



## ARLINGTON COUNTY, VIRGINIA

### County Board Agenda Item Meeting of February 24, 2018

**DATE:** February 14, 2018

**SUBJECT:** U-2823-94-4 USE PERMIT REVIEW for a telecommunications facility (Lee Pumping Station); located at 2400 N. Wakefield St. (RPC# 05-005-072).

**Applicant:**  
Sprint

**By:**  
Emily Nelms, Real Estate Manager—Washington DC Market  
Sprint National Lease Management  
6391 Sprint Parkway  
Mail Stop KSOPHT0101-Z2650  
Overland Park, Kansas 66251-2650  
Sprint PCS Site No.: DC03XC179

Sprint Law Department  
6391 Sprint Parkway  
Mail Stop KSOPHT0101-Z2020  
Overland Park, Kansas 66251-2020  
Attn: Sprint PCS Real Estate Attorney  
Sprint PCS Site No.: DC03XC179

### C.M. RECOMMENDATION:

Renew the subject use permit for a telecommunications facility for Sprint at the Lee Pumping Station, subject to all previously approved condition, added Condition #9, and with no further scheduled County Board review.

**ISSUES:** This is a one (1) year and four (4) month use permit review for a telecommunications facility at Lee Pumping Station. No issues have been identified as of the date of this report.

County Manager: *mgs/SMB*

County Attorney: *[Signature]* *MNC*

Staff: Cedric Southerland, DCPHD, Planning

PLA-7744

**SUMMARY:** The subject use permit was approved for a telecommunications facility, at the County-owned Lee Pumping Station in January 1995 and subsequently renewed by the County Board, with the last renewal occurring in October 2016. The use permit was granted prior to the 1996 Telecommunications Act, and therefore there are conditions on the use permit that are stricter than the current standards. Condition #1 requires annual third-party radio frequency (RF) emissions reports. The applicant submitted the required 2017 annual radio frequency (RF) report in April 2017 indicating radio frequency emissions well below the maximum permitted by the FCC, as required in Condition #2 of the use permit, a copy of which is attached to this report. The RF emissions from the subject facility do not exceed Federal, State, or Local standards, and the facility does not create an undue, adverse visual impact on the area. Federal law prohibits localities from basing a decision on the environmental effects of radio frequency emissions if the facility complies with FCC regulations. This review was scheduled to be concurrent with the renewal of the lease agreement between the County Board and the applicant, which is the subject of a separate board report. Therefore, staff recommends the County Board renew the use permit, subject to all previously approved conditions, added Condition #9, with no further scheduled County Board review.

**BACKGROUND:**

<u>Address / RPC:</u>	2400 N Wakefield Drive (RPC# 05-005-072)
<u>Neighborhood:</u>	Old Dominion Civic Association
<u>Zoning:</u>	“S-3A” Special District
<u>GLUP:</u>	Public
<u>Existing Use:</u>	An approximately 388,046 square feet site, with County owned water tank, water storage and water pumping facilities. Use permit (U-2704-91-3) to allow County antennas on the County’s water tank for public emergency services communications. Use permit (U-2823-94-4) to allow commercial antennas on the County’s water tank.

Figure 1. Ariel View



Source: Google Maps

Figure 2. Close-Up of Water Tank



Source: CPHD

**DISCUSSION:**

REVIEWED USE:

Telecommunications: Six (6) commercial antennas on the Lee Pumping Station water tank.

ASSESSMENT:

Code Enforcement: No issues reported.

Zoning Enforcement: No issues reported.

Fire Marshal's Office: No issues reported.

Police Department: No issues reported.

CPHD Planning: During the period of review, County agencies have not identified any issues with the use. The applicant has complied with Condition #1 requiring the submission of an emissions frequency report. The emissions testing results are below the range allowed by the FCC, satisfying Condition #2. The use has: a) not adversely affected the health or safety of persons residing or working in the neighborhood; b) been detrimental to the public welfare or injurious to property or improvements in the neighborhood; or c) been in conflict with the purposes of the master plans of the County.

## **PUBLIC ENGAGEMENT:**

Old Dominion Civic Association (ODCA): On January 23, 2018 staff contacted the President of the ODCA. There has been no response as of the date of this report.

Donaldson Run Civic Association (DRCA): On January 2, 2018 staff contacted the President of the DRCA. On February 2, 2018, the DRCA responded that they have no issues with the renewal of the use permit.

Analostan Homeowners Association (AHA): The Analostan townhouse community abuts the site to the west. Contact information for this association has not been provided to the County and staff was unable to locate valid contact information to provide information about this use permit.

**CONCLUSION:** The use permit is compliant with the County's [Guidelines for Placement of Telecommunications Facilities on County-Owned Property](#) and with FCC regulations, as well as conditions of approval and applicable provisions of the Arlington County Zoning Ordinance. The antennas and related equipment do not create an undue, adverse visual impact on the area. Therefore, staff recommends the County Board renew the subject use permit, subject to all previously approved conditions, and added Condition #9, with no further scheduled County Board review.

