

Figure 27: Total O&M Spent by ComEd per Customer

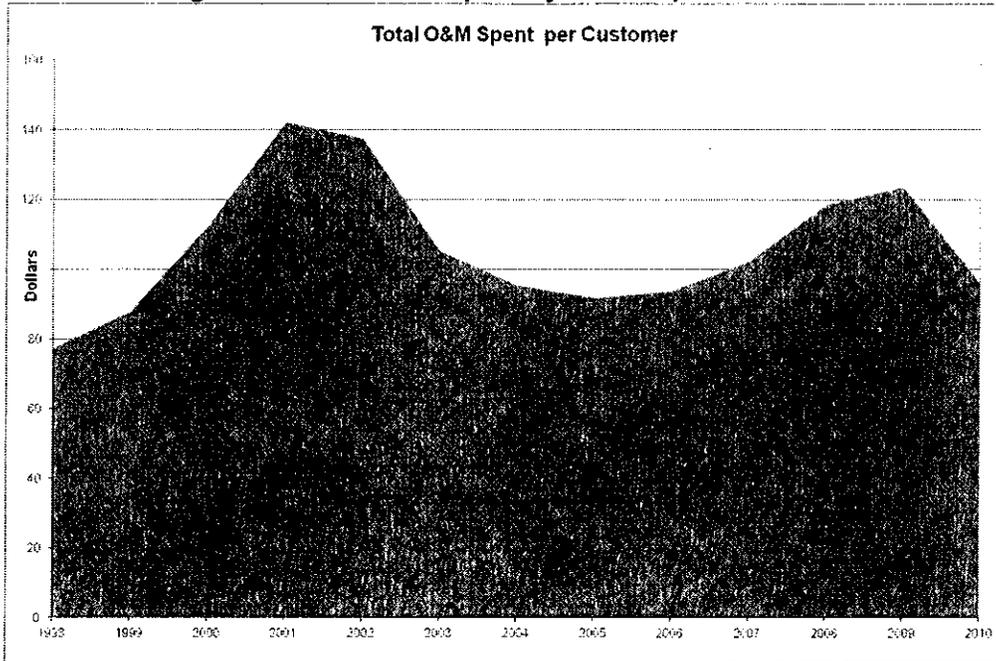
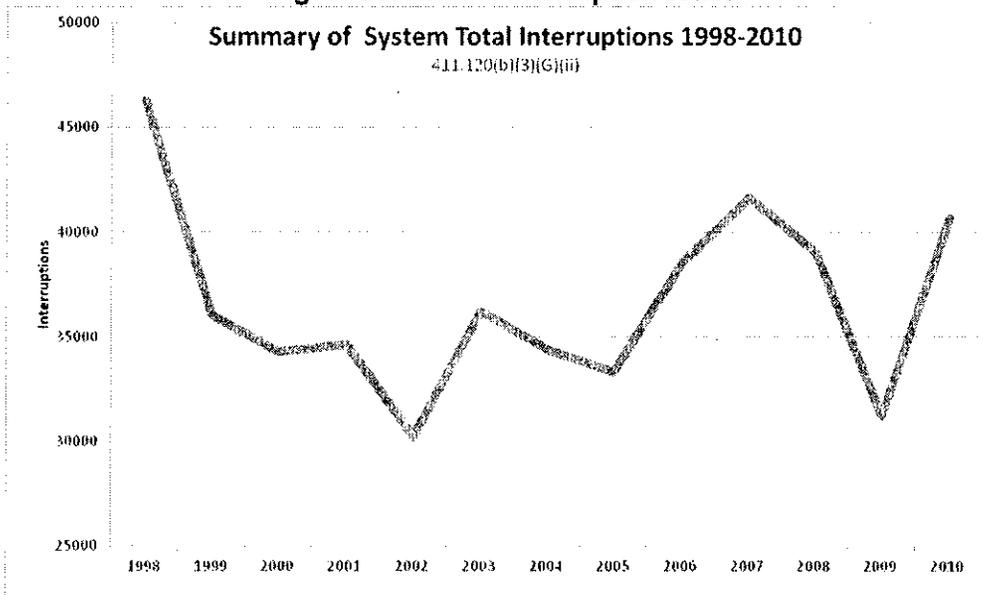


Figure 28 shows the trend in total annual system interruptions from 1998 through 2010 as identified in ComEd’s responses to Section 411.120(b)(3)(G)(ii)³⁵. The highest number of interruptions (46,286 interruptions) are seen in 1998 which corresponds to the time when ComEd’s distribution system unavailability became so conspicuously apparent. For 2002, after ComEd spent a few years improving its system, ComEd reported only 30,548 interruptions in response to 411.120(b)(3)(G)(ii). Staff would expect that, over time, ComEd’s system total interruption levels should be in line with the 2000-2005 time period, though Staff would also expect years when rare severe storm events would push totals above those levels³⁶.

Figure 28: Annual Interruption totals



³⁵ The 2010 System Total of 40,671 interruptions is from Table 12 on Page G-9 of ComEd’s 2010 Report.

³⁶ With total interruption levels returning to the lower levels in subsequent years.

In Figure 29, the number of company employees has declined from the peak in 2000 to 2012 though the combined company & contract employees count has increased from 2009.

