TECHNICAL REPORT OF
SITE INVESTIGATION FOR
ELECTROMAGNETIC TRANSMISSIONS

LOCATION:

CROTON OVERLOOK CORPORATION

SECTION 70.15, BLOCK 1, LOT 2

TOWN OF YORKTOWN

WESTCHESTER COUNTY, NEW YORK

Prepared for:

Croton Overlook Corporation

PO Box 1132

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Prepared by:

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Croton Overlook Corporation

September 14th, 2010

Introduction

Electro-magnetic fields (EMF) are created by differences in voltage and exist wherever a positive or negative electrical charge is present. EMFs can be produced through naturally occurring processes such as the build-up of electrical charges in the atmosphere associated with thunderstorms. EMFs can also be generated by human-made sources, such as any electrical device that carries an electrical charge and/or current. EMFs are emitted when electrical equipment is operated: when the device is switched on and currents flows. Electro-magnetic fields, unlike electric fields, can pass easily through most materials and are not easily shielded or weakened by conducting objects such as buildings. The strength of an EMF decreases dramatically as distance from the source increases.

An evaluation of Electro-Magnetic Fields under existing conditions was conducted to verify safe conditions for the future development of Croton Overlook. While there are no official standards or guidelines, this analysis compares measured electro-magnetic field data to the general guidelines of the International Radiation Protection Association (IRPA) general public limit and the New York State Right-of-way (NYSROW) maximum guidelines for electric and magnetic fields.

Methodology

In order to properly evaluate electro-magnetic fields on-site, measurements were taken along the perimeter of the site that runs closest to nearby power lines, the proposed houseline closest to the power lines, and at several locations on site furthest from the source power lines. The location of each data collection point is displayed on the attached site plan (A-1).

Only one property line runs adjacent to power lines, which also runs along Dell Avenue. Six (6) locations, equally spaced over the length of this property line, were selected as sampling points. These points are labeled P1 – 6 on the attached site plan (A-1).

Six (6) locations, equally spaced over the length of the houseline closest to the aforementioned property line, were selected as sampling points. These points are labeled R1 – 6 on the attached site plan (A-1).

To establish an ambient EMF value, five (5) locations spread out along the length of the site farthest from the aforementioned property line and power source, were selected as sampling points. These points are labeled A1 – 5 on the attached site plan (A-1).

The EMF field was measured using an EMF/ELF Meter (model number 480823) manufactured by EXTECH Instruments. This meter measures a single axis, with a range of 0 to 199.9 milliGauss (0 to 19.99 microTesla) and a frequency bandwidth of 30 to 300 Hertz.

Results

Because the EMF meter used was a single-axis meter, three values were required for each sampling location. These values were measured by: (1) pointing the meter at the source of the EMF, in this case the nearby power lines (2) holding the meter horizontally and slowly rotating the meter 360 degrees, until the highest EMF measurement was achieved (3) holding the meter vertically and slowly rotating the meter 360 degrees, until the highest EMF measurement was achieved. These three measurements were averaged using the sum of squares method to produce an accurate EMF reading at a single point. Raw data has been attached in the Electro-Magnetic Strength Field Survey.

Table 1 below shows the results of the EMF collection data.