### New Condition:

9. The applicant agrees that any non-functioning antennas shall be removed at the time of installation of any proposed new antennas. The applicant further agrees that, in the future, any of the applicant's antennas on the site shall be removed within ninety (90) days after cessation of use. The applicant agrees to submit to the Zoning Administrator a letter (within the aforementioned ninety (90) day period) listing the number and type of antennas and other related equipment that shall be removed including photo documentation demonstrating removal of non-functioning equipment.

## **PREVIOUS COUNTY BOARD ACTIONS:**

January 7, 1995	Approved use permit (U-2823-94-4) for installation of six panel antennae not exceeding 54 inches in length by 9 inches in width on the existing water tower and two equipment cabinets, subject to conditions with a review in one (1) year (January 1996).
January 20, 1996	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions with a review in three (3) years (January 1999).
January 27, 1999	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions and a revised Condition #2, with a review in three (3) years (January 2002).
January 26, 2002	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions and a revised Condition #2, with a review in three (3) years (January 2005).
April 16, 2005	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, with a review in one (1) year (April 2006).
April 22, 2006	Deferred use permit (U-2823-94-4) review for operation of six panel antennae on the existing water tower and two equipment cabinets to July 8, 2006.
July 8, 2006	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, with a review in one (1) year (July 2007).
July 7, 2007	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous

	conditions, with a review in one (1) year (July 2008).
July 19, 2008	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, with a review in two (2) years (July 2010).
September 29, 2009	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, with a County Board review in ten (10) months (July 2010).
July 10, 2010	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, a revised condition #6, and with a County Board review in one (1) year (July 2011).
July 11, 2011	Renewed use permit (U-2823-94-4) for operation of six panel antennae on the existing water tower and two equipment cabinets, subject to all previous conditions, and with a review by the County Board in February 2013 (the proposed date coincides with the cell phone providers' lease renewal).
October 20, 2012	Deferred a use permit amendment (U-2823-94-4) to amend Condition #1 re: maximum size of permitted antennas and to permit removal of existing antennas and replacement with new antennas for Sprint to the November 17, 2012 County Board meeting.
November 27, 2012	Approved a use permit amendment (U-2823-94-4) to amend Condition #1 re: maximum size of permitted antennas and to permit removal of existing antennas and replacement with new antennas for Sprint subject to all previously approved conditions, revised Conditions #1, 2, and 8, and with an administrative review in one year (November 2013) and a County Board review in three (3) years (November 2015).
November 17, 2015	Renewed the use permit (U-2823-94-4), subject to all previously approved conditions, with a County Board review in one (1) year (November 2016).

October 27, 2016

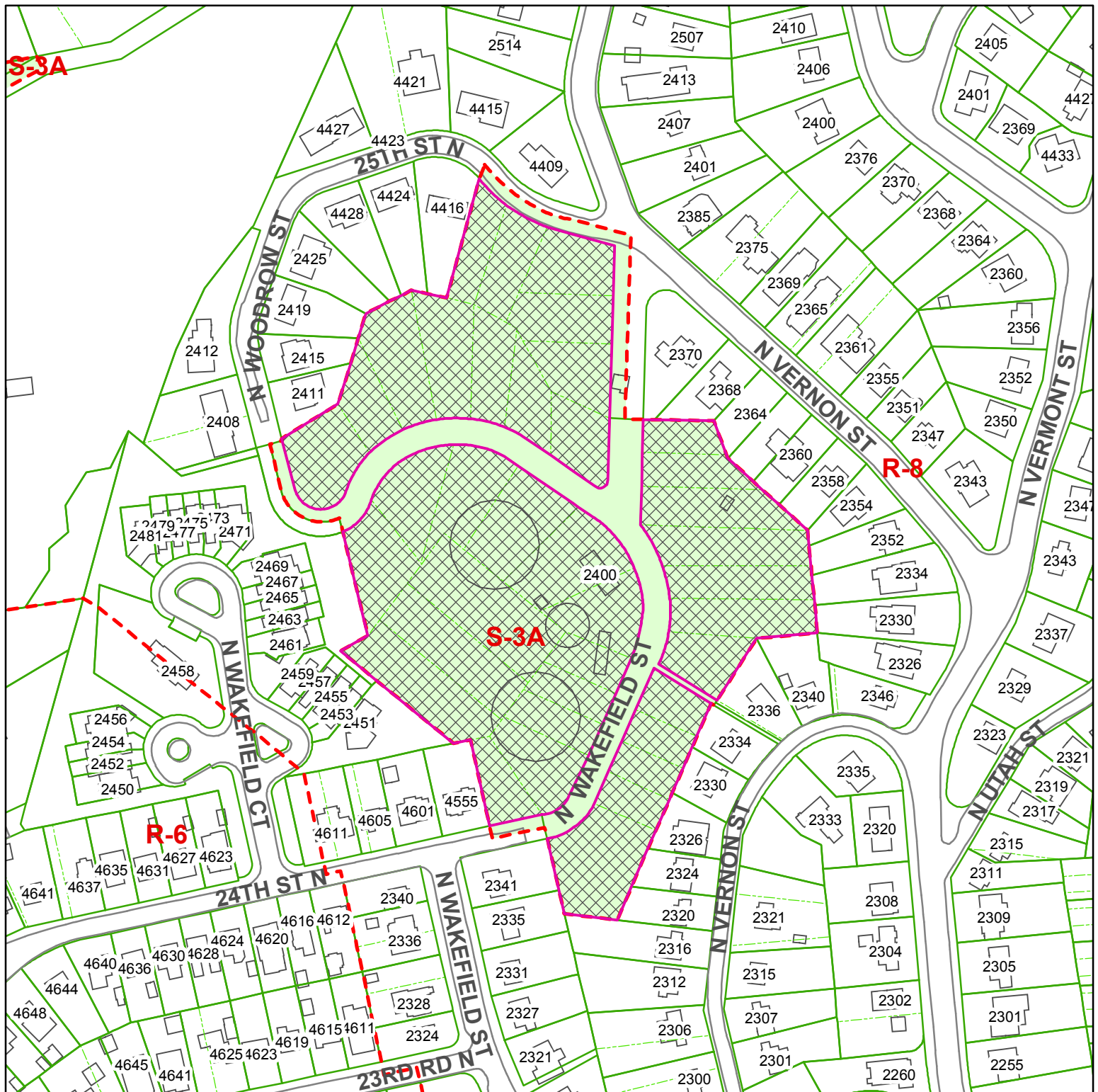
Renewed the use permit (U-2823-94-4), subject to all previously approved conditions, with a County Board review in one (1) year and four (4) months (February 2018).