Figure 29: Company and Contract Employees – End of Year Totals

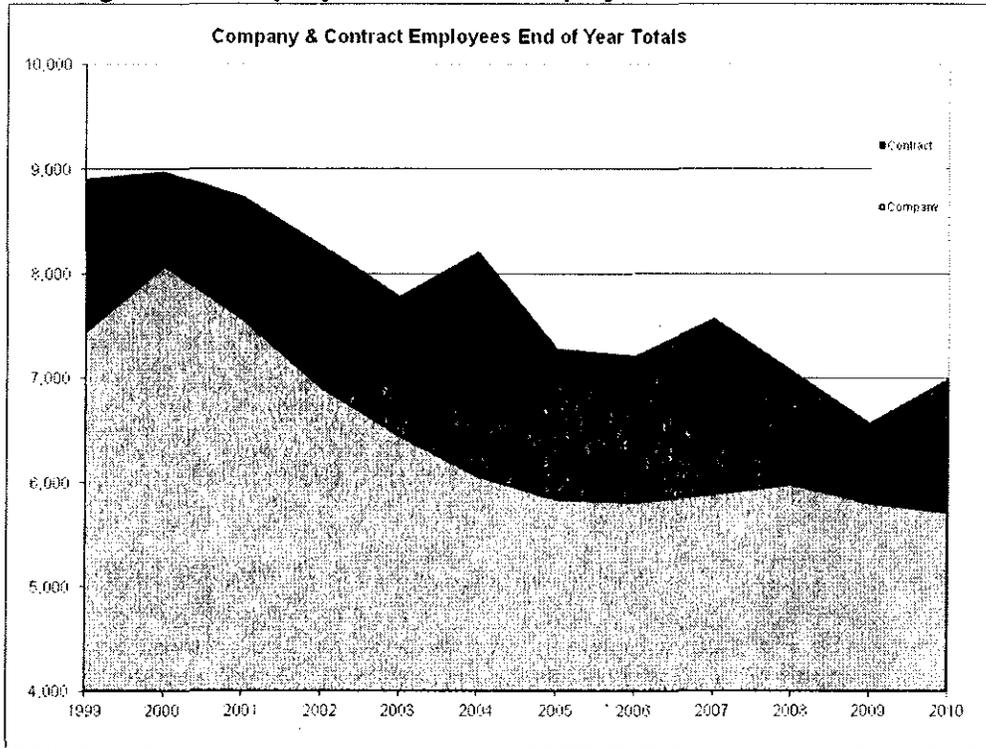


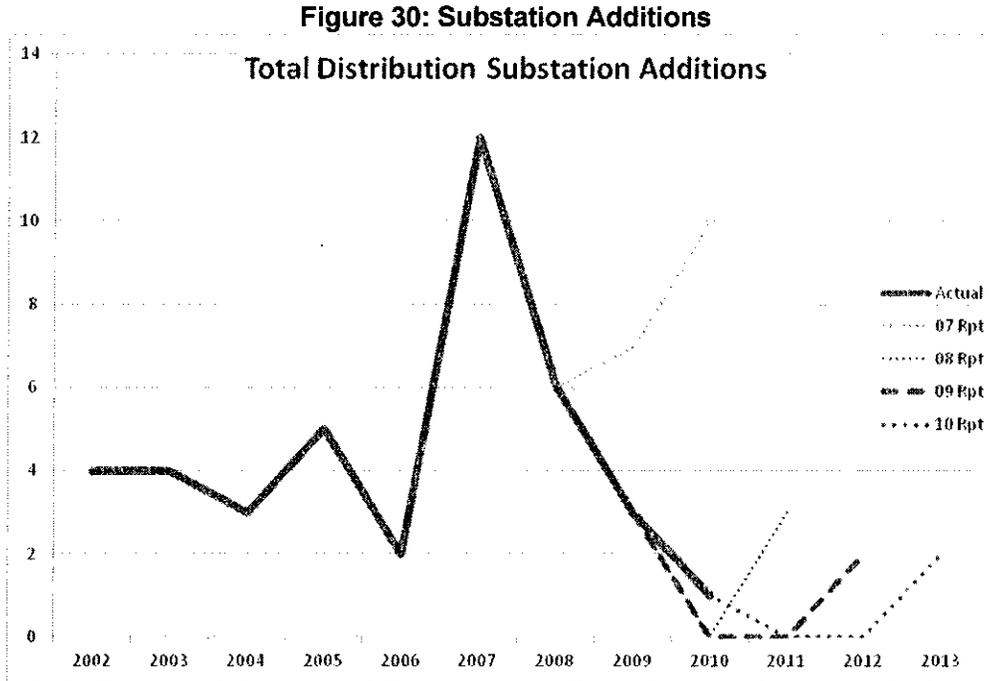
Table 12 indicates the term lengths of ComEd executives responsible for energy delivery reliability, starting with Paul McCoy on October 22, 1997, up through the current executive, Anne R. Pramaggiore. The lack of management continuity in this and other positions may have had a detrimental impact on reliability and/or efficiency in the past. Ms. Pramaggiore now holds the record for tenure in that position.

Table 12 Management Term Lengths

	Name	Approx Yrs in Position
1	Paul McCoy	1.8
2	David Helwig	0.1 (Interim)
3	Carl Croskey	1.3
4	David Helwig	1.4
5	Gregory N. Dudkin	1.3
6	Carl Segneri	0.1 (Interim)
7	Preston Swafford	1.7
8	John Costello	2.3
9	Barry Mitchell	1.7
10	Anne R. Pramaggiore	2.6 ³⁷

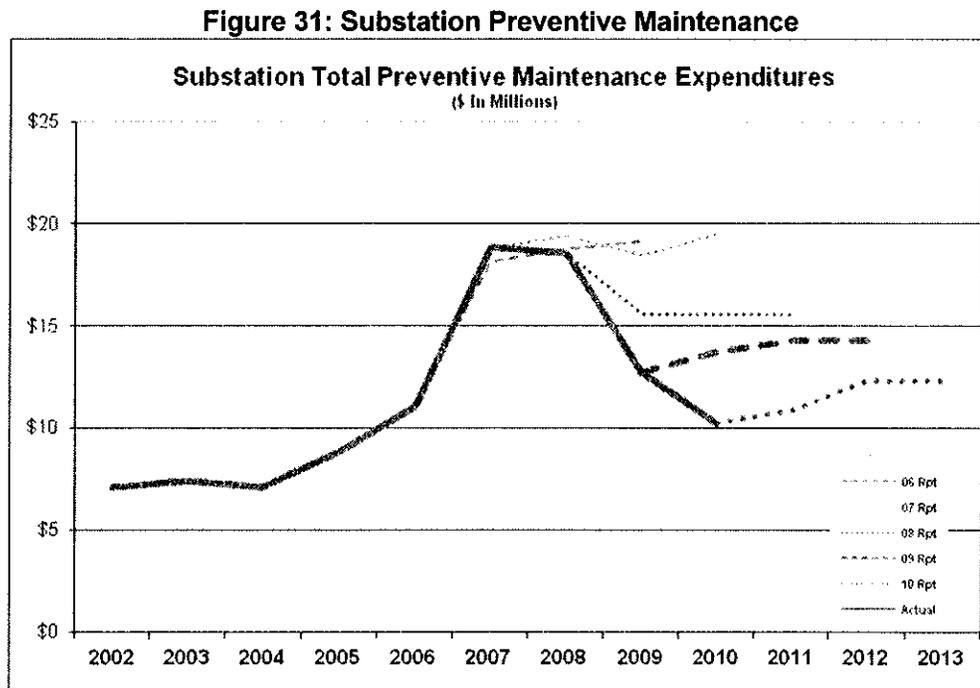
³⁷ As of December 31, 2011

In Figure 30, actual substation additions through 2010 are shown as well as planned additions through 2013. Clearly, with the drop-off in load growth illustrated in Figure 15 Staff would expect deferral of major substation additions as shown in Figure 30.



In addition to building new substations to meet increased demand and to improve customer reliability, it is important that maintenance be scheduled and completed in substations to insure maximum capability, flexibility and reliability during periods of high demand.

Figures 31 and 32 show the trends in spending on PM and CM expenditures.



Spending more on maintenance, all other things being equal, should result in improved equipment reliability and availability.

Figure 32: Substation Corrective Maintenance

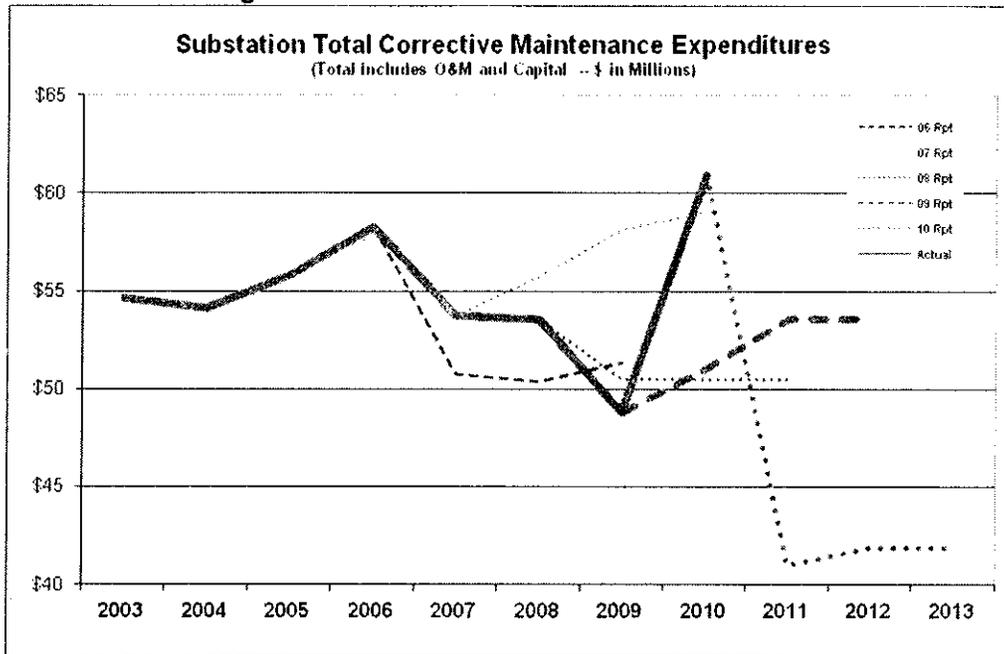
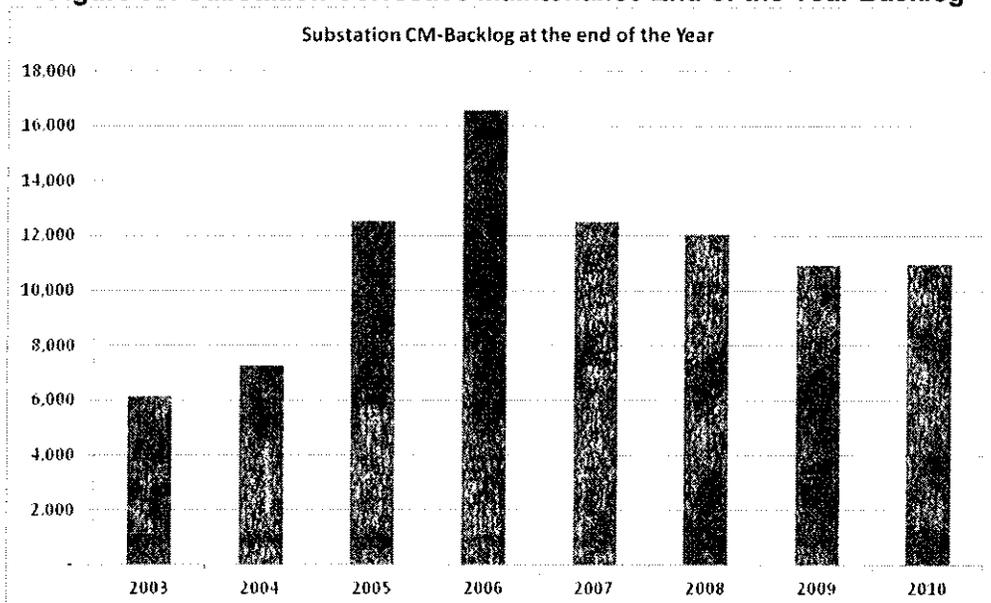


Figure 33 illustrates end of the year backlogs for Substation CM. The backlog remained unchanged from 2009 to 2010 yet ComEd is projecting a 30+% decrease, Figure 32, in expenditures for CM from 2010 to 2011.

