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February 16, 2010

Electronic Submission:
secretary@dps.state.ny.us

Jaclyn A. Brilling
Secretary
New York Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

Re: Case 04-M-0159, Proceeding on the Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems
Consolidated Edison Company of New York, Inc.'s *Report on the Results of Stray Voltage Tests and Facility Inspections for the Period beginning January 1, 2009 and Ending on December 31, 2009*

Dear Secretary Brilling,

Consolidated Edison Company of New York, Inc. ("Con Edison") submits for filing its *Report on the Results of Stray Voltage Tests and Facility Inspections for the Period beginning January 1, 2009 and Ending on December 31, 2009* ("Report").

The Report details the results of Con Edison's Stray Voltage Detection Program and its Electric Facility Inspection Program for the year ended December 31, 2009 and provides the certification of Con Edison's Vice President – Engineering and Planning that Con Edison has achieved its annual performance targets.

Sincerely,

Martin F. Heslin

Con Edison

STRAY VOLTAGE TEST and

FACILITY INSPECTION

Report on the results of stray voltage tests and facility inspections

for the period beginning January 1, 2009 and ending on December 31, 2009

February 15, 2010

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I. Background

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards ("Safety Standards"), issued on January 5, 2005 in Case 04-M-0159, with subsequent revisions issued on July 21, 2005 and December 15, 2008, require utilities to conduct an annual system-wide stray voltage detection program and a five-year equipment inspection program to mitigate stray voltage risks to the public and promote reliability.

This report describes Consolidated Edison Company of New York, Inc's ("Con Edison" or "the Company") stray voltage detection program and equipment inspection program conducted in 2009.

II. Company Overview

Con Edison is an investor owned utility that provides electric service to approximately 3.2 million customers in a service area of approximately 660 square miles within New York State encompassing New York City and most of Westchester County. The Company operates an electric transmission and distribution ("T&D") system that provides a high level of reliability in a very dense urban environment.

- Distribution
  a. Underground –The underground system has approximately 282,000 manholes, service boxes, and transformer vaults and above ground, pad mounted structures; 24,075 conduit miles of underground duct; 35,550 underground transformers; and approximately 94,000 miles of underground cable including primary, secondary and service cables.
  b. Overhead – The overhead system includes: 147 autoloops, 7 – 4 kV multi-bank substations, 230 – 4 kV unit substations, approximately 284,000 Con Edison or Verizon-owned poles, and approximately 36,000 miles of overhead wires including primary, secondary, and services. Cables operating at primary voltages of 33 kV, 27 kV, 13.8 kV, and 4 kV supply 47,119 overhead transformers that step the primary voltages down to 120/208/240 distribution voltages that are used by customers.
  c. Streetlights –Con Edison does not own, install, or maintain streetlights and traffic signals within its service territory. The New York City Department of Transportation (NYCDOT) and the local Westchester municipalities primarily own the streetlights and traffic signals in New York City and Westchester County. There are approximately 185,541 metal pole street lights and approximately 37,420 metal pole traffic signals within Con Edison's service territory. Con Edison cables and

- Transmission
  a. Underground – The underground transmission system delivers power at 69 kV, 138 kV, and 345 kV to various switching substations and area substations. The underground system has approximately 1,700 manholes and approximately 720 circuit miles of cable.
  b. Overhead - The overhead transmission system consists of 138 kV and 345 KV high voltage cable supported on towers and poles on rights-of-way located for the most part, north of New York City and terminating in Westchester County where the underground transmission system begins.
- Substations and Unit Substations
  There are 39 transmission substations, 60 area substations, 230 unit substations, and 15 Public Utility Regulating Stations.

III. Stray Voltage Testing Program

The Safety Standards require that Con Edison complete annual stray voltage testing by December 31 each year.

During the annual period ending December 31, 2009, Con Edison tested for stray voltage on all its T&D facilities with publicly accessible components capable of conducting electricity. In addition, Con Edison tested for stray voltage on all municipally owned metallic streetlights and traffic signals that are located on thoroughfares and areas that are publicly accessible and are directly supplied with electricity by the Company.

In addition, and in compliance with the Safety Standards, Con Edison:

- Immediately safeguarded and /or mitigated all voltage findings greater then or equal to 1.0 volt. The Company uses its best efforts to repair within 45 days all Company-owned equipment determined to have caused a voltage finding. Those that exceed 45 days are periodically monitored and tracked to completion. In instances where the stray voltage finding was determined to be caused by equipment that is not owned by Con Edison, the Company, after making the area safe, notified a responsible person associated with the premises of the unsafe condition and the need for the owner to arrange for a permanent repair.
- Tested all publicly accessible structures and sidewalks within a 30 foot radius of an energized structure, or stray voltage finding greater then or equal to 1. 0 volt.
- Responded to, investigated and mitigated positive findings of shock incidents reported by the public.

Of the total population of approximately 282,000 underground facilities, 178,048 were required to be tested manually. The remaining facilities were tested under

the mobile stray voltage program. Of the 178,048 underground facilities visited during manual testing, 1,861 did not require stray voltage testing due to inaccessibility.

- Inaccessible Underground Facilities Include:
    a. Private Property – Customer owned equipment on customer property
    b. Locked Gate/Fence – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.
    c. Company Property – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
    d. Construction – A structure located within a construction site. These structures are accessible only to construction personnel.
    e. Buried – A structure below grade that requires excavation to access the structure.
    f. Vaults – Structures located inside buildings. These structures are accessible only to Company and building maintenance personnel.
    g. Highway – Structures located on highways and on exit and entrance highway ramps. The performance of stray voltage testing would constitute an unacceptable risk to the employee.

Based on the initial overhead system inspection performed in 2005, there were approximately 284,000 overhead facilities (Con Edison or Verizon owned) found and inspected. This population of approximately 284,000 was the initial population used for creating the Company's Stray Voltage Testing Database. Out of the initial 284,000, approximately 6000 facilities have since been marked test not required in the testing database because they either no longer exist on the system, or are wood poles that have no attached appurtenances capable of conducting electricity; their electrically conductive appurtenances are not accessible to the public (pre-wired wood); the facilities are enclosed in fiberglass (non-conductive materials); the facilities are de-energized; and / or the facilities are deemed inaccessible to the public. For each testing cycle all facilities are checked on each mapping plate and in the field to ensure that conditions have not changed on facilities marked test not required in the past. In 2009, the population of Company owned overhead facilities that were required to be tested was 277,458. Of the 277,458 overhead facilities visited in 2009 to be tested for stray voltage, 737 did not require stray voltage testing because of the reasons stated above.

- Inaccessible Overhead Facilities Include:
    a. Private Property – Customer owned equipment on customer property
    b. Locked Gate/Fence – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.

c. Company Property – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
d. Construction – A structure located within a construction site. These structures are accessible only to construction personnel.
e. Highway – Structures located on highways and exit and entrance highway ramps. The performance of stray voltage testing would constitute an unacceptable risk to the employee.
f. Rail Road – Structures behind railroad fences or on a railroad right-of-way.

Of the total population of approximately 186,000 street light and 37,500 traffic signal facilities, approximatly130,000 facilities were required to be tested manually. The remaining facilities were tested under the mobile stray voltage program. Con Edison visited the approximate130,000 metal streetlight and traffic signal poles to which the Company directly supplies electric service. Of the facilities visited, 204 did not require stray voltage testing because these structures were not publicly accessible.