Approved Conditions:

1. The applicant agrees to install all new antennas and related equipment as shown on the application package dated August 6, 2012 (for Sprint) and to maintain any other existing telecommunications antennas and related equipment on-site intact. New antennas shall be mounted at a radial center (RAD) height no greater than 148' above ground level and shall not be larger than 80 inches in length and 16 inches in width. All antennas shall be mounted on the catwalk railing of the water tower and shall be painted to match the color of the tank. No antennas are to be installed on the top of the tank or on the tank's legs or support structure. The applicant agrees that any future installation of antennas on this property that are in keeping with the intent of the use permit conditions and all Federal, State, and Local regulations shall be subject to review, and approval, by the Zoning Administrator. The Zoning Administrator shall approve the installation of such antennas and related equipment if he or she finds that such antennas and related equipment will (1) achieve satisfactory radio frequency ranges as specified by the Federal Communications Commission (FCC) standards which are not injurious or detrimental to the public welfare, via a radio frequency/electromagnetic emissions report upon submission of the administrative change request (2) the proposed antennas are mounted at a RAD height no greater than 148' above ground level on the same or similar mounts located on the catwalk railing, and (3) that the first emissions test for any new antennas shall be submitted one (1) month after their installation to the Zoning Administrator, the Presidents of the Donaldson Run and Old Dominion Civic Associations, President of the Anlostan Home Owners' Association and the Director of the Emergency Communications Center for their records. If at any time the applicant's operations cause it to exceed the standards specified by the FCC, then the applicant agrees to immediately cease operations until the violation can be corrected.
2. The electromagnetic emissions from the applicant's antennae shall at all times comply with the ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 KHz to 300 GHz, as adopted by the Federal Communications Commission in its Second Order and Report on Personal Communications Systems (Adopted: September 23, 1993 in Docket 90-314). The applicant agrees to have an independent engineering firm conduct, at its sole costs and expense, field measurements of its electromagnetic emissions. The first test shall be conducted within 30 days after the applicant's equipment is installed and becomes operational. Thereafter, the test shall be conducted annually from the approval date of the special exception use permit (January 7, 1995). True and correct copies of the field measurement, certified by an engineer licensed to practice in the Commonwealth of Virginia, shall be submitted to the Zoning Administrator, the Presidents of the Donaldson Run and Old Dominion Civic Associations, the President of the Anlostan Home Owners' Association, and the Director of the Emergency Communications Center within 30 days of the test completion no later than June 1st of each year. If at any time the applicant's operations cause it to exceed the standards set forth in the above ANSI standard, then the applicant agrees to immediately cease operations until the violation can be corrected. The applicant agrees not to continue operations until such time as the system is operating within the applicable standard.