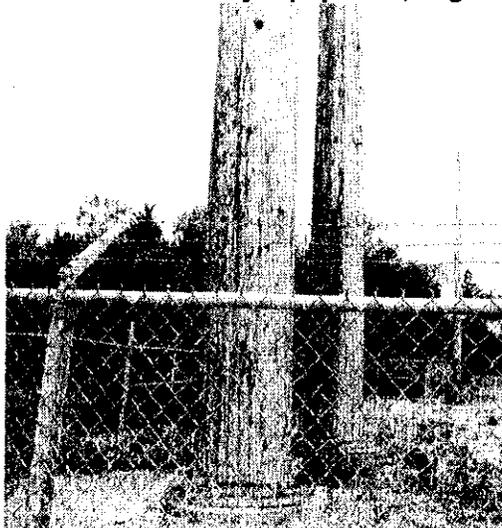
Figure 33: Substation Corrective Maintenance End of the Year Backlog



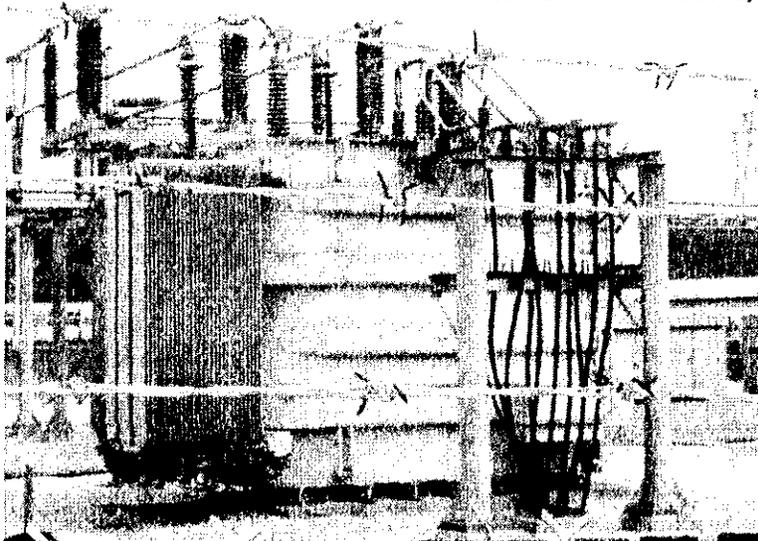
While ComEd has correctly focused on getting the higher priority CM's done, there are things that just are not getting done in substations. Pictures 1, 2, 20, and 21 illustrate a few of the substation issues and CM items

needing attention in Appendix A. Staff recommends ComEd explain how they have allocated sufficient resources to work down the substation CM backlog.

Picture 20: 058 Burr Ridge Substation: Rusty equipment, vegetation in yard & in/on fence



Picture 21: 110 Oakbrook Substation: rust on transformer and radiators, active oil leak



During Staff's field inspections, in previous years, Staff found instances of NESC violations and a few have been noted this year in Appendix A. Violations were found specifically in the areas of guy wire insulator placement (NESC 279.A.2), Grade B Crossings (NESC 261.D.4.c), and line clearance issues associated with Primary, Secondary, Neutral or Services. Staff is encouraged that ComEd is actively looking for and addressing these NESC violations as part of its regular inspection³⁸ cycle. Staff was further encouraged to learn that ComEd found and is correcting line clearance issues associated with its transmission system.

³⁸ "... The thorough inspection of 34kV lines are performed every 2 years and 4kV and 12kV lines are inspected every 4 years. ..." ComEd response to Staff DR, ENG 2.09.

10. Review of ComEd's Implementation Plan for the Previous Reporting Period

A report on the significant deviations from ComEd's 2009 plan for 2010 from 2010 actual spending levels was included in ComEd's 2010 reliability report in pages B-1 through B-6. Table 13 summarizes the data from ComEd's plan.

Table 13 Comparison of 2009 plan for 2010 to 2010 actual (in \$ Million's)

	2009 Plan for 2010	Actual 2010	Var	% Var
Transmission System Improvements [see page B-3]	99	140	41	41.4%
Distribution Capacity [see page B-4]	55	32	-23	-41.8%
Substation [see page B-4]	53	72	19	35.8%
4kv, 12kv, & 34kv Circuit Improvements [see page B-5]	73	87	14	19.2%
Inspection and Maintenance [see page B-6]	100	143	43	43.0%
	380	474	94	24.7%

ComEd's explanations for their major variances in response to 411.120(b)(3)(B) appear reasonable.

11. Summary of Recommendations

Staff recommends the following actions:

- Staff recommends ComEd continue to investigate problem areas and modify programs to advance *and maintain* a four-year (minimum) tree trimming cycle throughout its service territory that is in compliance with NESC Rule 218.
- Staff continues to recommend that, as ComEd makes additional progress in re-establishing the trim zones and removing dead wood above conductors of its distribution circuits, ComEd investigate more ways to address danger and hazard trees (defined in ANSI A300 72.5³⁹ and 72.8⁴⁰).
- Staff recommends ComEd pursue more opportunities to educate customers on the reliability consequences of planting some types of vegetation beneath or near ComEd's distribution equipment.
- Staff recommends ComEd identify and timely address vegetation management problem areas and modify programs to maintain their vegetation management progress.
- Staff recommends that ComEd allocate sufficient resources to distribution corrective maintenance and show progress in working down the CM Backlog.
- Staff recommends ComEd explain how they have allocated sufficient resources to work down the substation corrective maintenance backlog.

In addition, Staff should continue regular inspections in 2012 of conditions in the field coupled with monitoring emerging spending patterns as well as indicators of efficiency improvements.

³⁹ ANSI A300 72.5 **danger tree**: A tree on or off the right-of-way that could contact electric supply lines.

⁴⁰ ANSI A300 72.8 **hazard tree**: A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electrical supply lines.

Appendix A: Log of Summer Field Observations

The summary¹ 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 2011. 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 fix² 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) & [REDACTED] (ComEd)

Feeder Ckt: Z15091 City: Chicago Voltage: 12kV Date: Tuesday, May 10, 2011

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
852-905		TSS150 Calumet Substation	<p>In Station Inspection:</p> <p>South fence of 138kV yard ~3-6" space between bottom of fence and ground allowing easy animal access to substation yard, gate post gnded, SE fence corner & gate not gnded, L0716 CB C phase bushing indicated low oil, L15002 CB trash near base of A-phase tank & C-phase tank had rust</p> <p>Lots of equipment showed rust, Bus 1 Pots are rusty at base, Trash along fence and in yard, L0707 bus pots base rusty – same for L0708 bus pots, L0708 lighting ckt box open, Near 0708 bus pots fence was trash and gap in between fence and ground, noted several fence corner posts that did not appear gnded</p> <p>345 Air inductor yd gate posts are gnded but not bonded to gate, spare & damaged bushings in yard, Xfmr 78 some rust on cooling fins and some oil on</p>

¹ Detail was provided ComEd indicating the location of most deficiencies found on the respective circuits by Staff.
² Though Staff would expect that those identified problems and the problems inferred would be addressed.

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			<p>pad, Xfmr 77 some oil leaking and rust on cooling fins, Xfmr 76 some fans were not operating on radiator, Some grass in station yard, Xfmr 71X fan out, Xfmr 71X some old active oil leaks but ComEd was aware of them, Xfmr 71X LTC full oower, Xfmr 71X 2 fans appear out, Xfmr 71Y – oil at LTC valve and LTC indicator, OCB for Xfmr 72 & 76 c-phase oil level looked high, Xfmr 73 had oil on ground and debris in cooling fins, Xfmr 73 box is rusty, Xfmr 73 liquid level in LTC box appears high, Xfmr 74Y LTC pegged low, Xfmr 74X some oil on pad/foundation</p> <p>345 Yard Gate posts gnded and bonded t gate, South fence line had been cleared of vegetation, gate bonded to gnd, on West fence gate posts gnded and bonded to gates</p> <p>138kV & 69kV relay hse & 12kV sw gear Door alarm sw is active, observed station log book and 12kV single line diagram, dwgs available in relay hse of yard</p>
		Feeder Ckt: <u>Z15091</u> City: <u>Chicago</u> Voltage: <u>12kV</u>	
	1	TSS150 Calumet Substation	See above review
	2	Alley way between S. Marquette Ave & S. Manistee Ave and N of E85th St	overhang & tree canopy above primary
	3	Alley way between S. Marquette Ave & S. Manistee Ave and N of E84th St	overhang & tree canopy above primary
	3	Between S. Marquette Ave & S. Manistee Ave and N of E83rd St	overhang & tree canopy above primary Old pole
	3	Between S. Colfax Ave & S. Saginaw Ave and N of E83rd St	overhang & tree canopy above primary
	3	Between S. Kingston Ave & S. Colfax Ave and N of E83rd St	overhang & tree canopy above primary
	3	Alley way between S. Essex Ave & S. Kingston Ave and N of E82nd St	overhang & tree canopy above primary
	3	Alley way between S. Chappel Ave & S. Clyde Ave and N of E78th St	overhang & tree canopy above primary
906-7	4	7435 S. Clyde Ave 1 pole S of Device 07642401	Approx 10' of Gnd wire has been cut and removed
	4	7339 S. Clyde Ave	Approx 10' of Gnd wire has been cut and removed

