b>    | <b>0.556 J</b>   | < 2              | < 2              | < 2              | <b>0.277 J</b>   | < 2              | < 2              |
| Sodium                    | 50,000                           | NLE               | 21,500                             | <b>338,000</b>    | <b>331,000</b>    | <b>157,000</b>   | <b>53,200</b>    | <b>129,000</b>   | <b>278,000</b>   | <b>7,900</b>     | <b>212,000</b>   | <b>13,100</b>    |
| Thallium                  | 2                                | 2                 | 5.5                                | < 10              | < 10              | < 10             | < 10             | < 10             | < 10             | < 10             | < 10             | < 10             |
| Vanadium                  | NLE                              | NLE               | 108                                | < 0.6             | < 0.6             | < 0.6            | < 0.6            | < 0.6            | <b>0.368 J</b>   | < 0.6            | < 0.6            | < 0.6            |
| Zinc                      | 2,000                            | NLE               | 233                                | <b>0.575 J</b>    | <b>0.915 J</b>    | <b>4.5 J</b>     | <b>72.2</b>      | <b>0.92 J</b>    | <b>40.7</b>      | <b>3.8 J</b>     | <b>5.8 J</b>     | < 4              |

**Table 1**  
**Groundwater Analytical Results - 2013 and 2014**  
**Site FTMM-03 Closed Solid Waste Landfill**  
**Annual (Fourth Quarter) 2014 Groundwater Sampling Report**  
**Fort Monmouth, New Jersey**

Footnote:

- 1) All historical data collected prior to 2013 are reported as provided by others.
- 2) Number of Analyses is the number of detected and non-detected results excluding rejected results. Sample duplicate pairs have not been averaged.
- 3) NLE = no limit established.
- 4) ND = not detected in any background sample, no background concentration available.

- 5) Chemical result qualifiers are assigned by the laboratory and is typically evaluated and modified (if necessary) by during data validation.
  - [blank] = detect, i.e. detected chemical result value.
  - B = Compound detected in the sample and its associated blank sample.
  - R = Rejected, data validation rejected the results.
  - U = non-detect, i.e. not detected equal to or above this value.
  - U-DL = Elevated sample detection limit due to difficult sample matrix.
  - U-ND = Analyte not detected in sample, but no detection or reporting limit provided.

- J = estimated (detect or non-detect) value.
- E (or ER) = Estimated result.
- D = Results from dilution of sample.
- J-DL = Elevated sample detection limit due to difficult sample matrix.
- JN = Tentatively identified compound, estimated concentration.

- 6) Chemical results greater than or equal to the action level (depending on criteria) are highlighted based on the Criteria that are present.

- Cell Shade values represent a result that is above the NJ Ground Water Quality Criteria

###

NJDEP Interim Specific GWQC values are presented for the NJ GWQS where there is not a Specific Ground Water Quality Criteria. A full list of compounds is available at ([http://www.nj.gov/dep/wms/bwqsa/gwqs\\_interim\\_criteria\\_table.htm](http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)).

NJDEP Interim Generic GWQC values are presented for the NJ GWQS where there is not a XXXXX or a NJDEP Interim Specific GWQC. Available at ([http://www.nj.gov/dep/wms/bwqsa/gwqs\\_interim\\_criteria\\_table.htm](http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)).

- Bold Outline represent a result that is above the USEPA 2014-05 MCL.

###

- Cell Style values represent a result that is above the Weston 1995 Background (Main Post).

###

n/a = all concentrations were less than the detection limit, therefore, no location of maximum value identified.

Dash (-) = only background concentrations for metals are being used as comparison criteria.

- 7) Criteria action level source document and web address.

- The NJ Ground Water Quality Criteria refers to the NJDEP Groundwater Quality Standards - Adopted July 22, 2010

<http://www.state.nj.us/dep/wms/bwqsa/docs/njac79C.pdf>

- The 2014-05 USEPA MCL refers to the USEPA's Region 9 Regional Screening Levels (HQ=1.0) - 5/31/2014 (Last revised)

<http://www.epa.gov/region9/superfund/prg/>

- The Weston 1995 Background (Main Post) refers to the FTMM reports.