3. The applicant agrees to limit its use of the Lee Pumping Station to personal communications services operating within its FCC license.
4. The applicant agrees to limit access to the Lee Pumping Station site to bi-monthly maintenance and repair of equipment. Service vehicles shall be limited to vehicles no larger than a one (1) ton truck or van.
5. The applicant and County representatives, at the applicant's sole expense, shall make yearly inspections of the applicant's antenna mounts and other equipment installation to ensure the antennae and equipment are installed in accordance with the plans and specifications approved by the County. The applicant agrees to immediately repair any deficiencies found.
6. The applicant agrees to remove any equipment not in use or operation from the water tower. The applicant further agrees to place waterproof identification labels on the existing antennas and related facilities, including cables and cabinets inside and outside the Equipment Room, located at the site, by or before August 31, 2010.
7. The applicant agrees to install its equipment and antennae and to complete the relocation of County equipment, as provided for in the Lease Agreement, within 20 working days after commencement of the work. The applicant agrees to limit work to Mondays through Fridays from 8:00 a.m. to 6:00 p.m.
8. The applicant shall establish and identify a liaison who shall be available to address any concerns regarding its operations at the Lee Pumping Station. The name and telephone number of the liaison shall be sent to the Donaldson Run Civic Association, the Old Dominion Civic Association, the President of the Analostan Home Owners' Association and to the Zoning Administrator.




**U-2823-94-4**

**2400 N Wakefield St**

**RPC # 05-005-072**



 Case  
Location(s)  
Scale: 1:2,400

Note: These maps are for property location assistance only. They may not represent the latest survey and other information.

**Department of Community Planning, Housing and Development**

County Use Only  
Date Placard Posted \_\_\_\_\_  
By \_\_\_\_\_  
Removed \_\_\_\_\_

# Periodic Safety Monitoring (PSM) Compliance Report

Prepared for:  
Sprint  
7267 Park Circle Drive  
Hanover, MD 21076



Site No. DC03XC179  
Marymount  
2400 N. Wakefield Street  
Arlington, Virginia 22207  
Arlington County  
38.90111; -77.12083 NAD83

EBI Project No. 6217001275  
Site Visit Date: April 12, 2017  
Report Date: April 26, 2017

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY.....</b>	<b>I</b>
<b>1.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS .....</b>	<b>2</b>
<b>2.0 SITE AND VICINITY SURVEY .....</b>	<b>4</b>
<b>3.0 SUMMARY AND CONCLUSIONS.....</b>	<b>5</b>
<b>4.0 LIMITATIONS .....</b>	<b>5</b>

## APPENDICES

<b>Appendix A</b>	<b>Antenna Table</b>
<b>Appendix B</b>	<b>Site Photographs</b>
<b>Appendix C</b>	<b>Monitoring Results</b>
<b>Appendix D</b>	<b>Personnel Certifications</b>
<b>Appendix E</b>	<b>Site Survey Data</b>

## **EXECUTIVE SUMMARY**

### **Purpose of Report**

This report has been prepared to satisfy the bi-annual periodic safety monitoring (PSM) per the conditions of approval.

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Sprint, to conduct radio frequency electromagnetic (RF-EME) monitoring for Sprint Site DC03XC179 located at 2400 N. Wakefield Street in Arlington, Virginia to determine RF-EME exposure levels from wireless communications equipment installed at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general population exposures and occupational exposures. This report summarizes the results of RF-EME monitoring in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

A survey was performed on April 12, 2017 to determine the RF emission levels present at the site. Measurements were performed on the areas considered accessible to the occupational population at ground level within the tower compound, as well as the general population at ground level surrounding the facility.

This report contains a summary of the RF EME analysis for the site, including the following:

- Site Photographs
- On-site monitoring results
- Site Survey Data

This document addresses the compliance of Sprint's transmitting facilities independently and in relation to all collocated facilities at the site.

### **Statement of Compliance**

Based on the FCC criteria, there are no measured areas on any accessible ground-level walking/working surface related to the existing site conditions that exceed the FCC's occupational and general population exposure limits at this site.

## SITE DESCRIPTION

Sprint operates three (3) wireless telecommunication antennas on a water tank in Arlington, Virginia. There are three sectors (A, B and C) at the site, with one (1) antenna installed per sector. The Sector A antenna is oriented 15° from true north. The Sector B antenna is oriented 90° from true north. The Sector C antenna is oriented 235° from true north. Information supplied by Sprint shows the bottoms of the antennas to be 145 feet above ground level.

Access to this site is accomplished by elevating workers to antenna level. In addition, the tank is surrounded by a gated fence. As such, the general public is not able to access the antennas.

EBI conducted a site visit on April 12, 2017. At the time of the site visit, in addition to the Sprint antennas, T-Mobile antennas were present on the wireless telecommunication facility. Measurements were taken at the ground level to record existing RF-EME levels resulting from these antennas combined with Sprint's equipment. Appendix B contains site photos taken on April 12, 2017 during the on-site survey. Appendix C presents the monitoring results along with a brief description of the monitoring locations. Appendix E contains climate and site observations recorded during the site visit.