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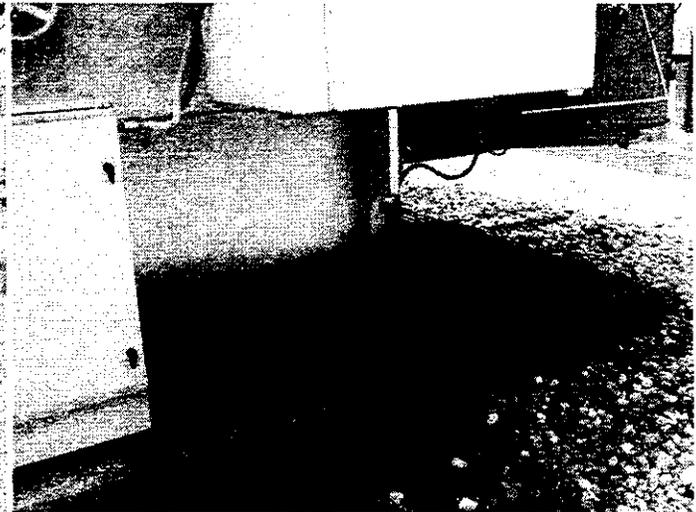
	4	2104 E 73 rd St	Approx 10' of Gnd wire has been cut and removed
	4	Alley way between S. Clyde Ave & S. Merrill Ave and N of E74th St	overhang & tree canopy above primary – 2 locations bad pole top
	4	Alley way between E 72 nd PL & E 73 rd St	Bad pole top & possibly shell rotted pole



Equipment Rust
857 Calumet Substation



Yard trash, Broken box, Equipment Rust
860 Calumet Substation



Site of past oil leak
876 Calumet Substation

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: Z11863 City: Chicago Voltage: 12/4kV Date: Wednesday, May 11, 2011

Appendix A: Log of Summer Field Observations

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
		Feeder Ckt: <u>Z11863</u> City: <u>Chicago</u> Voltage: <u>12kV</u>	
908-17	1	TSS118 Wallace Substation	Inspection from Station Fence line: Gate posts gnded and bonded to gates, grass & weeds in yard, OCB to L11801 is rusty, old oil leaks at Xfmrs.
	1	Near device F11583	Pole was being replaced by ComEd crew
	1	Near device 8132749	Badly burnt pole
	1	See Drawing – multiple locations	Serious OH (over hang)/tree canopy over primary – 3 locations Missing/damaged ground wires – 4 locations Unkn Ckt w/leaning pole on S. Parnell Ave Broken guy wire – near intersection of W. 83 rd St. and S. Wallace St. Near Device 8410305 – screws partly removed from heavy duty galvanized steel ground guard on pole Bad pole top or ragged pole top – 2 locations
920	1	F11863SW145	Leaning pole
921-2	1	8410803	Missing gnd and bad pole top
923-4	Random off of 1	1 pole down (North) from 08413309	Missing gnd for arrestor and leaning pole
925	Random off of 1	2 poles South of 08413309	Cross-arm braces disconnected
926-7	1	See dwg – near device 8411501	Loose HW
	2	See Drawing	Bad pole top on S. Holland Rd. near W. 88 th St intersection Serious OH (over hang)/tree canopy over primary – 2 locations
928	2	See dwg	Old mostly dead vines on Xfmr Gnd wire is missing
929-30	2	See dwg	Primary close to tree with dead branch directly overhead

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931-2	3	Device 8600404	One bank of Xfmr bank has been overheated
933	3	Fuse 11106 – one pole E of	Top bolt is loose
	3	See Drawing	Missing gnd wire – North of device 8780901 Serious OH (over hang)/tree canopy over primary – 2 locations
		Feeder Ckt: <u>G6091</u> City: <u>Oak Lawn</u> Voltage: <u>12kV</u>	
934-8	1	TSS60 Alsip Substation	Inspection from Station Fence Line: Gate posts are gnded but not bonded to gates, fire dept box on fence, distribution gear has animal fence surrounding that portion of the substation
	2	See Drawing	Trees close to primary – 2 locations near Device 2946
939-40	2	107 th St & Mayfield	Silver Maple close to field side primary
941-2	2	10647 Austin Ave	Pole leaning/twisted – cross-arm twisted
	5	See Drawing	Trees close to primary – 1 location on 99 th St. near device 3A2
943-4	6	W of McVickers Ave & S of 99 th	Willow Tree into primary
946-7	6	W of McVickers Ave & S of 99 th	Possible damaged cross-arm
948-9	6	Austin Ave N of 99 th St	Silver Maple into field side primary
951-2	6	9617 & 9621 & 9625 Austin Ave	4 trees in a row that are close to primary – Silver Maple will be into Primary by end of summer

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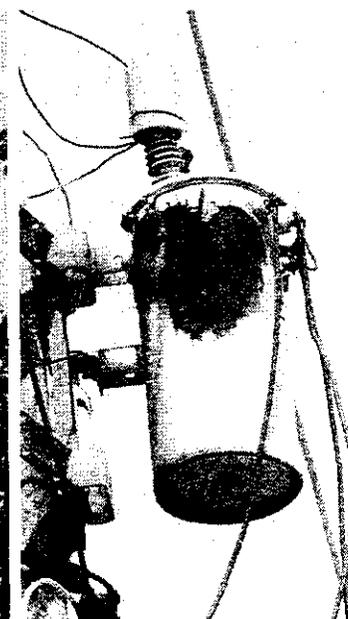
	Random	W of Oak Park Ave & 93 rd St	2-3 Silver Maples into primary
	Random	Oak Park Ave just S of 95 th	Trees into primary
	Random	93 rd St & Ridgeland Ave	Leaning pole
	Random	95 th St & W of Ridgeland Ave	Leaning pole with 3 bank
954-5	Random	9430 68 th Ct	Line hose on primary near municipal light
956	Random	Near YBHungry restaurant	Possible loose HW



Grass & Weeds in Yard, OCB Rust and poor paint work
917 Wallace Substation



Loose Hardware
927 Feeder Z11863



Transformer had overheated
931 Feeder Z11863

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: G4373 City: Harvey Voltage: 12/4kV Date: Tuesday, May 17, 2011

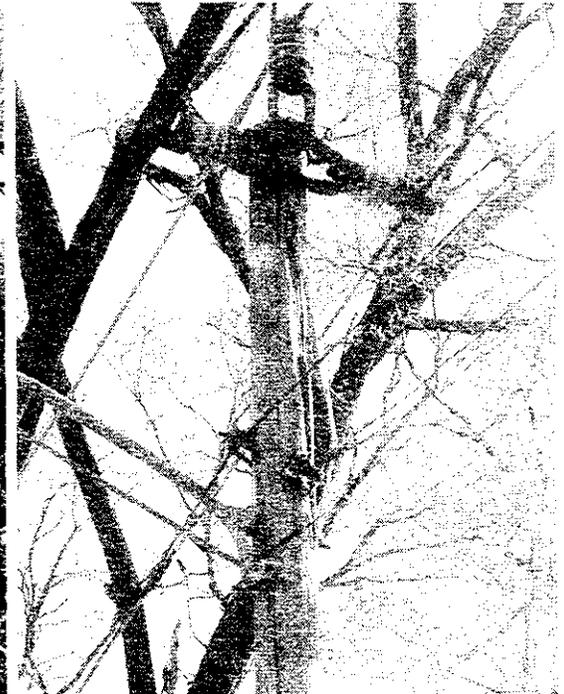
<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
	Random	139 th St 1 Mile W of Thornton Rd	Vine on pole
957-001		TSS76 Blue Island Substation	<p>In Station Inspection:</p> <p>Fire dept box is visible near substation gate, Vegetation inside yard – bushes in yard, veg growing up fence Gate is bonded to gate post which is gnded At some corner posts can see gnd – others may be gnded but not visible above gnd Crews working in yard today – cooler cleaning on Xfmr 82 and work on Xfmr 78 Lots of wild Asparagus growing along fence line – wildlife fence and wildlife protection visible on some line and bushings – ComEd said plan is to put wildlife guards on all 12kV lines going into yard One gate not bonded to gnd Location of diesel generators that were in the yard in the past Filters are close to changing on Xfmr 84 Cracked seal on Xfmr 84 – Xfmr 84 was the one someone tried to steal part of the CU gnd wire and got a flash – the flash point is visible on the Xfmr 84 tank were the wire cutters touched the tank as the thief was preparing to cut the gnd wire Xfmr 83 paint is off exposing one side Xfmr 81 – the air dehydrator is Blue Bkr 81-5 some rust visible on frame and tank</p>