- Inaccessible Streetlights and Traffic Signals Include:
    a. Construction – A structure located within a construction site. These structures are only accessible to construction personnel.
    b. Restricted Access – Structures located within areas with active public improvement efforts or the World Trade Center.

There are approximately 2133 underground transmission facilities that comprise the Company's underground transmission system. Of the approximately 2133 underground transmission facilities, approximately 820 facilities did not require stray voltage testing because these structures were not publicly accessible (badged joints, buried joints, and facilities located on Con Edison property).

- Inaccessible Transmission Facilities Include:
    a. Construction – A structure located within a construction site. These structures are only accessible to construction personnel.
    b. Con Edison Property – Structures located on or adjacent to Con Edison properties which are secured from the public via fencing or other barriers and are inaccessible to the public.

Con Edison visited all of the 1,212 overhead transmission facilities that comprise the Company's overhead transmission system. Of the 1,212 overhead transmission facilities, all were tested.

In accordance with the PSC's "Order Establishing Rates for Electric Service," issued March 25, 2008 in Case 08-E-0539, Con Edison performed 12 underground system scans using mobile stray voltage detection technology between December 1, 2008 and December 31, 2009. In addition, in accordance

with the PSC's "Order Adopting Changes to Electric Safety Standards," issued December 15, 2008 in Case 04-M-0159, Con Edison performed one underground system scan using mobile stray voltage detection technology in 4 cities with a population of at least 50,000 in Westchester County in 2009.

IV. Facility Inspection Program

The Safety Standards require Con Edison to visually inspect at least 19% of its facilities annually, and inspect 100% of its electric facilities every five years.

- Training

  The Secondary System Analysis section of Distribution Engineering conducted train-the-trainer sessions in each of the major workout locations since the inception of the program. The participants included the managers, planners, and supervisors of the crews that would be performing the inspections. The Secondary System Analysis Team has also conducted various training seminars at all of the major work out locations which included the following topics:

  > The January 2004 stray voltage fatality
  > The PSC Safety Standards
  > The revised Safety Standards of December 15, 2008
  > Scope of the inspection
  > Completing the inspection form
  > Data entry process
  > Status of inspections to annual goal
  > Repairs pending
  > Accounting of the inspection
  > Performance mechanism
  > Secondary rebuild program
  > Visual Secondary Targeting (VST)
  > Laptop program (increases data entry efficiency)

In addition to the train-the-trainer sessions, an E-Learning training module was developed. This training module can be accessed from any computer on the Con Edison network. This class is also part of the curriculum in career advancement for new mechanics.

In accordance with the Safety Standards requirements, Con Edison uses the following severity levels to establish priority for repairs and scheduling:

- Level I – Repair as soon as possible but not longer than one week. A Level I deficiency is an actual or imminent safety hazard to the public or poses a serious and immediate threat to the delivery of power. Critical safety hazards present at the time of the inspection shall be guarded until the hazard is mitigated.
- Level II – Repair within one year. A Level II deficiency is likely to fail prior to the next inspection cycle and represent a threat to safety and / or reliability should a failure occur prior to repair.
- Level III – Repair within three years. A Level III deficiency does not present immediate safety or operational concerns and would likely have minimum impact on the safe and reliable delivery of power if it does fail prior to repair.
- Level IV – Condition found but repairs not needed at this time. Level IV is used to track atypical conditions that do not require repair within a five year timeframe. This level should be used for future monitoring purposes and planning proactive maintenance activities.

In accordance with the Safety Standards, when a temporary repair is located during inspection or performed by the Company, best efforts are put forth to make a permanent repair of the facility within 90 days. Temporary repairs that remain on the system for more than 90 days are due to extraordinary circumstances, i.e. storms, and require extensive repair activity. After reviewing our inspection database, there are no temporary repairs that have remained in place more than 90 days.

V. Company Facilities

Structure Categories

Con Edison has approximately 571,000 individual facilities that require testing for the presence of stray voltage. These facilities are broken down into the following five categories:

- **Overhead Distribution** – There are approximately 284,000 distribution pole structures in Con Edison's territory. The testing criteria include all utility-owned or joint use wooden poles with utility electrical facilities located on both public thoroughfares and customer property, including backyards or alleys. Stray voltage tests shall be performed on all wooden poles with metallic attachments such as ground wires, ground rods, anchor guy wires, riser pipes, or any electrical equipment within reach of the general public. Distribution overhead facilities are included in both the stray voltage and inspection programs.

- **Underground T&D and Underground Residential Distribution** – There are approximately 282,000 underground facilities in Con Edison's T&D systems. The testing criteria comprise of subsurface structures, including above ground, pad-mounted structures. A subsurface structure is defined as any manhole (MH), service box (SB), transformer vaults (V,VS), transformer manholes (TM), customer boxes (CB), buried boxes (BB), injunction boxes (IJ), P-Boxes (PB), and T-Tap boxes and switchgears specifically associated with Underground Residential Distribution systems ("URD"). These facilities are included in both the manual and mobile stray voltage testing and facility inspection programs.

- **Street Lights and Traffic Signals** – There are approximately 185,541 metal pole street lights and approximately 37,420 traffic signals within Con Edison's service territory. The testing criteria include all municipally owned metal pole streetlights, traffic signals, and pedestrian crosswalk signals located on publicly accessible thoroughfares and areas that are directly supplied by the Company. All stray voltage testing of street lights is performed at night while the fixtures are energized. Area and street lighting that is privately owned is not included in the stray voltage testing program, as per the Order's requirements. Con Edison does not own any metal streetlights. Streetlights and traffic signals are included in the stray voltage testing program only.

- **Substation Fencing** – Con Edison operates and maintains substations at 99 locations and PURS substation facilities at 11 locations (some locations contain more than one facility). The testing and inspection criteria consist of perimeter fencing and other electrically conductive materials where such materials are accessible to the general public. These materials include but are not limited to fences, doors, roll-up gates, metallic delivery boxes, dielectric fluid delivery ports and Siamese connections.

- **Overhead Transmission** – There are 1212 individual poles/towers that comprise Con Edison's overhead transmission system. The testing criteria comprises of all structures, guys, and down leads attached to the structures. Transmission structures support circuit voltages of 69 kilovolts and greater. Facilities that house circuits of lower voltage in addition to the transmission voltage levels are included in this category. All transmission structures are included in both the stray voltage and facility inspection programs.

VI. Annual Performance Targets

Con Edison performed the required stray voltage testing and facilities inspections in accordance with the requirements of the Safety Standards.

In compliance with the Safety Standards, Con Edison has met the annual performance target for stray voltage testing of 100% of electric facilities and streetlights and traffic signals for the annual period ending December 31, 2009.

In compliance with the Safety Standards, Con Edison has met the fifth-year performance target for inspection of 100% of its electric facilities for the five-year period ending December 31, 2009. The results are summarized in the table below.

Facility Inspection Program Results

Category	**Safety Standard Requirement for Five Year Period ended 12/31/2009**	**Actual Cumulative Inspected as of 2009**
Overhead Distribution	100%	100%
Overhead Transmission	100%	100%
Underground T&D	100%	100%
Pad-mounted Transformers	100%	100%
Company-owned Streetlights	0	0

* Con Edison does not own streetlight facilities. They are owned by N.Y.C. and Municipalities located in Westchester County.