### I.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public.

**Occupational/controlled exposure limits** apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**General population/uncontrolled exposure limits** apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

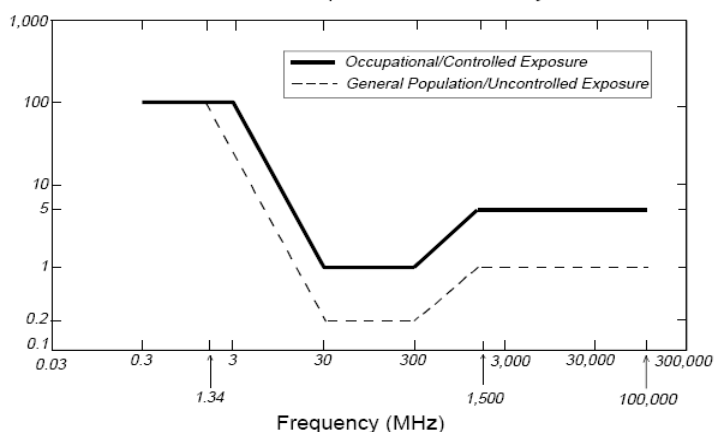
The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm<sup>2</sup>). Known as the power density, the FCC has established limits considered protective of the general and occupational populations.

Table I: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

\* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)  
Plane-wave Equivalent Power Density





Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
Cellular Telephone	870 MHz	2.90 mW/cm <sup>2</sup>	0.58 mW/cm <sup>2</sup>
Specialized Mobile Radio	855 MHz	2.85 mW/cm <sup>2</sup>	0.57 mW/cm <sup>2</sup>
Most Restrictive Freq. Range	30-300 MHz	1.00 mW/cm <sup>2</sup>	0.20 mW/cm <sup>2</sup>

MPE limits are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

According to information provided to EBI, Sprint operates within the PCS and SMR bands at this site. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

## 2.0 SITE AND VICINITY SURVEY

EBI performed an exterior ground-level RF-EME survey on April 12, 2017. The site photos taken from ground level are presented in Appendix B.

Monitoring was performed using a Narda NBM-550 Electromagnetic Radiation Survey Meter, Serial #E-0560 with a Narda EA5091 Shaped Probe with a frequency range of 300 kHz-50 GHz. Probe calibration was performed on February 15, 2017 with meter calibration performed on February 16, 2017. This meter was programmed to measure the total power density for all electromagnetic radiation within the 300kHz-50GHz frequency range and report the power density as a percent of the FCC's Controlled MPE.

The results of the on-site monitoring at the site are summarized below:

Measured Maximum Permissible Exposure (MPE)*			
Walking / Working Surface	FCC's Controlled MPE (%)	FCC's Uncontrolled MPE (%)	Power Density (mW/cm <sup>2</sup> )
Base of Tower/Within Tower Compound	0.2375	1.1875	0.0187

\*Emission results are cumulative of all emitters on site. It was noted that there was no change to Sprint's equipment.



A description of monitoring locations and measurements of power density can be found in Appendix C. Appendix E contains notes from the site survey.

At the time of the site survey, it was noted that there was a yellow “Guidelines” and Blue “Notice” sign located at each access gate, a Blue “Notice” sign located on the Sprint equipment shelter door, and a Yellow “Caution” sign located at the base of the water tank indicating the presence of RF emitting equipment at the site.

### **3.0 SUMMARY AND CONCLUSIONS**

EBI has prepared this Radiofrequency Emissions Compliance Report for telecommunications equipment installed at the site located at 2400 N. Wakefield Street in Arlington, Virginia.

Based on the FCC criteria, there are no measured areas on any accessible ground-level walking/working surface related to the existing site conditions that exceed the FCC’s occupational and general population exposure limits at this site. Based on the site information provided to EBI and information collected at the time of the site visit, this site is in compliance with FCC regulations for RF exposure.

### **4.0 LIMITATIONS**

This report was prepared for the use by Sprint. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information collected during the site visit and provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

