Appendix A: Log of Summer Field Observations

852	Random	41.57025 -87.55929 Street Side	Primary almost (threatening) in Trees
853	Random	Alley behind 41.57025 -87.55929	Primary into Trees
854	Random	2314 179th St, Lansing	Twisted Bad Pole (subsidence)
855	Random	Looking West from 2314 179th St, Lansing	Primary into Tree
-	Random	Alley behind 17934 Hickory St	Primary close to and into trees
-	Random	Torrence Avenue South of Ridge Rd to Glenwood Lansing Rd – i.e. for ~1/2 mile	Numerous Location of Trees close to and into Primary
-	Random	Near 2563 E Joe Orr Rd & Torrence Ave	Tree into Primary
-	Random	On ILL-1 South of Belmont Race Track and North of Beecher	Two Locations where Lightning Arrestors were wired with “curly” leads – the “curly” leads will add high impedance in series with the Lightning Arrestors
-	Random	On ILL-1 just North of Beecher	Broken Cross-arm on East Side of ILL-1
-	Random	Approx. 6 Poles East of 2534 West Indiana Ave, Beecher, IL	Blown Lightning Arrestor
-	Random	Approx. 4 poles East of 30095 South Kedzie Ave, Beecher, IL	Blown Lightning Arrestor
-	Random	29979 S. Kedzie Ave Beecher, IL 41.34469 -87.68909	Badly leaning Pole
858	Random	41.35478 -87.69700	Split Pole
-	Random	41.35470 -87.70429	Primary into Tree
860	Random	41.34357 -87.70837	Primary Insulator Lifted Out Of Cross-Arm Heavy Pole Subsidence

Appendix A: Log of Summer Field Observations

Trees into/over Fence
820 Calumet City Substation

Transformer Oil
823 Calumet City Substation

Gate Ground Bonding Strap not attached
814 Calumet City Substation

No Animal Guards
817 Calumet City Substation

Load Tap Changer Range of Travel
826 Calumet City Substation

Trees Canopy Overhang Primary
843

Appendix A: Log of Summer Field Observations

Tree into Primary
846

Split Pole
858

Hanging Primary Insulator
860

Appendix A: Log of Summer Field Observations

The summary[7] for each inspection represents typical observations noted during the field inspections and **does not** represent all of the problems or potential problems that may exist.

To evaluate the overall trend of conditions in ComEd's service territory, Commission Staff conducted a series of field inspections in 2014. The purpose of the inspections was for Staff to see if there were any obviously visible reasons for poor reliability performance. For example, on distribution circuits Staff looked for problems such as poor tree trimming practices, broken or damaged equipment, rotten poles, and overly slack spans (low sagging lines), while at substations Staff looked for problems such as low or leaking oil, load tap changers regularly operated at extreme positions, and poor maintenance practices. It is important to note that it is not the purpose of Staff's field inspections to find problems for ComEd to fix[8] but rather to develop a picture of the overall condition of the power delivery infrastructure in ComEd's service territory.

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff)

Feeder Ckt: H321 City: Garden Plain Township Voltage: 12kV Date: Tuesday, August 12, 2014

Photo ID	Drawing No.	Location Description	Observations at this Location
861-902		**TSS132 Garden Plain Substation**	**Fence line Inspection:** No Gnd binding strap from Gate to Gate Posts Veg management tag on gate dated 5-22-14 and checked 7-30-14 Rock surface graded or piled to substation fence bottom to prevent animal intrusion Substation Yard looks good & is largely weed free Bushing oil levels look good on Power Transformers 77 & 78 Bushing oil levels look good in Distribution yard Animal Fence surrounding Sub-Transmission Yard LTC's look OK Pole marked for removal outside yard New Poles & Cross-Arms outside yard Areas

[7] Detail was provided ComEd indicating the location of most deficiencies found on the respective circuits by Staff.
[8] Though Staff would expect that those identified problems and the problems inferred would be addressed.

Appendix A: Log of Summer Field Observations

			Animal guards on insulators on Distribution Buss-work for H321 & H322 – H322 bkr is badly rusted No squirrels guard on Circuit H322 overhead out of substation – Circuit H321 goes to riser and then underground to riser in front of Substation No direct stroke lighting protection seen in substation yard – 138kV and 34kV lines outside of yard do have static wire over primaries Vine observed growing up guy on pole for H322 outside of substation yard Another Guy seen with Vine growth just outside south side of Substation Signs that Trees/brush had been cut back outside North-East corner of Substation yard (near where Distribution equipment is located)
		Feeder Ckt: H321 City: Fulton **Voltage: 12kV**	
907	1	41.79301 -90.11115	Riser 3S143 outside of Substation from H321 breaker by transformer 51
909-910	1	41.79356 -90.11125 Device #13318277	Lose ground cover on ground to transmission tower static line
912-915	Random	41.86069 -90.14112	Vines on Down Guy Very old pole with substantial subsidence – may have been marked already for replacement Old cross-arm
916-917	1	41.800556 -90.13046	Pole – cross-arm – cutout – all being replaced
918	1	41.79956 -90.13056	Missing down guy guard
920	1	41.79823 -90.13058	Hanging ground cover
921-922	1	41.79410 -90.13053	Center Lightning Arrestor has curly leads (which cause High Impedance)
924	1	41.78973 -90.13049	Field Side Lightning Arrestor is Blown
925	1	41.78696 -90.13052	Line Hose on Field Side Primary
926	1	41.78696 -90.13052	Damaged Pole Top and Damaged Cross-Arm