5-Year Inspection Performance Summary

Overhead Distribution Facilities

Inspection Year	Unique Number of Overhead Distribution Structures Inspected	% of Overall Facilities Inspected (Cumulative)
2005	284,865	100%
2006	0	100%
2007	0	100%
2008	35,013	100%
2009	65,001	100%

Overhead Transmission Facilities

Inspection Year	Unique Number of Overhead Transmission Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2005	1192	100 %
2006	1216	100 %
2007	1216	100 %
2008	1216	100 %
2009	1212	100 %

* Con Edison inspects the entirety of its overhead transmission system once a year

Underground Distribution and URD Facilities

Inspection Year	Unique Number of Underground Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2005	41,698	15.24 %
2006	41,489	30.40 %
2007	36,821	43.85 %
2008	88,666	76.25 %
2009	65,001	100 %

Underground Transmission Facilities

Inspection Year	Gross Number of Underground Transmission Facilities Inspected (Gross Inspections)	% of Overall Facilities Inspected (Cumulative)
2005	613	29 %
2006	1135	82 %
2007	603	100 %
2008	1091	100 %
2009	673	100 %

*Con Edison inspects its underground transmission system at multiple intervals, all less then 5 years. The data above captures all inspections performed. The total number of underground transmission facilities is 2133.

VII. Certifications

Pursuant to Section 7 of the Safety Standards, the president or officer of each utility with direct responsibility for overseeing stray voltage testing and facility inspections shall provide an annual certification to the Commission that the utility has, to the best of his or her knowledge, exercised due diligence in carrying out a plan, including quality assurance, that is designed to meet the stray voltage testing and inspection requirements, and that the utility has:

- Tested all of its publicly accessible electric facilities and street lights, as referred to in the body of the February 15 Report, and
- Inspected the requisite number of electric facilities.

The certifications are attached as Exhibit 1 of this report.

VIII. Analysis of Causes of Findings and Stray Voltage

All New York State utilities perform an inventory on all Findings and report on the number of these Findings each year. Section 1(f) of the Safety Standards defines a Finding as "[a]ny confirmed voltage reading on an electric facility or

streetlight greater than or equal to 1 volt measured using a volt meter and 500 ohm shunt resistor." Section 1(c) defines Stray Voltage as "[v]oltage conditions on electric facilities that should not ordinarily exist. These conditions may be due to one or more factors, including, but not limited to, damaged cables, deteriorated, frayed, or missing insulation, improper maintenance, or improper installation."

Although not all Findings are due to Stray Voltage, NYS Utilities are required to report on all Findings, regardless of whether or not the voltage is normal to the operating system. In 2009, there were 6,267 sources of stray voltage found as a result of all methods of detections; approximately 90% of these findings were a result of the Mobile Stray Voltage Testing Program.

Stray voltage findings resulted from a variety of conditions including deterioration of conductors and insulation, damaged neutrals and connections, and defective customer equipment. All but one of these conditions have been repaired and mitigated. The explanation of the one condition is located in Appendix 2.

The following table contains a breakdown of the 2009 causes of stray voltage findings which were Con Edison responsibility:

2009 Stray Voltage Finding by Source Con Edison Responsibility	
Source of Stray Voltage	**Con Ed**
Service	503
Streetlight Service	474
Streetlight Con Edison Neutral	373
Main	259
Con Edison Neutral	254
Secondary Burnout	170
Service Con Edison Neutral	146
Crab	99
Main Con Edison Neutral	78
Abandoned Service	45
Sump Pump	28
Abandoned SL Service	23
Overhead Streetlight Service Neutral	16
Corroded Riser	10
Overhead Service	9
Overhead Service Neutral	8
Overhead Streetlight Service	6
Shunt	4
Overhead Secondary	3
Defective Transformer Equipment	2
Overhead Primary	2
Damaged/Missing Ground Rod	1
Defective Riser Bonding	1
Loose Connection at Con Edison Structure - Streetlight Service	1
Total	**2,515**

The following table contains a breakdown of the 2009 causes of stray voltage findings which were Non Con Edison responsibility:

2009 Stray Voltage Finding by Source – Non Con Edison Responsibility	
Source of Stray Voltage	**Non Con Edison**
Defective Customer Equipment	711
Defective Contractor Equipment	2
Defective Pigtail	4
Dept. of Transportation (DOT) Streetlight Neutral	525
Internal City Streetlight Wiring	2481
Loose Connection at Lamp Base	23
Open Ended Control Wiring	1
Contractor or Customer Damage	5
Total	**3,752**

In accordance with the PSC requirements, when a finding is discovered on an electric facility or streetlight during manual stray voltage testing, the Company performs stray voltage testing on all publicly accessible structures, streetlights and sidewalks within a minimum 30 foot radius of the electric facility or streetlight. Of the 666 findings identified and mitigated, 14 were a result of the 30-foot radius testing.

In the Company's 2008 "Stray Voltage Detection and Electric Facility Inspection Report," the stray voltage findings detected by the Mobile Stray Voltage Testing Program reflected the time period of 12/1/2007 through 11/30/2008. No manual testing was performed during this time period. Below is a breakdown of the stray voltage findings, by all methods of detection, for the time period of 12/1/2008 through 12/31/2008.

Stray Voltage Finding by Source & Responsibility (all methods of detection) 12/1/08 - 12/31/08			
Source of Stray Voltage	**Count of Findings**	**Con Ed**	**Non Con Ed**
Abandoned Service	4	4	-
Abandoned Streetlight Service	2	2	-
Con Edison Neutral	34	34	-
Crab	4	4	-
Defective Customer Equipment	51	-	51
Dept. of Transportation (DOT) Streetlight Neutral	3	-	3
Internal City Streetlight Wiring	117	-	117
Main	12	12	-
Neon Sign	1	-	1
Overhead Service	1	1	-
Secondary Burnout	6	6	-
Service	61	61	-
Service Con Edison Neutral	1	1	-
Streetlight Service	35	35	-
Sump Pump	2	2	-
Total	**334**	**162**	**172**

Mitigation through Detection

Four factors – the number of energized structures (ENEs), the duration of a mobile system scan, the voltage levels associated with the ENEs, and the population density – affect the likelihood that a member of the public or animal could experience a shock, referred to here as Electric Shock Reports (ESRs). A table containing the breakdown of ESRs called in to Con Edison for 2009 can be found in Appendix 3a. In the Company's 2008 "Stray Voltage Detection and Electric Facility Inspection Report," the electric shock reports called in to Con Edison by the public reflected the time period of 12/1/2007 through 11/30/2008. A table containing the breakdown of ESRs called into Con Edison for the time period of 12/1/2008 to 12/31/2008 can be found in Appendix 3b.

Since the likelihood of an ESR will increase or decrease in proportion to the total number of energized structures, the detection and repair of identified sources of stray voltage is the principal mitigation effort for reducing ESRs. Each completed repair effectively represents a mitigation of possible ESRs. As these repairs accumulate over time the potential ESRs decrease accordingly.

Additionally, conducting more mobile system scans annually has the positive effect of reducing the possibility of a member of the public or animal coming in contact with an energized structure because more stray voltage conditions would be detected and mitigated.