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			<p>Another gate into the yard is bonded to gnded gate posts Xfmr 76 LTC looked ok Bkr 7667 B tank oil level indicator is not visible Xfmr 78 rust inside radiator – LTC ok Fence corner posts appear gnded 12kV yard within animal fence – operating and testing of devices Guy wire broken on pole outside 12kV yard – couldn't find anchor Observed locations on steel work where gnd connections had been cut by wire thieves – other gnd connections had been made Xfmr 72 – Hydran leak in the past was visible – some rust inside radiator Xfmr 77 – old oil leaks visible – LTC OK – nitrogen tank secured with cord/rope and not chain Station log was reviewed along with single lines visible in relay house Lots of electro mech relays – 12kV had electro Mech relays while 34kV had SEL solid state relays</p>
	Random	171 st St in Harvey	Blown Arrestor
		Feeder Ckt: <u>G4373</u> City: <u>Harvey</u> Voltage: <u>12/4kV</u>	
002-10	1	TDC443 Harvey Substation	<p>Fence Line Inspection: Gate not bonded to gnded gate posts. Vegetation in yard and fence – hole in fence – bushes growing in fence Xfmr bushing oil levels OK Old oil leaks visible at Xfmrs</p>
011	1	North of 160 th St btwn Vine and Gauger Aves	Unknown Ckt -- Vine on pole
	1	Near intersection of 162 nd St & Lathrop Ave	Ragged pole top
014-5	2	Near 161 st & Damen Ave	Cross-arms used as braces at base of 2 poles

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	2	North of 163 rd btwn Damen Ave & Winchester Ave	Dead vines on pole
	3	South of 165 th btwn Dixie Hwy & Winchester Ave	OH/Tree canopy above primary
017-8	4	2301 Anthony Ave	Cross-arms used as braces on pole
019	4	North of 170 th St btwn Crane Ave & Head Ave	Loose wire hanging on primary
022-3	5	California & 174 th	Cracked pole top Bad pole
	5	N. of 172 nd St btwn Whittier Ave & California Ave	Site of old Vine problem visible (vine is dead/dried)



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Bushes growing into/over fence
009 Harvey Substation

Broken pole braced with cross-arms
017 Feeder G4373

Cracked/broken pole top
222 Feeder G4373

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: G652 City: Dolton Voltage: 12kV Date: Wednesday, May 18, 2011

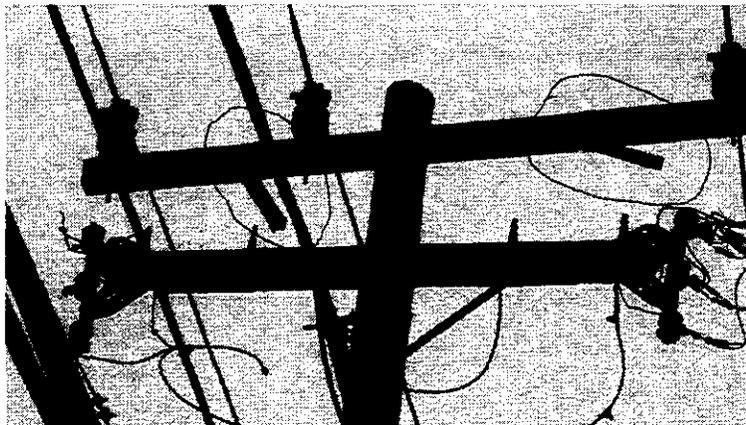
<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
	Random	45 ~ 1mi S. of 163 rd	Veg growing in riser cover
	Random	Near Joliet & Willow Springs Rd	Trees into Primary
		Feeder Ckt: <u>G652</u> City: <u>South Holland</u> Voltage: <u>12kV</u>	
024-6	1	TDC465 South Holland Substation	Fence line inspection: Gate posts gnded but gates not bonded to posts Fire box near gate – trash in yard Vines on fence – many dead & sign of past problems but some are coming back alive, Some veg in yard Oil levels look OK
027	6	2E3	Animal guard off of bushing of Xfmr
028-9	3	533 161 st Place	Broken or disconnected braces on both sides of the cross-arm
	3	161 st PL – near 4E4	Tree close to primary

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	1	Unknown ckt E. of Naughton Dr	Tree into primary
	2	S. of 154 th St btwn S. Park Ave & Elm St	Tree trimming observed
		Feeder Ckt: <u>W4514</u> City: <u>Oakbrook Terrace, Elmhurst</u> Voltage: <u>12kV</u>	
030-7	1	TSS145 York Center Substation	Fence line inspection: Gate post gnded – gate not bonded to post Fire box on fence near gate Some veg into fence but little in yard Xfmr 73 & 74 oil in bushing looks OK on 138kV / Primary side Xfmr 74 – dehumidifier decasment is blue Fans on Xfmr 73 are very loud
038-9	2	Behind Comfort Suites	Trees into primary all along alley
	3	Near device 4H1	Primary into trees
	3	West Ave South of Avery St intersection	Silver Maples are close to Primary
	4	Near device 2E6	Loose down guy
040-1	5	N. of Harrison btwn Swan & Sailor Ave	Primary into Tree
042-3	5	S of Harrison btwn Swan & Sailor Ave	Primary into Tree
	5	S of Harrison btwn Spring Rd & Saylor Ave	OH/Tree canopy over primary in ROW
		Feeder Ckt: <u>W3614X</u> City: <u>Willowbrook, Burr Ridge, Hinsdale, Clarendon Hills</u> Voltage: <u>12/4kV</u>	
044-60	1	TSS136 Burr Ridge Substation	Fence line inspection: Gates bonded to gnded gate post No guy guard on down guy in yard Xfmr bushing oil levels visible from W. fence look OK

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			Gap btwn gnd & fence on E. Fence line Veg in yard Corner posts are gnded Rusty Xmission twr/pole in yard
061	2	6285 Grant St	Pole marked for replacement
062-3	2	6005 Grant St	Old pole with dead vine on it (area of possible past problems) – Pole top looks to be in bad shape
	2	63 rd St	Saw 2 new poles that had recently installed Observed 1 pole that ComEd crew was in the process of installing



Broken/disconnected braces
028 Feeder G652



Trees into Primary all along alley
038 Feeder W4514



Badly rusted poles
060 Burr Ridge Substation

Field Inspection Log

Appendix A: Log of Summer Field Observations

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: W6610Y City: Oakbrook, Oakbrook Terrace, Villa Park, Elmhurst Voltage: 12kV Date: Thursday, May 19, 2011

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
064-103		SS501 Elmhurst Substation	<p>In Station inspection:</p> <p>Weed cntl/mgmt tag on fence, trees cut away from fence, fire dept box on fence at W gate, Xfmr 52 has rust on cooling fins/radiators, Xfmr 51 has some rust on case and cooling fins/radiators, animal protection on Xfmr disconnects, Bus tie bkr L12065 Oil OK – rusty on outside, fire sealant visible in cable conduits, Xfmr 53 oil levels OK Bkr L12069 oil level OK – rusty on outside Bkr pnls all replaced outside in 2000 One down guy into station touches fence & may provide station access for animals</p> <p>Station House – Spare bkr in bldg for parts for old equipment Modern relays feeders 432, 430, 431, Xfmr 52 Fiber tie-in for SCADA</p> <p>Review station book/log – station single line Read about pre-ICC walk-down several days earlier</p>
		Feeder Ckt: <u>W6610Y</u> City: <u>Oakbrook, Oakbrook Terrace, Villa Park, Elmhurst</u> Voltage: <u>12kV</u>	
104-112	1	TDC566 Oakbrook Substation	<p>Fence line inspection:</p> <p>Gate posts gnded but not bonded to gates, Xfmr 71 oil in bushing OK, rock of yard meets fence minimizing animal entry, rust on Xfmr 72, bushes trimmed around fence perimeter, Xfmr 74 has heavy rust on cooling radiators/fins – active/current oil leak visible</p>
113	5	1 st pole S of Prairie Path Ln btwn Berkley & Hawthorn	Missing outside down guy marker/guard