Appendix A: Log of Summer Field Observations

927-928	2	41.78138 -90.13054	Blown Lightning Arrestor on Field Side
929	2	41.77822 -90.13055	All three Lightning Arrestor have curly lead connections and thus High Impedance
930-931	2	41.77204 -90.12243	Primary J-Mount is lose and near failure Pole Top is Damaged
932-933	2	41.77202 -90.11204	Pole looks bad Pole top bad Primary J-Mount is Lose
935-936	2	41.77208 -90.11990	Split Pole / Damaged Pole
937	2	41.77623 -90.16814	Cross-Arm holding Cut-Outs appears to be in bad shape
--	2	41.75977 -90.15942	Curly Leads (High Impedance) to Field & Road Side Lightning Arrestors
--	2	41.75694 -90.15137	Curly Leads (High Impedance) to Field & Road Side Lightning Arrestors
938	5	41.73690 -90.15194	Curly Leads (High Impedance) to Field & Road Side Lightning Arrestors
--	5	41.73692 -90.1584	Curly Least (High Impedance) to Field & Road Side Lightning Arrestors
--	5	2 Poles East of 41.73692 -90.1584	Very Lose/Hanging Ground Guard
--	5	3 Poles West of 41.73692 -90.1584	Very Lose/Hanging Ground Guard

Appendix A: Log of Summer Field Observations

939-991		**DCH62 Sterling Substation**	**Fence line Inspection:** Ground Bonding Straps from Gates to Gate Posts is Broken Transformer 51 appears older and while it needs painting it is not visibly Rusty Transformer 52 does appear newer than Transformer 51 Rock in Substation yard is up to fence bottom to help prevent animal entry Bushing oil levels on Transformer 52 look OK Overall: Yard Looks Good – Some Old equipment but it appears in Maintained shape No vegetation intrusion into substation yard – obvious had some in the past but it is OK now Signs of trees/bushes being cut back from substation fence line Gate may have been painted Some Rust and/or old paint on equipment in yard but overall looks good from fence line

Rust/Peeling Paint on Circuit H322 Breaker
885 Garden Plain Substation

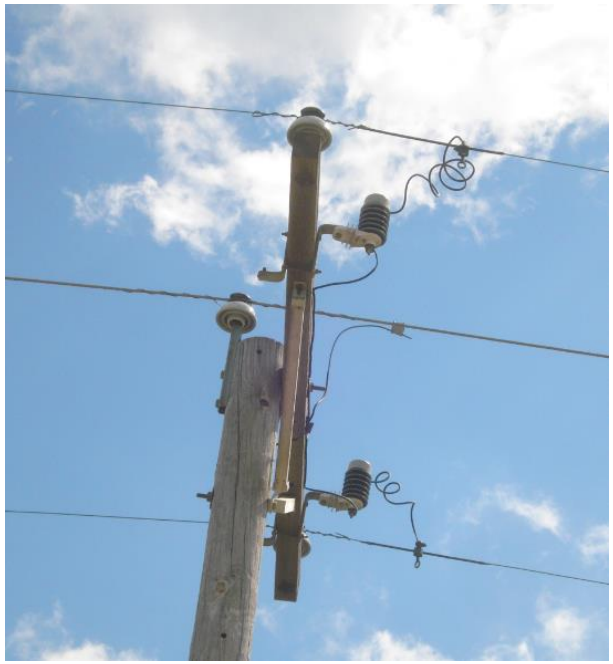
Field Side Lightning Arrestor Blown
924

Damaged Pole & Damaged Cross-Arm
926

Appendix A: Log of Summer Field Observations

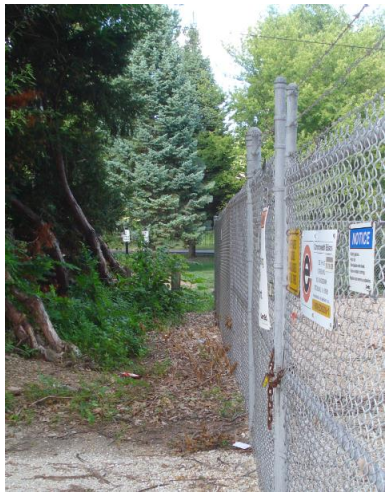
Primary J-Mount is Lose & Pole Damage
930