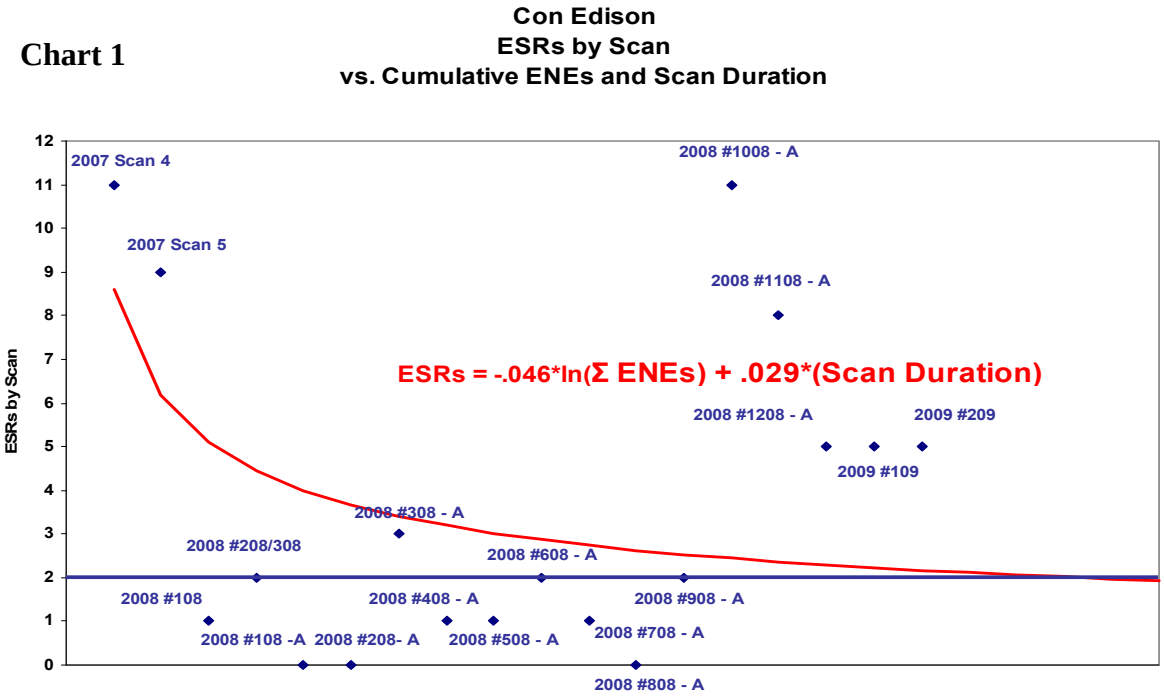
Although both ENE voltage levels and population density are recognized as contributory factors in ESR occurrences, these two factors are not subject to control such that they can be meaningfully incorporated into ESR or Generation Rate analyses.

Based on these considerations the following analyses demonstrate the reduction in ESRs realized through continued ENE elimination. A separate analysis is carried out for each of the three major system elements that could contribute to an ESR: Con Edison, DOT, and Customer Equipment (Public Access).

For each system element attention was restricted to ESRs occurring across system "2007 Scan 4" through "2009 Scan 209". These scans correspond to the time period June 12, 2007 through June 14, 2009 inclusive. Since significant weather events occurred during the winter of 2009, the exacerbating effects of rain and/or snow on the manifestation of ESRs have contributed to a minor increase from the previous year. Finally, each of the analyses is based on the association among ESRs, cumulative detected ENEs, and scan durations.

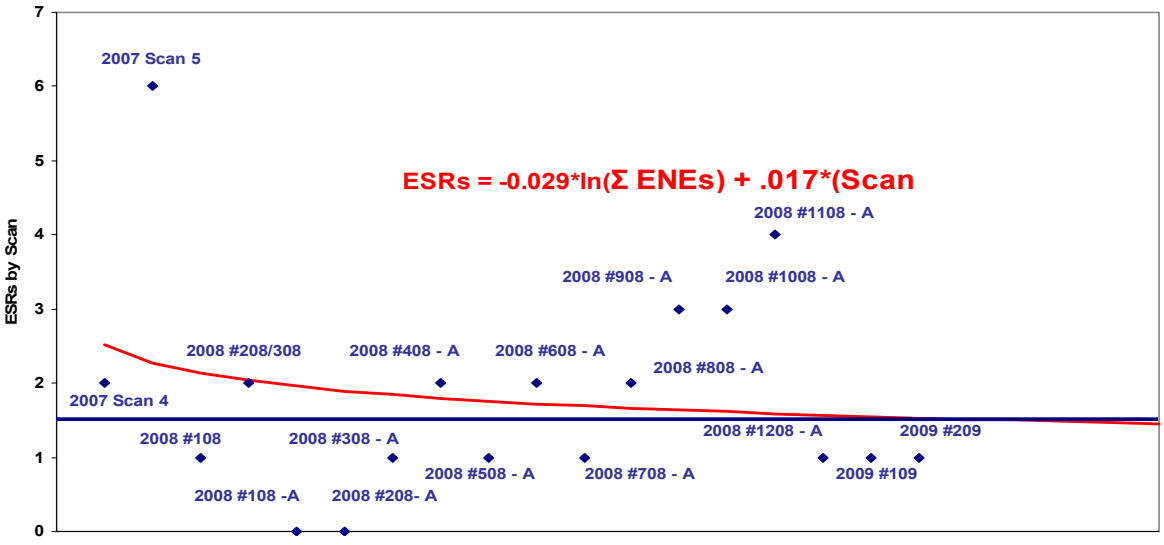
The reduction of ESRs associated with Con Edison appears on Chart 1. The duration of scans from the (2008) scan duration level were reduced to 35 days each after scan #708-A. The expected ESRs at this scan duration level should fall to approximately 2 per month early in 2009. This prediction is consistent with the 2009 actual results of 24 shocks due to Con Edison responsibility. Based on this prediction we expect a similar result in 2010.

Chart 1



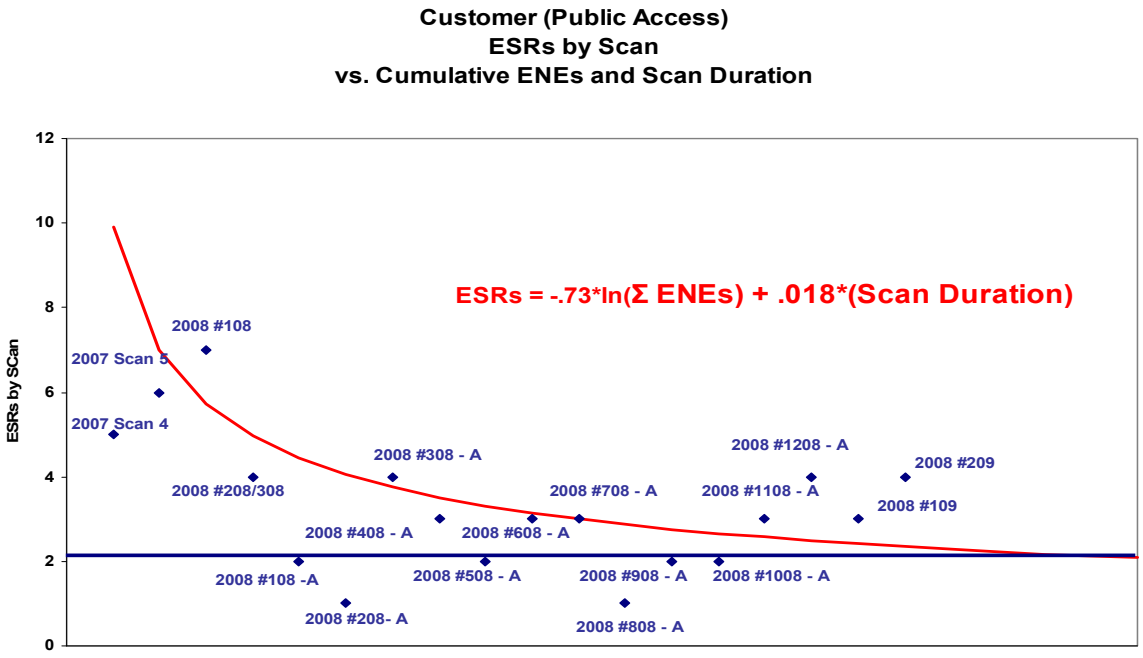
The reduction of ESRs associated with the DOT appears on Chart 2. The duration of scans from the (2008) scan duration level were reduced to 35 days each after scan #708-A. At 35 days per scan through the end of 2009 expected ESRs should fall between 1 to 2 per month. This demonstrates marginal improvement over current scan durations. In 2009 there were 6 shocks associated with DOT equipment failures. This result is better then predicted, and is likely the result of various programs implemented by both DOT and Con Edison to mitigate shocks.