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114-5	5	Pole at Montrose Ave btwn Fairfield & Berkley	1 or 2 loose bolts holding on insulator mounting bracket
116, 119, 120	5	S pf Vallette St btwn Fairview & Berkley	Line hose on primary protecting tree from primary – at least 1 dead branch over area of line hose – heavy tree growth – very heavy overhang/tree canopy above primary
121	5	North of above position	Very heavy Overhang/Tree canopy above primary
122-3	5	Pole at Vallette btwn Berkley & Hawthorn	Pole very old – mounting bracket loose – heavy overhead/tree canopy above primary both N and S
124-5	5	See dwg – N. of W. Vallette St btwn Hawthorne Ave & Fairfiend Ave	Dead vines on pole to top of pole
126	5	See Dwg ~344 Vallette St Across street from lincoln school	Line hose on primary to protect primary that is close to tree –
127-9	5	344 Vallette St	Loose bolts on mounting HW & split pole top
130-1	5	W. Cressent Ave btwn Sunny Side Ave & Fairview Ave	Heavy vines – some apparently live
	5	Near Intersection of W. Cressent Ave & Rex Blvd	Dead vines on pole – probable location of past problems
	5	ROW N. of W. Cressent Ave btwn Hawthorn Ave & Fairfield Ave ROW S of W. Cressant Ave btwn Fairfield Ave & Hillside Ave	Multiple Possibly bad/old poles & pole tops
	5	General observation: ROW S of Prairie Path Ln to N of W. Vallette St btwn Sunnyside Ave & Fairview Ave ROW S of Montrose Ave to N of W Crescent Ave btwn Fairview Ave * Berkley Ave ROW S of Prairie Path Ln to N of W. Crescent Ave btwn S Berkley Ave & Hawthorne Ave ROW S of W. Vallette St to N of W. Crescent Ave btwn Hawthorn Ave & Fairfield Ave ROW N of W. Crescent Ave btwn Spring Ave & Saylor Ave	Heavy Overhang/Tree canopy above primary everywhere

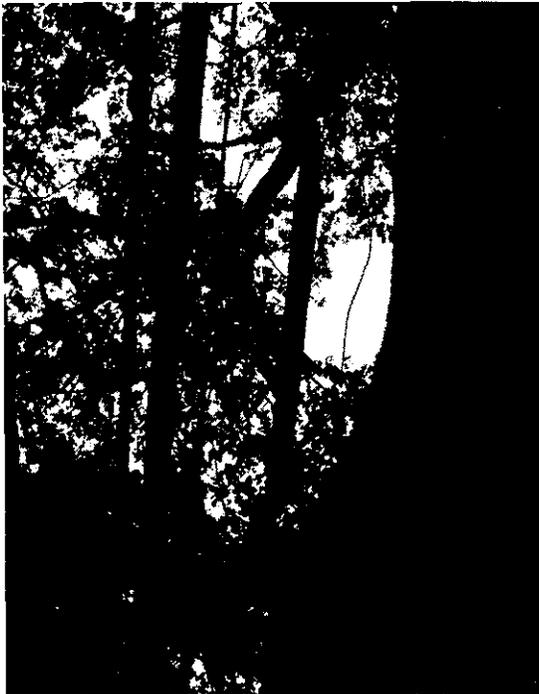
Appendix A: Log of Summer Field Observations

132-3	4	ROW N of Wilson St btwn S Berkley Ave & Hawthorn Ave	Pole top split with nail/bolt in split
134	4	ROW N of Madison St and W of Fairview Ave	Split Pole Top
	4	ROW N of Wilson St btwn S Berkley Ave & Hawthorn Ave ROW N of Madison St btwn Spring Rd & Saylor Ave	Heavy Overhang/Tree canopy above primary
	4	Near intersection of Madison St & Spring Rd	Line hose on primary
	4	ROW S of Madison St btwn Fairfield Ave & Hillside Ave	Old/possibly bad poles
		Feeder Ckt: <u>W668X</u> City: <u>Oakbrook, Elmhurst</u> Voltage: <u>12kV</u>	
104-112	1	TDC566 Oakbrook Substation	Fence line inspection: See above
135	3	911 Van Buren	Blanket on Pole – primary next to pole
136	3	911 Van Buren	Secondary cross-arm braces are hanging
137-8	3	Madison	Pole being replaced and replacement pole
139	3	Off of Madison	Picture of ROW with veg planting below primary
141-2	3	McKinley at Fuse 170003	Bad pole top & loose mounting bracket for insulator
143-4	3	575 Prospect Ave	Line hose on primary that is leaning against tree Tree into Primary
	3	610 Prospect Ave	Transformer looks like it may have overheated in past
	3	ROW S of W Adams St btwn Mitchell Ave & Prospect Ave	Unknown Ckt – Old/Bad pole top

Appendix A: Log of Summer Field Observations

	3	ROW S of McKinley St btwn Parkside Ave & Bryan St	Ratty/Bad pole top Line hose on primary Old/bad pole
	3	Near intersection of W. Vallette St & Parkside Ave	Old/bad pole
	3	ROW N of McKinley St btwn Saylor Ave & Swan Ave	Leaning pole
	4	ROW N of W. Jackson St btwn Fairfield Ave & Hillside Ave	OH/Tree canopy above primary
		Feeder Ckt: <u>W665X</u> City: <u>Oakbrook, Elmhurst</u> Voltage: <u>12/4kV</u>	
104-112	1	TDC566 Oakbrook Substation	Fence line inspection: See above
146	3	15W112 Howard St	Loose bolt on insulator bracket
147	3	Xfmr 4E6	Leaning pole Old pole
148	3	Intersection of Howard & Old York	Leaning pole
	3	Lexington St -- near Xfmr 4D1	Old Poles -- 2 locations
	3	Harrison St -- near Xfmr 4D3	Leaning pole
	3	Concord St	Old poles -- 5 locations
	3	Harvard St -- near Xfmr 4E3	Very bad pole top
	3	Near intersection Linden Ave & Fillmore St	Guy guard issue
	3	Near intersection Linden Ave & Old York Rd	Leaning pole

Appendix A: Log of Summer Field Observations



Line hose on primary close to tree near school
126 Feeder W6610Y



Blanket on pole next to Primary
135 Feeder W668X



Tree into Primary, line hose on Primary leaning against tree
143 Feeder W668X

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: C82 City: Skokie Voltage: 12/4kV Date: Monday, May 23, 2011

Feeder Ckt: D4901 City: Berkley, Elmhurst Voltage: 12kV

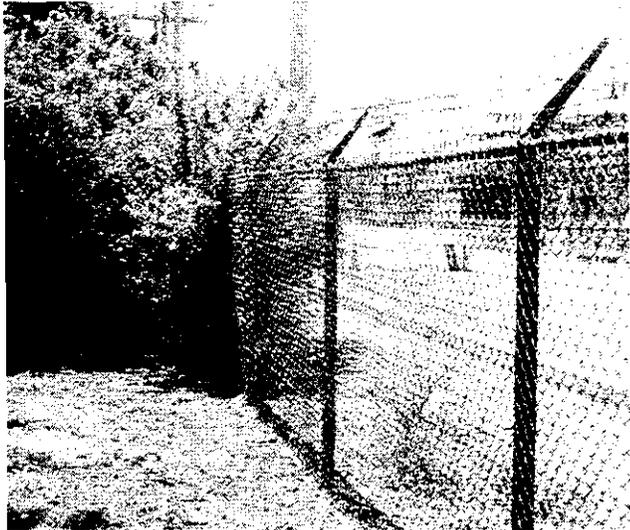
Appendix A: Log of Summer Field Observations

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
		Feeder Ckt: C82 City: Skokie Voltage: 12/4kV	
154-67	1	Tss88 Skokie Substation	Fence-line inspection: Gate at Emerson St -- Gate posts not visibly Gnded or bonded to gate, bushes growing into and over fence provide easier animal access to substation yard, bushes growing inside fence, vegetation in yard, missing down guy marker/guard, 12KV yard has animal fence around it, animal guards on lines into/out of 12kV yard, Bkr for Ckt C82 is visible and has animal protection – equipment is rusty – Ckt C82 Bkr has visible past oil leak on top of tank. Could make oil levels on bushings of 2 Xfmrs and appeared OK.
168-9	2	6 or 7 poles W of Gross Pt. Rd on Old Orchard Rd	Blown arrestor
170-1	2	1 pole E of above on Old Orchard Rd	Old pole appears partly shell rotted
172	2	1 pole E of above on Old Orchard Rd at Device 437104A1	Gnd cover/molding missing
173-4	2	9361 Gross Point Rd	Hanging leads to arrestor
	2	Gross Point Rd btwn Grant St and Old Orchard Rd	A number (5-6) of old poles visible
		Feeder Ckt: D4901 City: Berkley, Elmhurst Voltage: 12kV	
175-83	1	TDC549 Berkeley Substation	Fence-line inspection: Gate post gnded but not bound to gate, Fire Dept box available at gate, Xfmr 71 & 73 bushing oil levels OK, Xfmr 73 LTC appears to have been hard low, some rust visible on Xfmr 71 radiator, some Veg in yard
184	1	1 pole N of 3D2	Dead end – pri thru tree not hooked to line side