NA

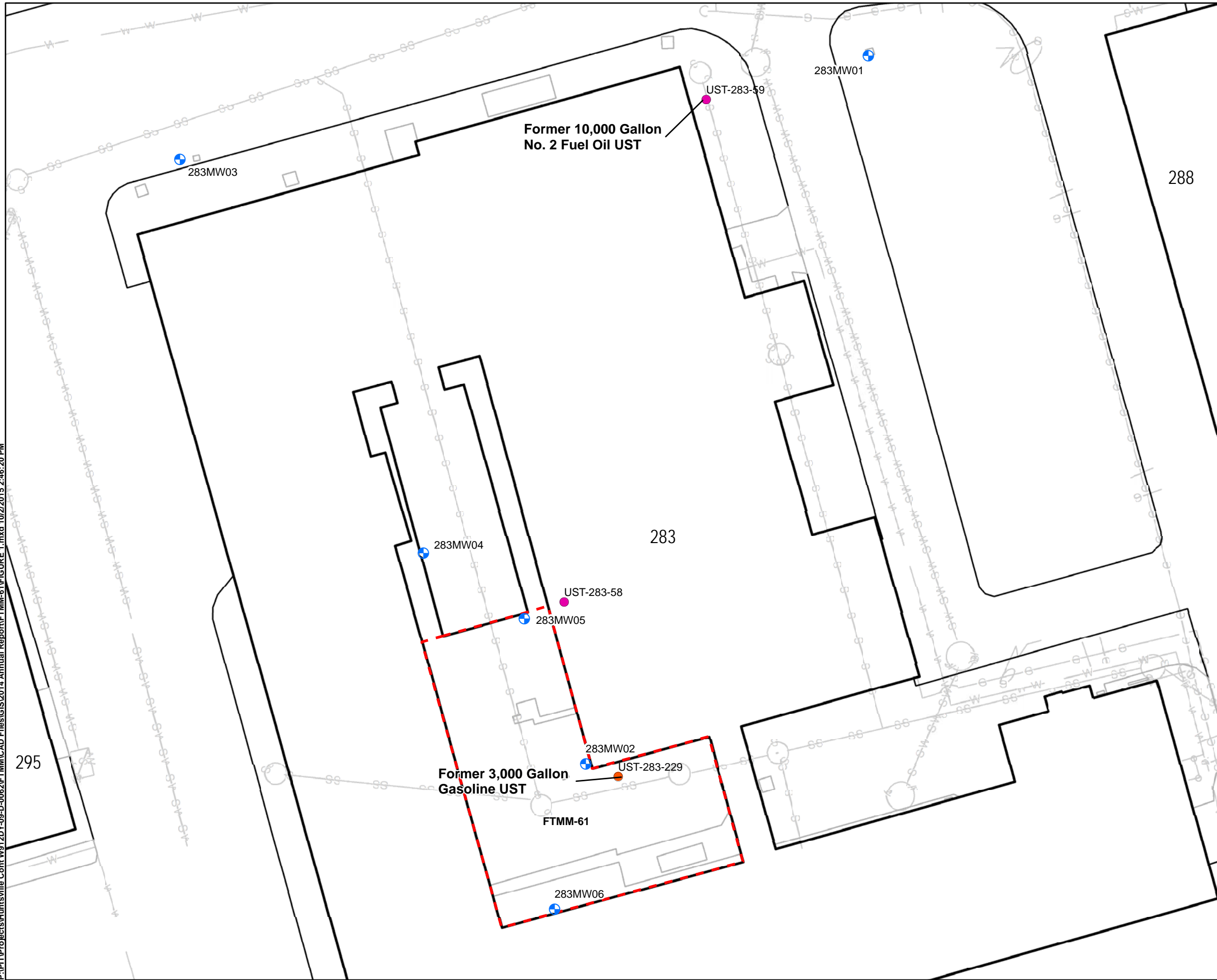
- 8) Wells sampled in the fourth quarter are highlighted in yellow.

Sample ID

**Attachment B**

**Figure 1 - Layout of FTMM-61B37 Building 283 Gasoline Storage and  
Table 1 - FTMM-61 Groundwater Analytical Results - 2013 and 2014**

P:\PTP\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\2014 Annual Report\FTMM-61\FIGURE 1.mxd 10/2/2015 2:46:20 PM



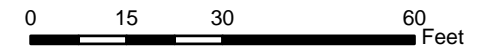
**LEGEND:**

- Shallow Monitoring Well
- Removed Gasoline UST associated with FTMM-61
- Removed Steel UST associated with FTMM-61 (Building 283)
- FTMM-61 Boundary
- Municipal Boundary
- Installation Boundary
- Water Line
- Sanitary Sewer Line
- Storm Sewer Line
- Gas Line

**DRAFT**

N

1 inch = 30 feet



Source: FTMM Supplied CAD, 2013.