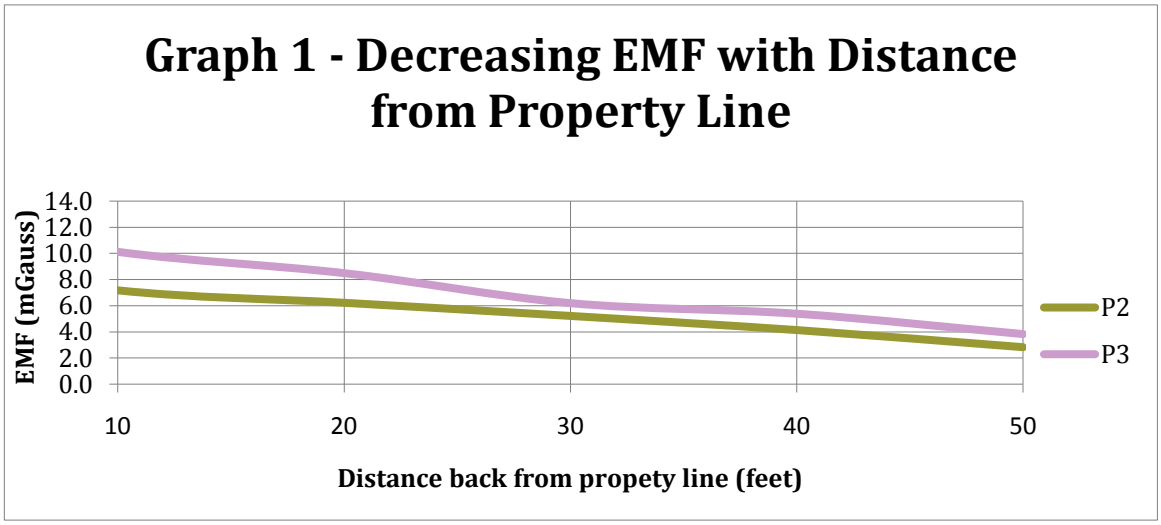
Table 1 – EMF Field Data Results

Sample Location	EMF milliGauss
Ambient Readings:	
A1	0.60
A2	0.30
A3	0.20
A4	0.30
A5	0.30
Houseline Readings:	
R1	0.50
R2	0.50
R3	0.90
R4	1.20
R5	1.20
R6	1.40
Property Line Readings:	
P1	4.30
P2	9.80
P3	13.00
P4	7.00
P5	4.60
P6	1.10

Conclusion

All electro-magnetic results, as displayed in Table 1, are well below the IRPA general public limit of 1000 milliGuass and the NYSROW maximum guidelines for magnetic field strength of 200 milliGauss. As expected, the highest levels of EMF were observed at the property line running adjacent to the power lines, specifically

locations P2 and P3. To observe how these higher EMF values decreased with distance from the source, additional measurements were recorded at 10, 20, 30, 40, and 50-foot distances away from the source. The results are displayed in Graph 1 below:



As shown in Graph 1, the EMF decreases steadily, as the distance from the power lines increases, to a value of 2.8 mGauss for P2 and 3.8 mGauss for P3 at just 50 feet from the property line.

There are no anticipated detrimental impacts by electro-magnetic fields on health or safety for the Croton Overlook development. All EMF measurements are several orders of magnitude less than the IRPA general public limit, and significantly lower than the NYSROW maximum guidelines for magnetic field strength. Houseline and ambient EMF measurements were all in the range of: 0.1 to 1.4 mGauss. For comparison purposes, the EMF of a fluorescent light bulb at a distance of 1 meter can be measured at 0.2 to 2.5 mGauss.

World Health Organization: Electromagnetic Fields (EMF)

New York State Right of Way: Maximum Guidelines for Electric and Magnetic Fields

International Radiation Protection Association (IRPA): General Public Limit

National Institute of Environmental Health Sciences: EMF, Electric and Magnetic Fields Associated with the Use of Electric Power