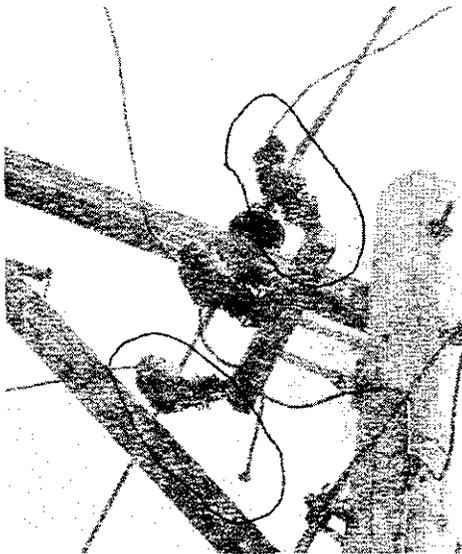
Appendix A: Log of Summer Field Observations

185	1 (Random)	Primary W of Device 354890 (unkn Ckt)	Close to/into tree branch
	1	Chicago Ave btwn Arthur Ave & Taft Ave	Serious overhang above primary
186	1	5805 Chicago Ave – Back yard	Bush/Tree into center primary – electro burning on tips of branches
187-91	1	Device 3829	Shell rot on riser pole Loose HW on pole
	1	ROW N of Chicago Ave btwn Richard Ave & Arthur Ave ROW N of Chicago Ave btwn Arthur Ave & Herbert Ave ROW along Chicago Ave W of Herbert Ave	OH/Tree Canopy above primary
192	2	517 E Park Ave	Point of past problem(s) Apparently dead vines had been growing up pole and guy wires
193	3	256 Maison St – Back yard	Ragged pole top Center phase bracket loose
	3	ROW N of E 3 rd St & E of Geneva Ave	Old pole appears shell rotted
	4	Arlington Ave	Loose down guy
	4	Arlington Ave	Shell rotted pole
	Random	Wolf Rd & Charles St ROW near 1656 Charles St	Flaky shell on pole and ragged pole top

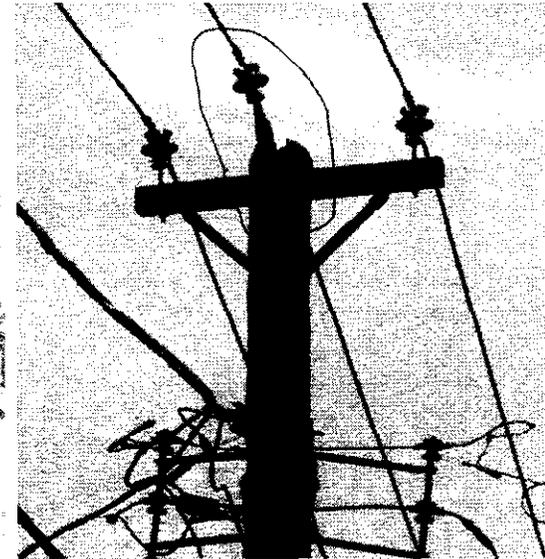
Appendix A: Log of Summer Field Observations



Vegetation growing in/thru fence & in station yard
160 Skokie Substation



Blown/damaged Arrester
168 Feeder C82



Old/Ragged pole top – center Primary bracket loose
193 Feeder D4901

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: W5204 City: Addison, Elmhurst, Bensenville, Wood Dale Voltage: 12kV Date: Tuesday, May 24, 2011

Feeder Ckt: W435 City: Elmhurst Voltage: 4kV

Feeder Ckt: W680 City: Elmhurst Voltage: 12kV

Feeder Ckt: W3521 City: Elmhurst Voltage: 12kV

Photo ID	Drawing No.	Location Description	Observations at this Location
		Feeder Ckt: <u>W5204</u> City: <u>Addison, Elmhurst, Bensenville, Addison, Wood Dale</u> Voltage: <u>12kV</u>	

Appendix A: Log of Summer Field Observations

195-220	1	TDC552 Addison Substation	Fence-line Inspection Gate posts Gnded, gate not bonded to gnded gate posts, fire box on fence, visible dead and live vines on fence, veg mgmt tab on fence dated 4-23-2011, open space between fence bottom and ground enables easier animal access to yard, animal guards on 12kV equipment, Ckt 5205 primary phases have animal ingress prevention HW on lines but they are not present on neutral, Xfmr 71 pri bushing oil levels appear OK – Xfmr 71 LTC hard low, corner posts of fence are gnded, rust visible on some equipment, Xfmr 72 LTC OK & Pri bushing oil level OK, Xfmr 72 active oil leak on E radiator,
221	1	Transmission ROW near substation just east of Harvard Ave	Trees in transmission ROW directly below 2 transmission lines
222	1	Unknown ckt 20' N of device 445332E6	Tree into W primary
224	1	Unknown ckt – bottom ckt Approx 300' E of Lorraine	Tree close to N primary
225	1	Approx 300' E of Lorraine	Barb wire hanging loose into space around/above base of transmission tower
226-8	1	Unknown Ckt – bottom ckt Approx 500' E of Lorraine	Trees close/into bottom ckt primaries On 3 rd picture (228) can see burning on ends of some branches that have been in contact with primaries
229-30	1	422 Beverly Ave	Broken gnd cover/molding Vine cage has been placed around base of pole
231	1	422 Beverly Ave	Barb wire hanging loose into space around/above base of transmission tower
232	1	409 Cherry Hill – backyard	Trees into primary
234	1	E of cherry Hill near Fullerton	Trees into primary
235	2	Device 170278	N primary disconnected – tree into N primary S primary close to tree Map showed 2 primaries connected
239-41	2	Speedway Gas Station on Lake St	Shell rotted and split pole
	2	E of Xfmr 3D7	Old/bad pole

Appendix A: Log of Summer Field Observations

	2	Near intersection of Bruce St & alley-way	Old/bad pole
236-7	3	1H5	Tree into Xfmr bank Tree brushing primary in the wind
238	3	Device 62894	Tree close to primary and brushes primary when wind blows
242-3	4	512 Forest Dr	Tree into primary – both sides of street
244-5	4	511 Forest Dr	Tree into primary
	4	ROW from Cardinal Ave to Xfmr 3E5	OH/Tree canopy above primary
246	4	641 Holly Ct	Weeping willow into primary
247	4	640 Holly Ct	Bad/split pole top at bolts
	4	Wood Dale Rd – S of Device 70978 near street cross-over	Trees into primary
248	5	Device 25461	Arrestor disconnected
	5	Woodland Ave – E of Device 25461	Tree into primary
	5	N Addison Rd near Byron Ave intersection	Tree between primary phases but not touching
		Feeder Ckt: <u>W435</u> City: <u>Elmhurst</u> Voltage: <u>4kV</u>	
249-64	1	DCW343 Elmhurst Substation	Fence-line Inspection but with Open Gate: Substation Gate was unlocked and open when Staff and ComEd Gov Affairs Employee arrived at the Substation. No ComEd personnel were present at the Substion – the substation was unattended. Gate posts not gnded & gate is not bonded to gate post, Veg mgmt tag on fence dated 4/23/2011, Gnd was not visible at corner fence posts, Xfmr 2 oil in bushings appears OK, animal guards on secondary, Xfmr 1 feeds W435, Line 6431 feeds the substation (Xfmrs 1 & 2), extensive vines and vegetation/bushes along back fence (North side) of substation, bottom of substation fence is blocked to prevent easy animal access to substation, some equipment is rusty and badly in need of painting.