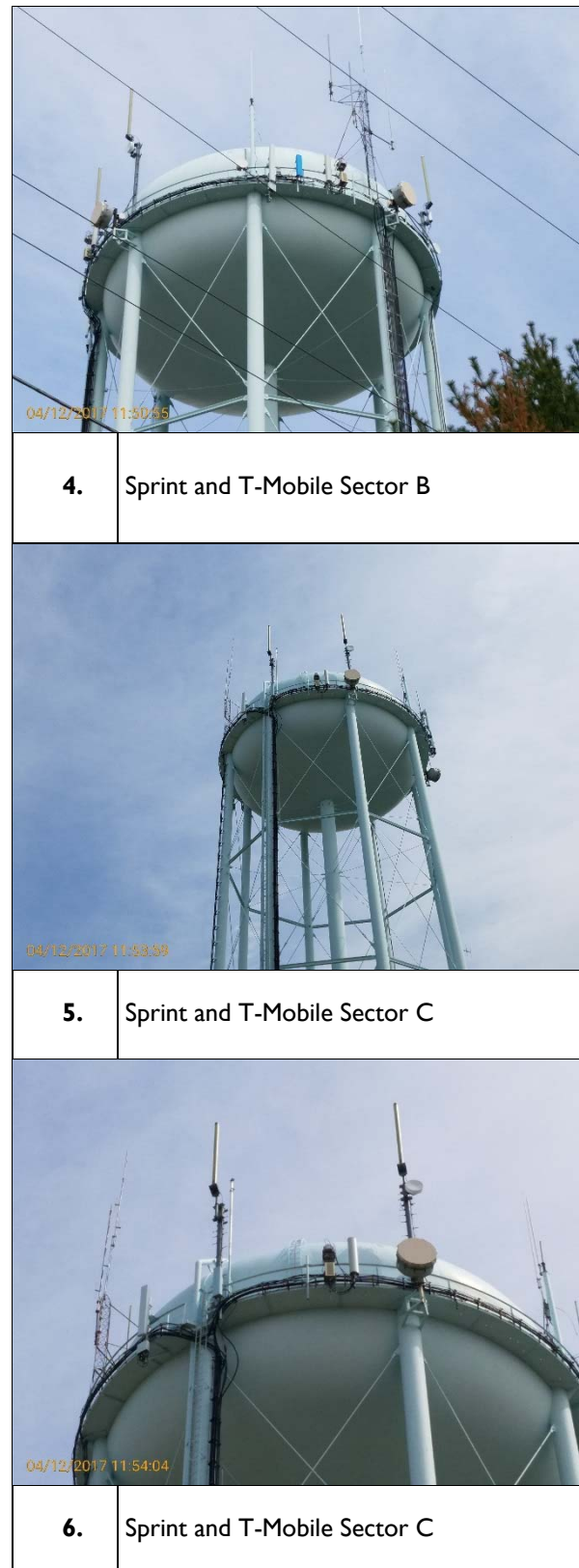
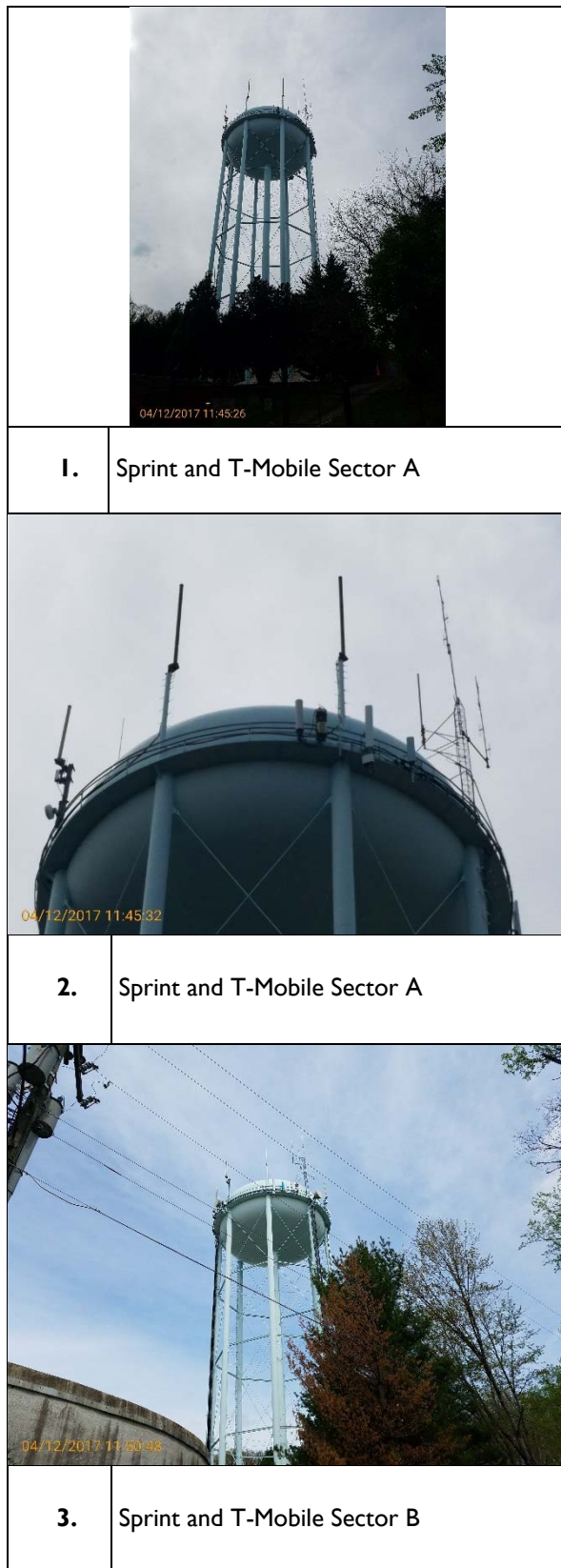
## **Appendix A**