Split/Damaged Pole
936



Curly Leads (High Impedance) to Lightning Arrestors
938

Broken Ground Bonding Strap
946 Sterling Substation



Trees/Brush cut back from fence line
944 Sterling Substation

Appendix A: Log of Summer Field Observations

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Field Inspection Log

Utility: ComEd **Investigators: J. Stutsman (Staff) & and 12 people from ComEd Regulatory and Technical Staff**

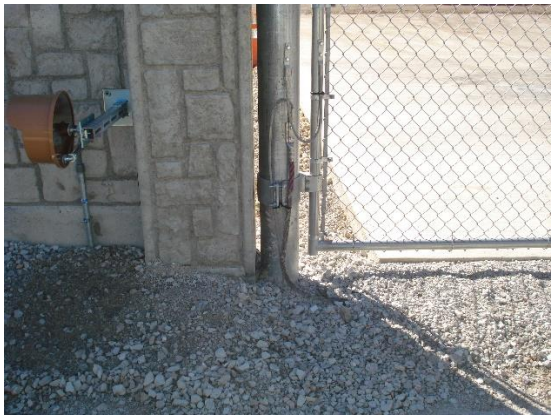
Substation: Tonne TDC207 **City: Elk Grove Village** **Voltage: 138-34-12kV** **Date: Tuesday, September 16, 2014**

Photo ID	Drawing No.	Location Description	Observations at this Location
992-048		**TDC207 Tonne Substation**	**Yard Inspection:** Construction in the Substation Yard substantially completed since last year New 34KV SwitchGear Bldg Transformer 77 New Fire wall; Oil levels OK; Transformer 78 Oil levels OK; Transformer 79 New Fire wall; Oil levels OK; 138KV Control Building Lots of new equipment and solid state relays 34KV Control Room Condition looked good Security switches on doors and Security camera(s)

[9] Detail was provided ComEd indicating the location of most deficiencies found on the respective circuits by Staff.
[10] Though Staff would expect that those identified problems and the problems inferred would be addressed.

Appendix A: Log of Summer Field Observations

			12KV Transformers – Transformer 74 Oil levels OK; Transformer 73 Oil levels OK; Transformer 72 Oil levels OK; Transformer 71 Oil levels OK; 12KV Yard The 12KV Yard looking good with some construction remaining to be completed – including the installation of new breakers; 12KV House New equipment & solid state relays Station Yard Yard looks good New poles installed with static wires connecting at top for direct stroke Lightning protection Check last year's field log for information on construction



Gate bonded to grounded Post
Part of perimeter detection system also visible
996

34KV Switchgear building
992

Creative design used to install switches above Breaker
028

Appendix A: Log of Summer Field Observations

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Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff)

Feeder Ckt: B2301 City: Marengo Voltage: 12kV Date: Tuesday, Sept 23, 2014

Photo ID	Drawing No.	Location Description	Observations at this Location
049-075		**TSS123 Marengo Substation**	**Fence line Inspection:** Firebox at Gate Gate not bound to grounded gate posts 34kV T-Bus CB rusty L12372 BKR being prep'd for painting No squirrel guards on 12kV lines out of yard Fence line clean Substation yard clean of vegetation/weeds Rust on BKR for Fdr B2301 No apparent Direct Stroke Lightning Protection Oil levels OK on Transformers 51 & 52 Oil levels on Transformer 76 looked low Employees doing work in substation yard

[11] Detail was provided ComEd indicating the location of most deficiencies found on the respective circuits by Staff.
[12] Though Staff would expect that those identified problems and the problems inferred would be addressed.

Appendix A: Log of Summer Field Observations

			Met employee who was leaving substation at the gate when I arrived and identified myself Substation fence looked clean and maintained
		Feeder Ckt: B2301 City: Marengo Voltage: 12kV	
-	1	Just North of Chicago and Northwestern RR track crossing	Tree close to or into Primary
-	2	4506 Thorton RD	Missing Down Guy Guard
-	2	4609 Thorton Rd	Missing Down Guy Guard
076	3	5818 Meyer Rd	Loose/hanging Gnd Cover near top of pole
-	3	3 poles North of Above	Loose/hanging Gnd Cover near top of pole
-	4	South of Lakewood Drive on Meyer Rd	Loose/hanging Gnd Cover near top of pole
077-080	10	42.20192 -88.64607	Pole buried in tree/bush
081	10	42.20277 -88.64825	Old pole & J-hook primary mount barely in pole
-	10	Promary running along Blissdale North of Grange Rd	A large number of old poles
082-084	10	42.21169 -88.70924	Pole buried in tree/bush
085-086	Random	42.24434 -88.76117	Bad pole top / bad pole / primary near failure

Appendix A: Log of Summer Field Observations

Rust 34kV Transfer Bus Circuit Breaker
062

Animal guards on 12kV bushings in yard
No squirrel guards on 12kV lines in/out of yard
Fence line clean of vegetation/weeds
067

Pole surrounded by tree/bush
078

Old pole & Primary J-Mount Loose
081

Old & Split/Damaged Pole & Loose Primary J-Mount
085