Chart 2



The reduction of ESRs associated with Customer Equipment (Public Access) appears on Chart 3. The duration of scans from the (2008) scan duration level were reduced to 35 days each after scan #708-A. At 35 days per scan through the end of 2009 expected ESRs should fall to approximately 2 per month with no significant reduction anticipated below that level in the near future. These ESRs appear essentially insensitive to changes in scan duration at this point in time. The actual performance indicates that these shock events are less sensitive to our mitigation efforts then we initially projected. In 2009 we responded to 33 validated shock reports on publicly accessible customer equipment, this is 38% higher then predicted by the model.

Chart 3



IX. Analysis of 2009 Inspection Results

Inspection Breakdown

Facility Inspection Program	2005	2006	2007	2008	2009	5-Year Cumulative Unique Inspections	Percent Completed
Distribution - Underground	41,698	41,489	36,821	88,666	65,001	273,675	100%
Distribution - Overhead	284,865	0	0	35,001	65,001	284,865	100%
Transmission – Underground*	613	1135	603	1091	673	2133	100%
Transmission - Overhead	1192	1216	1216	1216	1212	1216	100%
Substations	22	23	20	20	14	99	100%
PURS Facilities	3	2	2	2	2	11	100%
Unit Substations	230	230	230	230	230	230	100%
Total	228,621	44,095	38,892	126,226	132,133	561,756	100%

*Gross inspections performed. Con Edison inspects its underground transmission system at multiple intervals, all less then 5 years. The data above captures all inspections performed.

Overhead Distribution Structures

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
65,001	23,223	35.727%

Breakdown of Locations with Deficiencies

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	4	0.017%
2	1,742	7.501%
3	9,909	42.668%
4	11,568	49.812%
Total:	23,223	100%

Overhead Transmission Facilities

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
1212	857	70%

Breakdown of Locations with Deficiencies

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	1	1%
2	0	0%
3	0	0%
4	856	99%
Total:	857	100%

Underground Distribution and URD Facilities

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
65,001	55,250	85 %

Breakdown of Locations with Deficiencies

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	256,461	80 %
2	37,792	12 %
3	3,250	1 %
4	23,785	7 %
Total:	321,288	100%

* The tracking of levels for underground inspections began in the fourth quarter of 2009.

** Multiple deficiencies were identified per location.

In 2008, the Company devised an aggressive plan, including hiring contractors to work with Company forces, to effectively complete 56% of the unique underground inspections required to complete the 5-year inspection cycle. In 2009, 80% of the underground facility locations found with deficiencies were repaired immediately before leaving the location; whereas 7% of the underground facility locations found with deficiencies are to be completed in the long term (level 4). Multiple deficiencies were identified per location. Of the 93% of deficiencies found that are not long term repairs, 13% are to be completed within 1 or 3 years. Thus, an 87% effectiveness ratio for the completion of immediate repairs was achieved.

Streetlights

Con Edison does not own streetlight facilities. They are owned by N.Y.C. and Municipalities located in Westchester County

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
0	NA	NA

Breakdown of Locations with Deficiencies

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	NA	NA
2	NA	NA
3	NA	NA
4	NA	NA

X. Quality Assurance

The Safety Standards require electric companies to develop a quality assurance program to "ensure timely and proper compliance with these safety standards." Con Edison has developed a comprehensive quality assurance program to address the stray voltage testing and facility inspections requirements. The quality assurance program includes:

- Stray voltage testing of underground distribution structures including Underground Residential Distribution (URD), overhead distribution structures and municipality owned streetlights
- Stray voltage testing of transmission and substation facilities
- Facility inspections of underground distribution structures including URD and overhead distribution structures
- Facility inspection of transmission facilities and substation facilities

This section addresses Con Edison's quality assurance program for the aforementioned stray voltage testing and facility inspection.

Quality Assurance Measures Instituted: Stray Voltage Testing of Underground Distribution Structures, Overhead Distribution Structures, and Municipality Owned Streetlights

Con Edison developed a quality assurance plan to ensure that stray voltage testing was performed as specified. The reliability and error design parameters used were:

> *95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.*

1200 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the stray voltage tests were conducted in accordance with Company specifications.

Specification EO-10315 (Quality Assurance of the Stray Voltage and Periodic Distribution Structure Safety Inspection Programs) calls for 1200 quality assurance checks to be performed on the contractor stray voltage testing. The quality assurance checks are randomly selected from a database of all stray voltage tests. The audit includes a field test for stray voltage. Con Edison performed 400 quality assurance checks of the underground distribution structures including underground residential distribution (URD), 400 quality assurance checks of overhead distribution structures and 400 quality assurance check of municipality owned streetlights. Stray voltage was not found during any of these quality assurance reviews. In addition to the 1200 quality assurance checks discussed above, Con Edison also conducted Random Quality Assurance reviews of "work in progress."

Quality Assurance Measures Instituted: Stray Voltage Testing of Transmission and Substation Facilities

In accordance with CE-ES-1043, a planner in Transmission Line Maintenance who has knowledge and expertise in overhead transmission, but who did not perform or directly supervise the stray voltage testing, conducted quality assurance inspections at locations on various transmission lines for overhead transmission facilities. Stray voltage was not found during any of these quality assurance reviews

Con Edison performed several types of quality assurance on the underground transmission stray voltage-testing program. Contractors, who also performed testing on underground distribution structures, performed the stray voltage testing of underground transmission facilities. Following this stray voltage testing, Con Edison Construction Management personnel performed audits at several locations. Stray voltage was not found during any of these quality assurance reviews

Substations Operations Methods and Procedures group performed quality assurance for the substation stray voltage-testing program. The quality assurance consisted of a documents search, records review, as well as physical stray voltage testing. Separate records were created for each quality assurance audit. Stray voltage was not found during any of these quality assurance reviews

Quality Assurance performed a quality review on a randomly selected sample of unit substations. Stray voltage was not found during any of these quality assurance reviews

These QA checks confirmed the accuracy of the results from the stray voltage-testing program.

Quality Assurance Measures Instituted: Inspections of Underground Distribution Structures and Overhead Distribution Structures

A Central Quality Assurance group (QA) was established to oversee work done on the underground electrical system. QA observes specification compliance of the underground inspection program. EO-10315 (Quality Assurance of the Stray Voltage and Periodic Distribution Structure Safety Inspection Programs) establishes standards for the QA program in order to ensure that the underground structure inspections are performed in accordance with the Safety Standards and Con Edison's specifications. The reliability and error design parameters used were:

95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.

800 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the inspections were conducted in accordance with Company specifications.