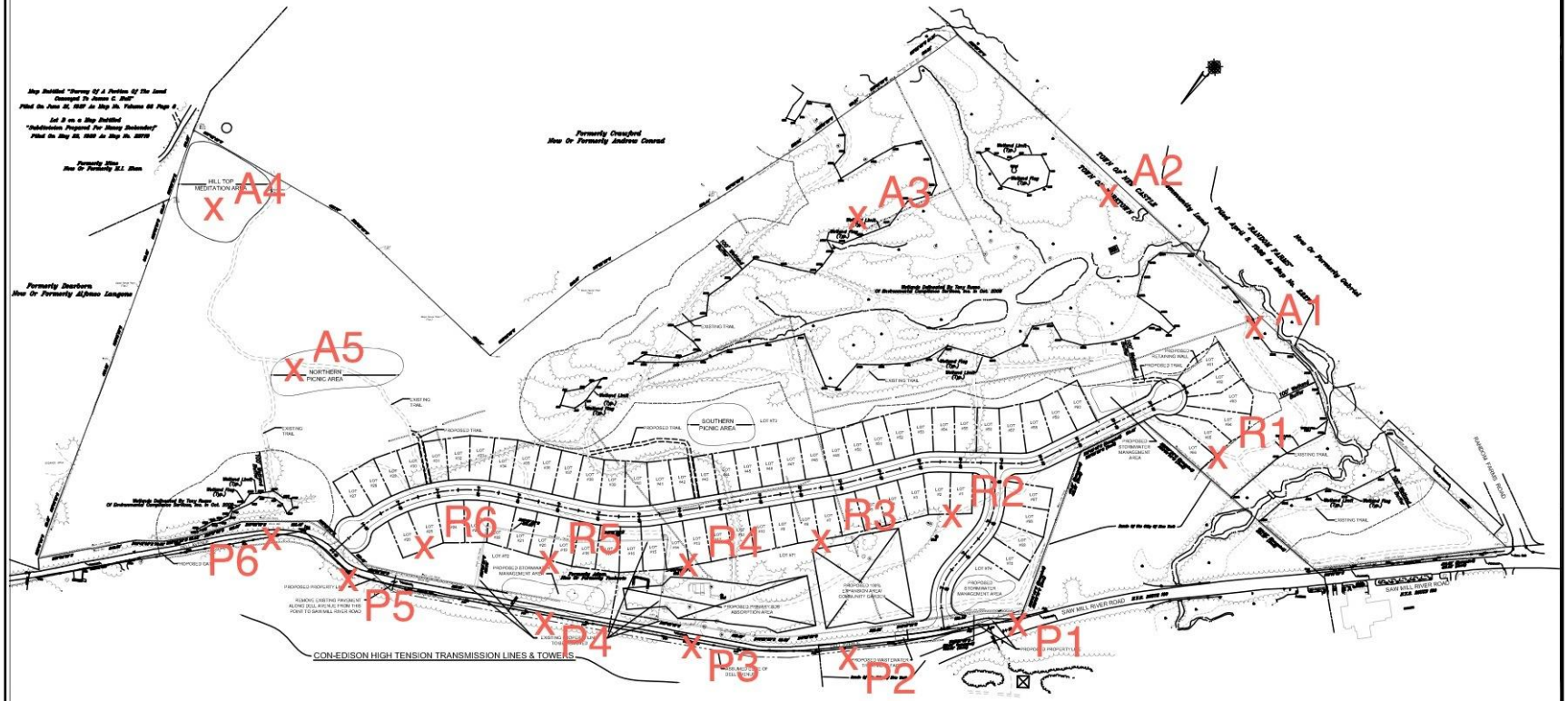
ElectroMagnetic Field Strength Survey

Survey Date: 9/13/2010
Survey Time: 11:00 AM - 3:00 PM
Inspector: Connor McBride
Client: Croton Overlook Corporation
Property Croton Overlook
Address Dell Ave, Yorktown NY

Test Plane:	**1...to Source**		**2...Vertical**		**1...Horizontal**		**FINAL**
	Distance feet	**EMF** milliGauss	**Distance** feet	**EMF** milliGauss	**Distance** feet	**EMF** milliGauss	**EMF milliGauss**
Ambient Readings:							
A1	851 ft	0.1	851 ft	0.5	851 ft	0.9	**0.6**
A2	1,205 ft	0.1	1,205 ft	0.4	1,205 ft	0.4	**0.3**
A3	1,278 ft	0.1	1,278 ft	0.4	1,278 ft	0.1	**0.2**
A4	1154 ft	0	1154 ft	0.3	1154 ft	0.2	**0.3**
A5	642 ft	0.2	642 ft	0.4	642 ft	0.4	**0.3**
Houseline Readings:							
R1	557 ft	0.1	557 ft	0.7	557 ft	0.4	**0.5**
R2	420 ft	0.2	420 ft	0.7	420 ft	0.5	**0.5**
R3	322 ft	0.7	322 ft	1.1	322 ft	0.8	**0.9**
R4	235 ft	0.2	235 ft	1.5	235 ft	1.4	**1.2**
R5	273 ft	0.1	273 ft	1.6	273 ft	1.4	**1.2**
R6	234 ft	0.6	234 ft	1.8	234 ft	1.6	**1.4**
Property Line Readings:							
P1	105 ft	1.6	105 ft	6.4	105 ft	3.3	**4.3**
P2	58 ft	1.8	58 ft	14.9	58 ft	7.9	**9.8**
P2+10	68 ft	1.7	68 ft	10.8	68 ft	5.9	**7.2**
P2+20	78 ft	1	78 ft	9.5	78 ft	5	**6.2**
P2+30	88 ft	1.5	88 ft	7.7	88 ft	4.5	**5.2**
P2+40	98 ft	1	98 ft	5.5	98 ft	4.5	**4.1**
P2+50	108 ft	1.3	108 ft	3.5	108 ft	3.2	**2.8**
P3	42 ft	5.4	42 ft	20.9	42 ft	6.7	**13.0**
P3+10	52 ft	4.4	52 ft	15.7	52 ft	6.4	**10.1**
P3+20	62 ft	3.9	62 ft	13.1	62 ft	5.4	**8.5**
P3+30	72 ft	3	72 ft	9	72 ft	5	**6.2**
P3+40	82 ft	3	82 ft	8.5	82 ft	2.4	**5.4**
P3+50	92 ft	2	92 ft	6	92 ft	2	**3.8**
P4	92 ft	3.6	92 ft	10.5	92 ft	4.8	**7.0**
P5	133 ft	3.1	133 ft	6.1	133 ft	4.2	**4.6**
P6	209 ft	0.3	209 ft	1.9	209 ft	0.5	**1.1**

WESTCHESTER COUNTY HEALTH DEPARTMENT

Site Plan A - 1



SITE DATA:

TAX MAP: SECTION 70.15, BLOCK 1, LOT 2 AND LOT 1
EXISTING ZONE: R1-80 (SINGLE FAMILY RESIDENTIAL DISTRICT)
PROPOSED ZONE: RSP-1 RESIDENCE DISTRICT (AGE-ORIENTED COMMUNITIES)
TOTAL AREA: 61.1008 ACRES + 1.654 ACRES = 62.7548 ACRES

	REQUIRED	PROPOSED
FLOOR AREA RATIO, USABLE	0.3	0.116