**PARSONS**  
 401 Diamond Drive NW,  
 Huntsville AL

**Fort Monmouth**  
 New Jersey

**LAYOUT OF FTMM-61  
 B37 BUILDING 283 GASOLINE STORAGE**

|  |                                   |
|--|-----------------------------------|
| CREATED BY:<br><b>RR</b>               | REVIEWED BY:<br><b>ME</b>         |
| DATE:<br><b>OCT. 2015</b>              | FIGURE NUMBER:<br><b>FIGURE 1</b> |
| PROJECT NUMBER:<br><b>748810-01000</b> | FILE:<br><b>FIGURE 1.mxd</b>      |

**Table 1**  
**Groundwater Analytical Results - 2013 and 2014**  
**Site FTMM-61 Building 283 Gasoline Storage**  
**Annual (Fourth Quarter) 2014 Groundwater Sampling Report**  
**Fort Monmouth, New Jersey**

| Loc ID                                   | NJ Ground Water Quality Criteria | 2014-05 USEPA MCL | Weston 1995 Background (Main Post) | 283MW01                | 283MW02                |                          | 283MW03                | 283MW04                |
|--|----------------------------------|-------------------|------------------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|
| Sample ID                                |                                  |                   |                                    | FTMM-61-GW-283MW01     | FTMM-61-GW-283MW02     | FTMM-61-GW-283MW02-13.26 | FTMM-61-GW-283MW03     | FTMM-61-GW-283MW04     |
| Sample Date                              |                                  |                   |                                    | 8/15/2013              | 8/16/2013              | 10/2/2014                | 8/15/2013              | 8/16/2013              |
| QA/QC                                    |                                  |                   |                                    | SA                     | SA                     | SA                       | SA                     | SA                     |
| Study ID                                 |                                  |                   |                                    | Baseline - August 2013 | Baseline - August 2013 | 2014-Q4 QGW              | Baseline - August 2013 | Baseline - August 2013 |
| Sampling Method                          | LFPS                             | LFPS              | LFPS                               | LFPS                   | LFPS                   |                          |                        |                        |
| <b>Volatile Organic Compounds (µg/l)</b> |                                  |                   |                                    |                        |                        |                          |                        |                        |
| 1,1,1,2-Tetrachloroethane                | 1                                | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1,1-Trichloroethane                    | 30                               | 200               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1,2,2-Tetrachloroethane                | 1                                | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1,2-Trichloroethane                    | 3                                | 5                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1-Dichloroethane                       | 50                               | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1-Dichloroethene                       | 1                                | 7                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,1-Dichloropropene                      | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2,3-Trichlorobenzene                   | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2,3-Trichloropropane                   | 0.03                             | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2,4-Trichlorobenzene                   | 9                                | 70                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2,4-Trimethylbenzene                   | 100                              | NLE               | -                                  | <b>1.2 J</b>           | <1                     | <1                       | <1                     | <1                     |
| 1,2-Dibromo-3-chloropropane              | 0.02                             | 0.2               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2-Dibromoethane                        | 0.03                             | 0.05              | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2-Dichlorobenzene                      | 600                              | 600               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2-Dichloroethane                       | 2                                | 5                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,2-Dichloropropane                      | 1                                | 5                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,3,5-Trimethylbenzene                   | 100                              | NLE               | -                                  | <b>0.59 J</b>          | <1                     | <1                       | <1                     | <1                     |
| 1,3-Dichlorobenzene                      | 600                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,3-Dichloropropane                      | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 1,4-Dichlorobenzene                      | 75                               | 75                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 2,2-Dichloropropane                      | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| 2-Chlorotoluene                          | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Acetone                                  | 6,000                            | NLE               | -                                  | <5                     | <b>2.1 J</b>           | <5                       | <b>1.4 J</b>           | <5                     |
| Benzene                                  | 1                                | 5                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Bromobenzene                             | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Bromochloromethane                       | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Bromodichloromethane                     | 1                                | 80                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Bromoform                                | 4                                | 80                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Carbon tetrachloride                     | 1                                | 5                 | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Chlorobenzene                            | 50                               | 100               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Chlorodibromomethane                     | 1                                | 80                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Chloroethane                             | 5                                | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Chloroform                               | 70                               | 80                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Cis-1,2-Dichloroethene                   | 70                               | 70                | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Cis-1,3-Dichloropropene                  | 1                                | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Cymene                                   | 100                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Dichlorodifluoromethane                  | 1,000                            | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Ethyl benzene                            | 700                              | 700               | -                                  | <b>1 J</b>             | <1                     | <1                       | <1                     | <1                     |
| Hexachlorobutadiene                      | 1                                | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Isopropylbenzene                         | 700                              | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |
| Meta & Para Xylenes                      | 1,000                            | NLE               | -                                  | <b>1.9 J</b>           | <2                     | <2                       | <2                     | <2                     |
| Methyl bromide                           | 10                               | NLE               | -                                  | <1                     | <1                     | <1                       | <1                     | <1                     |