Con Edison employees from the centralized quality assurance department conduct the quality assurance for each of the Company's operating regions. These employees are experienced cable splicers, linemen and mechanics that have been trained in the facility inspection and the quality assurance specifications.

The quality assurance personnel performed a complete re-inspection of 400 underground and 400 overhead faculties respectively. The results of the randomly selected facilities are compared with the results to the previous inspected facilities. Deficiencies identified during quality assurance reviews are communicated to field crews, supervisors, planners, and managers who have been required to reinforce inspection procedures with field crews.

Quality Assurance Measures Instituted: Transmission and Substation Facility Inspections

Company specifications CE-SS-6830 (Low and Medium Feeder Pressure Periodic Inspection Procedure) and CE-SS-6045 (Inspection and Preventive Maintenance and Stray Voltage Testing of Pipe Type Cable Systems) require that quality assurance inspections of randomly selected transmission manholes be performed. These randomly selected manholes are re-inspected or re-tested by trained and knowledgeable employees who did not perform or directly supervise this work.

Substation Operations' quality assurance program consists of periodic document reviews and field observations to ensure that 100% of the required stray voltage tests and a minimum of 20% of the Safety and Reliability Inspections of Substation facilities will be completed by December 31 of each year and that the testing and inspections are properly conducted.

Quality assurance was performed by members of the SSO Methods and Procedures group and consisted of a documents search, records review, and physical critical visual inspection. Critical visual inspection quality assurance was performed. Separate inspection records were created for each quality assurance audit. In addition, all inspection and follow-up work order documentation was reviewed. Work orders are entered into our work management system and processed by appropriate personnel. These work orders are tracked closely until all repairs are completed. All personnel are trained on proper reporting and referral of repairs identified during facility inspections. The quality assurance inspections yielded results indicating that the original inspections were performed in accordance with the applicable specifications.

XI. Other Pertinent Information

Over the past several years Con Edison has partnered with EPRI to develop advanced methods for detecting, mitigating and preventing stray voltage. As a result of this research and development project, Con Edison, EPRI and other utilities developed an advanced diagnostic method using waveshape analysis to help determine the cause of stray voltage.

In late 2009, Con Edison began using hand-held oscilloscopes to take 3rd harmonic measurements as a diagnostic method. High 3rd harmonic content is associated with non-linear loads. The harmonic byproduct distorts the waveform and causes harmonic voltages to travel back through other parts of a power distribution system, such as the neutrals. This information is used to assist crews in mitigating stray voltage.

Appendix 1 : Summary of Stray Volatge Testing

	Total System Units Requiring Testing	Units Completed	Percent Completed	Units with Voltage Found* (>= 1.0v)	Percent of Units Tested with Voltage (>= 1.0v)	Units Classified as Inaccessible
Distribution Facilities	282,973	284,193	100.43%	18	0.006%	733
Yearly Update	282,973	284,193	100.43%	18	0.006%	
Underground Facilities	177,186	180,528	101.89%	6	0.003%	1,861
Yearly Update	177,186	180,528	101.89%	6	0.003%	
Street Lights / Traffic Signals	129,523	131,948	101.87%	414	0.314%	205
Yearly Update	129,523	131,948	101.87%	414	0.314%	
Assets Tested Mobile	156,049	156,049	100.00%	509	0.326%	0
Yearly Update (1 Scan)	156,049	156,049	100.00%	509 **		
Substation Fences	66	66	100.00%	0	0.000%	0
Yearly Update	66	66	100.00%	0		
Transmission (69kV and Above)	1,329	1,329	100.00%	0	0.000%	0
Yearly Update	1,329	1,329	100.00%	0		
TOTAL	747,126	754,113	100.94%	947	0.126%	2,799
Yearly Update	747,126	754,113	100.94%	947	0.126%	

*Stray voltage sources on Con Edison structures and streetlights

**Out of total 721 sources [Both Con Edison and Non Con Edison structures], 509 sources were on Con Edison structures and streetlights

Data Collected through Dec 31, 2009

Appendix 2a : Summary of Energized Objects - Mobile Testing

	2009 Year				Jan 1, 2009 - Dec 31, 2009		
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25 V	Totals	<1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	26	12	0	38	38	0	0
Pole	23	12	0	35	35	0	0
Ground	0	0	0	0	0	0	0
Guy	3	0	0	3	3	0	0
Riser	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Underground Facilities	508	221	43	772	772	0	0
Service Box	3	0	0	3	3	0	0
Manhole	502	221	43	766	766	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault – Cover/Door	3	0	0	3	3	0	0
Pedestal	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Street Lights / Traffic Signals	2,936	1,003	448	4,387	4,387	0	0
Metal Street Light Pole	1096	559	384	2,039	2039	0	0
Traffic Signal Pole	1751	416	63	2,230	2230	0	0
Traffic Control Box	42	17	0	59	59	0	0
Pedestrian Crossing Pole	47	11	1	59	59	0	0
Other	0	0	0	0	0	0	0
Substation Fences	0	0	0	0	0	0	0
Fence	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	0	0	0	0	0	0	0
Lattice Tower	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	3,329	1,437	412	5,178	5177	1	0
Sidewalk	1438	694	174	2,306	2306	0	0
Gate/Fence/Awning	805	359	113	1,277	1276	1	0
Traffic Sign	0	0	0	0	0	0	0
Scaffolding	67	21	20	108	108	0	0
Bus Shelter	43	23	3	69	69	0	0
Fire Hydrant	129	30	3	162	162	0	0
Phone Booth	45	23	9	77	77	0	0
Control Box	0	0	0	0	0	0	0
Water Pipe	0	0	0	0	0	0	0
Riser	0	0	0	0	0	0	0
Other	802	287	90	1,179	1179	0	0
Totals	6,799	2,673	903	10,375	10,374	1	0

Explanation on Mitigation Exception (voltage left equal to 1.6 volts)

ENE Location: Ryerson Ave, B ticket: BE09041546 dtd 9/21/2009 10:24:00 AM

The voltage at this location is at 1.6 volt with shunt resistor on metal door. The building is a commercial building that occupies the entire block. Con Edison has made reasonable attempts to mitigate the stray voltage condition by testing and inspecting all Con Edison owned facilities in the area. Upon this investigation, found to be internal wiring problem in customer premises. The customer and building department was notified to take appropriate action.

Appendix 2b : Summary of Energized Objects - Manual Testing + Other

	2009 Year				Jan 1, 2009 - Dec 31, 2009		
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25 V	Totals	<1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	16	16	8	40	40	0	0
Pole	14	10	5	29	29	0	0
Ground	0	0	0	0	0	0	0
Guy	0	1	1	2	2	0	0
Riser	2	5	2	9	9	0	0
Other	0	0	0	0	0	0	0
Underground Facilities	19	17	17	53	53	0	0
Service Box	12	13	12	37	37	0	0
Manhole	5	3	3	11	11	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault – Cover/Door	2	0	1	3	3	0	0
Pedestal	0	0	0	0	0	0	0
Other	0	1	1	2	2	0	0
Street Lights / Traffic Signals	141	281	82	504	504	0	0
Metal Street Light Pole	81	210	66	357	357	0	0
Traffic Signal Pole	58	68	16	142	142	0	0
Traffic Control Box	1	0	0	1	1	0	0
Pedestrian Crossing Pole	1	3	0	4	4	0	0
Other	0	0	0	0	0	0	0
Substation Fences	0	0	0	0	0	0	0
Fence	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	0	0	0	0	0	0	0
Lattice Tower	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	31	26	12	69	69	0	0
Sidewalk	13	9	4	26	26	0	0
Gate/Fence/Awning	8	5	3	16	16	0	0
Traffic Sign	0	0	0	0	0	0	0
Scaffolding	0	1	0	1	1	0	0
Bus Shelter	0	0	0	0	0	0	0
Fire Hydrant	0	1	0	1	1	0	0
Phone Booth	0	0	0	0	0	0	0
Control Box	0	0	0	0	0	0	0
Water Pipe	0	1	0	1	1	0	0
Riser	0	0	0	0	0	0	0
Other	10	9	5	24	24	0	0
Totals	207	340	119	666	666	0	0