### **Antenna Table**

Ant #	Type	Mfr/Model	Freq (MHz)	Azimuth°	Mech. Down Tilt°	Height (Above Ground Level/ ft.)	Carrier
1	Panel	RFS/ APXVSP18-C-A20	800/1900	15	5	145	Sprint
2	Panel	RFS/ APXVSP18-C-A20	800/1900	90	5	145	Sprint
3	Panel	RFS/ APXVSP18-C-A20	800/1900	235	5	145	Sprint
4	Panel	Ericsson AIR21	N/A	30	N/A	145	T-Mobile
5	Panel	Ericsson AIR21	N/A	30	N/A	143	T-Mobile
6	Panel	Ericsson AIR21	N/A	80	N/A	145	T-Mobile
7	Panel	Ericsson AIR21	N/A	80	N/A	143	T-Mobile
8	Panel	Ericsson AIR21	N/A	250	N/A	145	T-Mobile
9	Panel	Ericsson AIR21	N/A	250	N/A	143	T-Mobile
10-11	Dipole	N/A	N/A	N/A	N/A	Varies	Unknown
12-22	Omni	N/A	N/A	N/A	N/A	Varies	Unknown
23-26	Microwave	N/A	N/A	Varies	N/A	Varies	Unknown

## **Appendix B**

### **Photographs**







**7.** Sprint Sector A Transmitting Direction



**8.** Sprint Sector B Transmitting Direction



**9.** Sprint Sector C Transmitting Direction



**10.** Northeast Access Gate



**11.** East Access Gate



**12.** Southeast Access Gate





**13.** Tank Base Signage



**14.** Sprint and T-Mobile Equipment

## **Appendix C**

### **Monitoring Results**








## Spatially Averaged Measurements (% of the FCC MPE Standards) \*

Location Reference	Spatially Averaged % Occupational MPE	Spatially Averaged % General Population MPE
10' West of the Tank	0.2375	1.1875
80' West of the Tank	0.2229	1.1145
125' Northwest of the Tank	0.0474	0.2370
30 ' North of the Tank	0.0874	0.4370
125' Northeast of Tank	0.0961	0.4805
Sprint Equipment	0.0603	0.3015
75 ' East of Tank	0.0159	0.0795
50' Southeast of Tank	0.0518	0.2590
100 Southeast of Tank	0.0512	0.2560
30' Southwest of Tank	0.0923	0.4615
100' Southwest of Tank	0.2128	1.0640
30' South of Tank	0.0022	0.0110
100' South of the Tank	0.0071	0.0355
South Access Gate	0.0193	0.0965
Southeast Access Gate	0.0060	0.0300
Northeast Access Gate	0.0017	0.0085
East Access Gate	0.0012	0.0060
Southeast	0.0117	0.0585