Table 1  
Groundwater Analytical Results - 2013 and 2014  
Site FTMM-61 Building 283 Gasoline Storage  
Annual (Fourth Quarter) 2014 Groundwater Sampling Report  
Fort Monmouth, New Jersey

| Loc ID                    | NJ Ground Water Quality Criteria | 2014-05 USEPA MCL | Weston 1995 Background (Main Post) | 283MW01                | 283MW02                |                          | 283MW03                | 283MW04                |
|---------------------------|----------------------------------|-------------------|------------------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|
| Sample ID                 |                                  |                   |                                    | FTMM-61-GW-283MW01     | FTMM-61-GW-283MW02     | FTMM-61-GW-283MW02-13.26 | FTMM-61-GW-283MW03     | FTMM-61-GW-283MW04     |
| Sample Date               |                                  |                   |                                    | 8/15/2013              | 8/16/2013              | 10/2/2014                | 8/15/2013              | 8/16/2013              |
| QA/QC                     |                                  |                   |                                    | SA                     | SA                     | SA                       | SA                     | SA                     |
| Study ID                  |                                  |                   |                                    | Baseline - August 2013 | Baseline - August 2013 | 2014-Q4 QGW              | Baseline - August 2013 | Baseline - August 2013 |
| Sampling Method           | LFPS                             | LFPS              | LFPS                               | LFPS                   | LFPS                   |                          |                        |                        |
| Methyl butyl ketone       | 300                              | NLE               | -                                  | < 5                    | < 5                    | < 5                      | < 5                    | < 5                    |
| Methyl chloride           | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Methyl ethyl ketone       | 300                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Methyl isobutyl ketone    | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Methyl Tertbutyl Ether    | 70                               | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Methylene chloride        | 3                                | 5                 | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Naphthalene               | 300                              | NLE               | -                                  | <b>0.25 J</b>          | < 1                    | < 1                      | < 1                    | < 1                    |
| n-Butylbenzene            | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Ortho Xylene              | 1,000                            | NLE               | -                                  | <b>0.23 J</b>          | < 1                    | < 1                      | < 1                    | < 1                    |
| p-Chlorotoluene           | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Propylbenzene             | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| sec-Butylbenzene          | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Styrene                   | 100                              | 100               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Tert Butyl Alcohol        | 100                              | NLE               | -                                  | NA                     | NA                     | < 20                     | NA                     | NA                     |
| tert-Butylbenzene         | 100                              | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Tetrachloroethene         | 1                                | 5                 | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Toluene                   | 600                              | 1,000             | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Total Xylenes             | 1,000                            | 10,000            | -                                  | <b>2.13 J</b>          | < 3                    | NA                       | < 3                    | < 3                    |
| Trans-1,2-Dichloroethene  | 100                              | 100               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Trans-1,3-Dichloropropene | 1                                | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Trichloroethene           | 1                                | 5                 | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Trichlorofluoromethane    | 2,000                            | NLE               | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| Vinyl chloride            | 1                                | 2                 | -                                  | < 1                    | < 1                    | < 1                      | < 1                    | < 1                    |
| <b>TIC VOCs (µg/l)</b>    |                                  |                   |                                    |                        |                        |                          |                        |                        |
| Total TIC, Volatile       | 500                              | NLE               | -                                  | <b>5.2 JN</b>          | ND                     | ND                       | ND                     | ND                     |
| <b>Inorganics (µg/l)</b>  |                                  |                   |                                    |                        |                        |                          |                        |                        |
| Lead                      | 5                                | 15                | 22.7                               | < 2                    | < 2                    | NA                       | < 2                    | < 2                    |

**Table 1**  
**Groundwater Analytical Results - 2013 and 2014**  
**Site FTMM-61 Building 283 Gasoline Storage**  
**Annual (Fourth Quarter) 2014 Groundwater Sampling Report**  
**Fort Monmouth, New Jersey**

Footnote:

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###

- Cell Style values represent a result that is above the Weston 1995 Background (Main Post).

###

n/a = all concentrations were less than the detection limit, therefore, no location of maximum value identified.

Dash (-) = only background concentrations for metals are being used as comparison criteria.

7) Criteria action level source document and web address.

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<http://www.epa.gov/region9/superfund/prg/>

- The Weston 1995 Background (Main Post) refers to the FTMM reports.

NA

8) Wells sampled in the fourth quarter are highlighted in yellow.

Sample ID