Appendix 3a : Summary of Shock Reports from the Public		
2009	**Quarterly Update** Oct 1, 2009 - Dec 31, 2009	**Yearly Total**
I. Total shock calls received:	**32**	**150**
Unsubstantiated	15	50
Normally Energized Equipment	2	16
Substantiated Stray Voltage	15	84
Details of Substantiated Stray Voltage Events :		
# of Persons	9	75
# of Animals	6	32
II. Injuries Sustained	**0**	**0**
Utility Responsibility :		
Person	0	0
Animal	0	0
Non Utility Responsibility :		
Person	0	0
Animal	0	0
Unsubstantiated :		
Person	0	0
Animal	0	0
III. Medical Attention Received	**1**	**18**
Utility Responsibility :		
Person	0	2
Animal	0	0
Non Utility Responsibility :		
Person	0	5
Animal	0	1
Unsubstantiated :		
Person	1	10
Animal	0	0
IV. Voltage Source:	**15**	**84**
Utility Responsibility :		
Issue with primary, joint, or transformer	0	0
Secondary joint (Crab)	1	4
SL service Line	0	6
Abandoned SL service line	1	2
Defective service line	1	11
Abandoned service line	0	0
OH Secondary	0	0
OH Service	0	0
OH Service neutral	0	0
OH SL Service	0	1
OH SL Service neutral	0	0
Pole	0	0
Riser	0	0
Other	0	0
Customer Responsibility :		
Contractor damage	1	7
Customer equipment/wiring	11	47
Other Utility/Gov't Agency Responsibility :		
SL Base Connection	0	0
SL Internal wiring or light fixture	0	6
Overhead equipment	0	0
V. Voltage Range:	**15**	**84**
1.0V to 4.4V	1	8
4.5V to 24.9V	8	25
25V and above	6	51
No Reading	0	0

Data Collected through Dec 31, 2009

Appendix 3b : Summary of Shock Reports from the Public	
2008	Update Dec 1, 2008 - Dec 31, 2008
I. Total shock calls received:	**7**
Unsubstantiated	0
Normally Energized Equipment	0
Substantiated Stray Voltage	7
Details of Substantiated Stray Voltage Events :	
# of Persons	1
# of Animals	6
II. Injuries Sustained	**7**
Utility Responsibility :	
Person	0
Animal	2
Non Utility Responsibility :	
Person	1
Animal	4
Unsubstantiated :	
Person	0
Animal	0
III. Medical Attention Received	**0**
Utility Responsibility :	
Person	0
Animal	0
Non Utility Responsibility :	
Person	0
Animal	0
Unsubstantiated :	
Person	0
Animal	0
IV. Voltage Source:	**7**
Utility Responsibility :	
Issue with primary, joint, or transformer	1
Secondary joint (Crab)	0
SL service Line	0
Abandoned SL service line	0
Defective service line	1
Abandoned service line	0
OH Secondary	0
OH Service	0
OH Service neutral	0
OH SL Service	0
OH SL Service neutral	0
Pole	0
Riser	0
Other	0
Customer Responsibility :	
Contractor damage	0
Customer equipment/wiring	2
Other Utility/Gov't Agency Responsibility :	
SL Base Connection	0
SL Internal wiring or light fixture	3
Overhead equipment	0
V. Voltage Range:	**7**
1.0V to 4.4V	0
4.5V to 24.9V	2
25V and above	5
No Reading	0

Appendix 4 : Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Distribution															
Overhead Facilities	**2009**			**2010**			**2011**			**2012**			**2013**		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Poles															
Pole Condition															
Number of Deficiencies															
Repaired in Time Frame															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies			**4,272**												
Repaired in Time Frame			**183**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**4,089**												
Not Repaired - Overdue			**0**												
Anchors/Guy Wire															
Number of Deficiencies			**34**												
Repaired in Time Frame			**3**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**31**												
Not Repaired - Overdue			**0**												
Cross Arm/Bracing															
Number of Deficiencies		**123**													
Repaired in Time Frame		**11**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**111**													
Not Repaired - Overdue		**1**													
Riser															
Number of Deficiencies			**617**												
Repaired in Time Frame			**0**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**617**												
Not Repaired - Overdue			**0**												

Conductors															
Primary Wire/Broken Ties															
Number of Deficiencies			**4,862**												
Repaired in Time Frame			**292**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**4,570**												
Not Repaired - Overdue			**0**												
Secondary Wire															
Number of Deficiencies			**29**												
Repaired in Time Frame			**14**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**15**												
Not Repaired - Overdue			**0**												
Neutral															
Number of Deficiencies		**185**													
Repaired in Time Frame		**2**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**183**													
Not Repaired - Overdue		**0**													
Insulators															
Number of Deficiencies		**108**													
Repaired in Time Frame		**19**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**88**													
Not Repaired - Overdue		**1**													
Pole Equipment															
Transformers															
Number of Deficiencies	**4**														
Repaired in Time Frame	**3**														
Repaired - Overdue	**1**														
Not Repaired - Not Due	**0**														
Not Repaired - Overdue	**0**														
Cutouts															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Lightning Arrestors															
Number of Deficiencies		**33**													
Repaired in Time Frame		**3**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**30**													
Not Repaired - Overdue		**0**													
Other Equipment															
Number of Deficiencies			**95**												
Repaired in Time Frame			**2**												
Repaired - Overdue			**0**												
Not Repaired - Not Due			**93**												
Not Repaired - Overdue			**0**												
Miscellaneous															
Trimming Related															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Other															
Number of Deficiencies		**1,293**													
Repaired in Time Frame		**51**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**1,242**													
Not Repaired - Overdue		**0**													
		0													
Overhead Facilities Total															
Total															
Number of Deficiencies	**4**	**1,742**	**9,909**												
Repaired in Time Frame	**3**	**86**	**494**												
Repaired - Overdue	**1**	**0**	**0**												
Not Repaired - Not Due	**0**	**1,654**	**9,415**												
Not Repaired - Overdue	**0**	**2**	**0**												

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Transmission

Transmission Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Towers/Poles															
Steel Towers															
Number of Deficiencies			**41**												
Repaired in Time Frame			**25**												
Repaired - Overdue															
Not Repaired - Not Due			**16**												
Not Repaired - Overdue															
Poles															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Anchors/Guy Wire															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Crossarm/Brace															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies		**51**													
Repaired in Time Frame		**51**													
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Conductors															
Cable															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Static/Neutral															
Number of Deficiencies	**1**														
Repaired in Time Frame	**1**														
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Insulator															
Number of Deficiencies			**17**												
Repaired in Time Frame			**17**												
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Right of Way Condition															
Number of Deficiencies		**18**													
Repaired in Time Frame		**18**													
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Other															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Transmission Facilities Total															
Total															
Number of Deficiencies	**1**	**69**	**58**												
Repaired in Time Frame	**1**	**69**	**42**												
Repaired - Overdue															
Not Repaired - Not Due			**16**												
Not Repaired - Overdue															