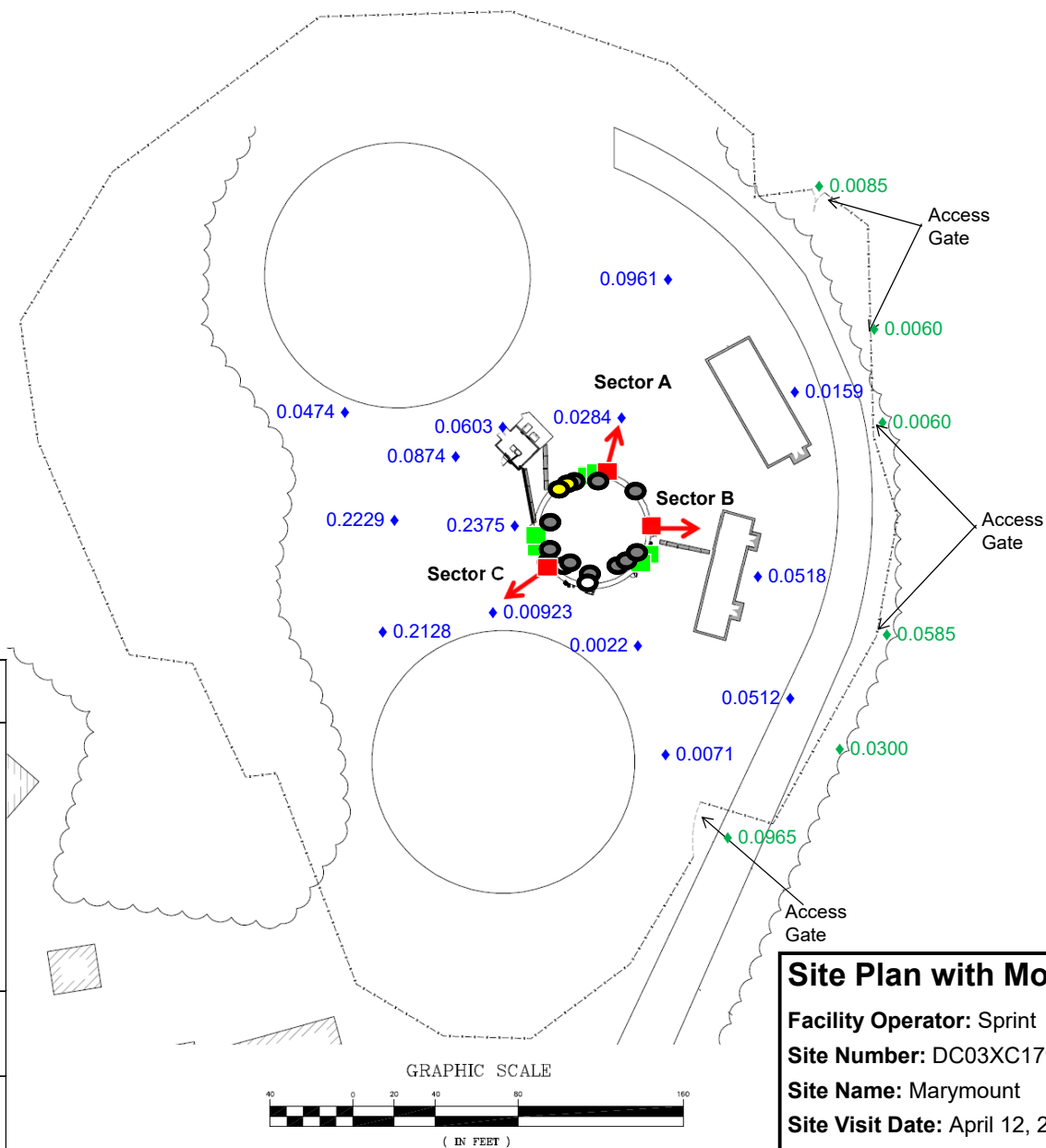
\*Emission results are cumulative of all emitters on site. It was noted that there was no change to Sprint's equipment.

## LEGEND

	Sprint Antennas
	T-Mobile Antennas
	Dipole Antennas
	Omni Antennas
	Microwave Antennas

◆ Blue numbers are Spatially-Averaged Measurements reported in percentage (%) of FCC Occupational Limit

◆ Green numbers are Spatially-Averaged Measurements reported in percentage (%) of FCC General Public Limit



## Site Plan with Monitoring Results

Facility Operator: Sprint  
 Site Number: DC03XC179  
 Site Name: Marymount  
 Site Visit Date: April 12, 2017

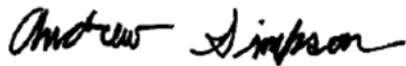
## **Appendix D**

### **Certifications**

## Field Personnel Certification

I, Andrew Simpson, state that:

- I am an employee of Envirobusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified “occupational” under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have been trained in the proper use of the RF-EME measurement equipment, and have successfully completed EBI training in the policies and procedures for site survey protocols.
- All information collected during the site survey and contained in this report is true and accurate to the best of my knowledge and based on the data gathered.

  
\_\_\_\_\_

## Preparer Certification

I, Andrew Simpson, state that:

- I am an employee of Envirobusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified “occupational” under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed the data collected during the site survey and provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

*Andrew Simpson*

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## **Appendix E**

### **Site Survey Data**

Surveyor Name	Andrew Simpson	Site Visit Date	April 12, 2017
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Site Information	
Andrew Simpson 2400 N. Wakefield Street Arlington, Virginia 22207	Arlington County <b>Site Coordinates (NAD83):</b> 38.90111; -77.12083

**MONITOR INFORMATION****PROBE INFORMATION**

Monitor Model #	NBM-550	Probe Model #	EA5091
Monitor Serial #	E-0560	Probe Serial #	1050
Calibration Date	02/16/17	Calibration Date	02/15/17
Next Recommended Calibration Date	02/16/19	Next Recommended Calibration Date	02/15/19

**CLIMATE INFORMATION**

Temperature (°F)	Sunny
Sunny/Overcast/Cloudy	No Wind
Windy/Mild Breeze/No Wind	N/A
Rainy/Drizzle/Foggy/Snowy	N/A
Other Noteworthy Weather Factors that Might Influence Readings	Sunny

**ACCESS INFORMATION**

Type of Facility	Water Tank
Property Owner and Contact Number	Arlington Water Authority
Who Manages Access (e.g. security, landlord, no one)	Arlington Water Authority
How is Access Managed? (locks, sign-in, etc)	Call (703) 558-2222
Ease of Access, in General (e.g. ease of breaching any access physical controls)	Locked Gate