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Underground

Underground Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Underground Structures															
Damaged Cover															
Number of Deficiencies		**10305**													
Repaired in Time Frame		**5,298**													
Repaired - Overdue		**686**													
Not Repaired - Not Due		**3,711**													
Not Repaired - Overdue		**610**													
Damaged Structure															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Congested Structure															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Damaged Equipment															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Conductors															
Primary Cable															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Secondary Cable															
Number of Deficiencies		**17,624**													
Repaired in Time Frame		**14,042**													
Repaired - Overdue		***1,002***													
Not Repaired - Not Due		**2,326**													
Not Repaired - Overdue		**254**													
Neutral Cable															
Number of Deficiencies		**8,481**													
Repaired in Time Frame		**7,370**													
Repaired - Overdue		**468**													
Not Repaired - Not Due		**579**													
Not Repaired - Overdue		**64**													
Racking Needed															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies	**256,461**	**1,382**	**3,250**												
Repaired in Time Frame	**256,457**	**223**	**96**												
Repaired - Overdue	**3**	**18**	**0**												
Not Repaired - Not Due	**0**	**1,012**	**3,154**												
Not Repaired - Overdue	**1**	**129**	**0**												
Underground Facilities Total															
Total															
Number of Deficiencies	**256,461**	**37,792**	**3,250**												
Repaired in Time Frame	**256,457**	**26,933**	**96**												
Repaired - Overdue	**3**	**2,174**	**0**												
Not Repaired - Not Due	**0**	**7,628**	**3,154**												
Not Repaired - Overdue	**1**	**1,057**	**0**												

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Pad Mount Transformers

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Pad Mount Transformers															
Damaged Structure															
Number of Deficiencies		1													
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due		1													
Not Repaired - Overdue															
Damaged Equipment															
Number of Deficiencies		13													
Repaired in Time Frame		1													
Repaired - Overdue		-													
Not Repaired - Not Due		12													
Not Repaired - Overdue		-													
Cable Condition															
Number of Deficiencies	116	34	3												
Repaired in Time Frame	116	29													
Repaired - Overdue															
Not Repaired - Not Due		5	3												
Not Repaired - Overdue															
Oil Leak															
Number of Deficiencies		6													
Repaired in Time Frame		5													
Repaired - Overdue															
Not Repaired - Not Due		1													
Not Repaired - Overdue															
Off Pad															
Number of Deficiencies		1													
Repaired in Time Frame		1													
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Lock/Latch/Penta															
Number of Deficiencies	11	4													
Repaired in Time Frame	4	2													
Repaired - Overdue	2														
Not Repaired - Not Due		2													
Not Repaired - Overdue	5														

Miscellaneous																
Other																
Number of Deficiencies	**470**															
Repaired in Time Frame	**470**															
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Pad Mount Total																
Total																
Number of Deficiencies	**597**	**59**	**3**													
Repaired in Time Frame	**590**	**38**	**-**													
Repaired - Overdue	**2**		**-**													
Not Repaired - Not Due		**21**	**3**													
Not Repaired - Overdue	**5**	**-**	**-**													

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Streetlights

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Streetlights															
Base/Standar/Light															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Handhole/Service Box															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Service/Internal Wiring															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Access Cover															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Streetlight Total															
Total															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Year	Prority Level / Repair Expected		Deficiencies Found (Total)	Repaired In-Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired - Overdue
2009							
	I	Within 1 week	257,058	257,047	2	0	5
	II	Within 1 year	39,593	27,057	0	9,303	1,059
	III	Within 3 years	9,912	494	0	9,418	0
	IV	N/A	36,240	0	0	22417	0
2010							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2011							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2012							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2013							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Level IV Conditions

Overhead Facilities	2009		2010		2011		2012		2013	
	Number of Conditions Found	Number of Conditions Repaired	Number of Conditions Found	Number of Conditions Repaired	Number of Conditions Found	Number of Conditions Repaired	Number of Conditions Found	Number of Conditions Repaired	Number of	Number of Conditions Repaired
Overhead Facilities										
Pole Condition										
Pole Condition	**7,194**	**0**								
Grounding System										
Anchors/Guy Wire										
Cross Arm/Bracing										
Riser										
Conductors										
Primary Wire/Broken Ties										
Secondary Wire										
Neutral										
Insulators										
Pole Equipment										
Transformers										
Cutouts										
Lightning Arrestors										
Other Equipment										
Miscellaneous										
Trimming Related										
Other	**4,374**	**22**								
Overhead Facilities Total	**11,568**	**22**								
Transmission Facilities										
Tower/Poles										
Steel Towers	**44**	**0**								
Poles	**0**									
Anchors/Guy Wire	**0**									
Crossarm/Brace	**0**									
Grounding System	**37**	**10**								
Conductors										
Cable	**157**	**0**								
Static/Neutral	**6**	**3**								
Insulators	**184**	**12**								
Miscellaneous										
Right of Way Conditions	**169**	**4**								
Other	**290**	**15**								
Transmission Facilities Total	**887**	**44**								
Underground Facilities										
Underground Structures										
Damage Covers										
Damage Structures										
Congested Structures										
Damage Equipment										
Conductors										
Primary Cable										
Secondary Cable										
Neutral Cable										
Racking Needed	**23,785**	**4,611**								
Miscellaneous										
Other										
Underground Facilities Total	**23,785**	**4,611**								
Pad Mount Transformers										
Underground Structures										
Damage Structures										
Damage Equipment										
Damage Cable										
Oil Leak										
Off Pad										
Lock/Latch/Penta										
Miscellaneous										
Other										
Pad Mount Transformers Total										
Streetlights										
Streetlights										
Base/Standar/Light										
Handhole/Service Box										
Service/Internal Wiring										
Access Cover										
Miscellaneous										
Other										
Streetlight Total										
Total Level IV Conditions										
Overall Total	**36,240**	4,677								

Exhibit 1

Certification of Stray Voltage Testing

John Mucci, on this 12th day of February 2010, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's stray voltage testing program, and in that capacity I have monitored the Company's stray voltage testing program during the twelve months ended December 31, 2010 ("the twelve month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the stray voltage testing requirements of the Public Service Commission's Safety Standards, issued and effective January 5, 2005 as modified by Orders issued July 21, 2005 and December 15, 2008 in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, during the twelve month period, Con Edison identified and tested for stray voltage (i) all publicly accessible electric facilities owned by the Company, and (ii) all municipally owned metallic streetlights and traffic signals that are located on thoroughfares and areas in the Company service territory, are publicly accessible, and are directly supplied with electricity by the Company as identified through a good faith effort by the Company, except for such facilities that are identified in the Company's Annual Report, submitted herewith.

John Mucci

Certification of Inspections

John Mucci, on this 12th day of February 2010, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's electric facility inspection program, and in that capacity I have monitored the Company's inspection program during the twelve months ended December 31, 2010 ("the twelve-month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the inspection requirements established by the Public Service Commission's Safety Standards, issued and effective January 5, 2005 as modified by Orders issued July 21, 2005 and December 15, 2008 in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, Con Edison has visually inspected the requisite number of electric facilities during the twelve-month period, and during the five-year inspection cycle that ended December 31, 2010 has conducted a visual inspection of each of its electric facilities.

John J Mucci

John Mucci