Appendix A: Log of Summer Field Observations

266-7	1	Transformer 1K4	Split or broken crossarm – road side primary loose
268	1	1 Pole E of Colefax on Butterfield Device 15753	Exposed secondary cables
	1	1 pole E of Device 2D6	Old bad looking pole
270-1	1	Butterfield Rd from Linden to York	Evergreens planted roadside near or under primary – eventual problem
272	1	935 Chatham Rd	Tree into street side primary
	1	924 Chatham Rd	Tree brushes S primary in wind
	1	245 Van Buren St.	Some shell rot pole top is ragged
273	1	852 Chatham Ave – back yard ROW	Unidentified Salmon or Orange device on pole top – not insulator Old pole
	1	ROW N of E. Van Buren St btwn Chatham Ave & Colefax Ave	OH/Tree Canopy over Primary
		Feeder Ckt: <u>W680</u> City: <u>Elmhurst</u> Voltage: <u>12kV</u>	
274-92	1	TDC568 Church Substation	Fence-line Inspection: Gate post gnded and bonded to gate, W680 bkr cab is visible – fed from Xfmr 71, veg mgmt cntl tag dated 4-23-2011, Xfmr 71 bushing oil levels OK on primary & LTC looks OK, rock built up around fence line recently to eliminate easy animal entry into substation – build up is fresh with some rocks stuck high in fence.
	1	Pole at crossing of Church Rd – E side	Flaky – bad pole
	1	3G4	Replace pole tag – with new pole on street
	1	Near Xfmr 3H1	Gnd cover/molding broken/missing
		Feeder Ckt: <u>W3521</u> City: <u>Elmhurst</u> Voltage: <u>12kV</u>	
293-99	1	TSS135 Elmhurst	Fence-line inspection:

Appendix A: Log of Summer Field Observations

			1 st gate North, gate post gnded but not bonded to gate, veg mgmt cntl tag dated 5-5-2011, rock built up along fence line to eliminate easy animal entry into substation, 2 nd gate South, fiber mesh fence, gate posts gnded and bonded to gates, most substation equipment too distant from fence line for condition to be determined
	2	Near Xfmr 3F2	Bad pole
	2	1 pole W from 26209	Ragged pole top & split pole top
	2	ROW along Kenilworth Ave btwn E Grantiley Ave & Columbia Ave	Old/bad pole
	2	Near intersection of Kenilworth Ave & Grantiley Ave	OH/Tree Canopy above primary
300-1	3	235 Willow Rd	Line hose on primary that is next to trunk of tree
3002-3	3	131 Melrose Ave	Broken double cross-arm – appears to be working & may have been used in a repair
	3	ROW N & S of E 3 rd St btwn Indiana St and Willow Rd	OH/Tree Canopy's above primary



Tree into Primary
244 Feeder W5204



Evergreens planted below Primary
271 Feeder W435



Line hose on Primary next to tree trunk
300 Feeder W3521

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: E4004 City: Cary Voltage: 12kV Date: Wednesday, June 8, 2011

Feeder Ckt: E501 City: Barrington Hills Voltage: 12/4kV

Feeder Ckt: W7217 City: Sleepy Hollow Voltage: 12kV – Spot Check

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
	Random	HW-47 N of I-55 S of Morris	2 12kV arrestors blown 1 34kV arrestor blown
327	Random	N of Morris on HW-47 Near Grundy Co Fairgrounds Entrance	3 blown arrestors
	Random	Approx 1-2 mi. N of Morris on HW-47	Blown arrestor
	Random	3 poles N of intersection of 52 & 47	Broken 34kV cross-arm brace
	Random	2-3 mi. S of 71 on 47	2 blown 34kV arrestors on field side
	Random	On 71	Trees into 12kV primary
		Feeder Ckt: <u>E4004</u> City: <u>Cary</u> Voltage: <u>12kV</u>	
328-35	1	TDC240 Cary Substation	Fence-line Inspection Gate posts Gnded, Bonding braid to gate is broken, Weed cntl tag on fence, fire box on fence, some grass & weeds in yard, TR 71 & 72 oil levels & bushing levels visible from fence line are OK, LTC's on TR 71 & 72 stops look

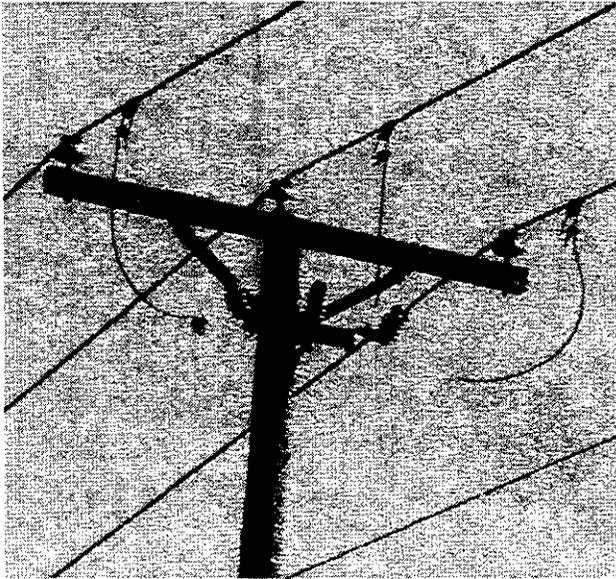
Appendix A: Log of Summer Field Observations

			like they had been hard low, misc equipment in yard
	2	Near Xfmr 1B5	Old pole that has been re-enforced – missing part of gnd molding
	2	120 Ross Ave E	Ratty pole top
336	3	156 Wagner Dr	Threaded rod in top bolt position of bracket – does not appear to have a nut on one side
	3	154 Oriole Tr	Bad pole top
	3	ROW N of Alma Ter & E of Elden Dr	Weathered/bad pole
337-9	3	At device F13138	Pole being replaced
		Feeder Ckt: E501 City: Barrington Hills Voltage: 12/4kV	
346-58	1	TDC250 Barrington Hills	Fence-line Inspection: Gate posts Gnded, gate not bonded to gnded gate posts, some weeds and grass in fence, oil levels visible from fence line OK, dead vines on fence, station yard built up at fence line to prevent easy animal access to yard, animal protection visible on devices in station
359-61	3	85280 Riser	Vines growing on riser
	6	ROW S of Device 85227	Bad/Ratty pole top
341	8	419 Sweitzer Rd	Tree into primary
341	8	Opposite of 419 Sweitzer Rd	Tree close to primary when wind blows
	8	Sweitzer Rd near Kendal	Silver Maple close/into Primary
	8	4510 Linden St	Trees close/into primary
	8	4510 Linden St	Trees close on other side

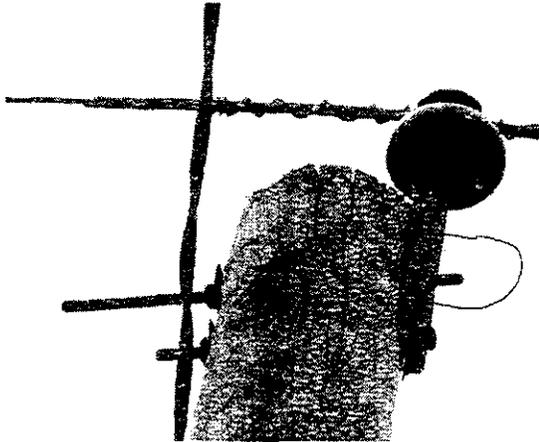
Appendix A: Log of Summer Field Observations

	8	2C9	Trees close/into primary
343-4	8	4435 Pate Device 203624	Branch on primary
345	8	Corner of Geringer Rd & Beachway	Bad pole Vine on pole
	8	Pioneer St near 4A2	Trees into primary with burning visible
		<u>Spot Check -- Feeder Ckt: W7217 City: Sleepy Hollow Voltage: 12kV – Spot Check</u>	W7217 had been a worst performing circuit in 2006, 2005 and 2003. This circuit has been inspected by Staff three times in the past. In Staff's assessment of ComEd's 2006 report Staff noted that: "Circuit W7217 was spot checked on Tuesday, June 5, 2007, for the purpose of trying to determine why W7217 was a repeat worst performing circuit. Staff observed that W7217 is located in Right Of Way's (ROW's) and back lots composed of many fast growing trees, such as white pines, and vines that will be perpetual problems without careful attention."
362	Spot Check W7217	Near Water Tower in Sleepy Hollow	Dead vines on classic xfmr look good compared to years past
363	Spot Check W7217	Y2599	Look good compared to past
364	Spot Check W7217	Other device	Look good compared to past
365	Spot Check W7217	Dev 42233263	Cleared but vines growing up guy wire will be problem in the future

Appendix A: Log of Summer Field Observations



3 blown arrestors
327 Feeder RANDOM



Missing Bolt Cap/Nut
336 Feeder E4004



Bad pole, Vines, Tree(s) into Primary
345 Feeder E501

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff) & [REDACTED] (ComEd)

Feeder Ckt: R6509 City: Rockford Voltage: 4/12kV Date: Thursday, June 9, 2011

Feeder Ckt: B116 City: Popular Grove, Caledonia Township, Caledonia, Manchester Township, Roscoe Township Voltage: 12kV

Feeder Ckt: B182 City: Harvard, Alden Twnshp, Hartland Twnshp Voltage: 12kV

<u>Photo ID</u>	<u>Drawing No.</u>	<u>Location Description</u>	<u>Observations at this Location</u>
366-76	1	TSS165 Fordam	Fence line Inspection: Corner posts Grounded, Gate posts Grounded, Gates not bonded to ground posts, some equipment rust, some equipment in need of painting, minor grass

Appendix A: Log of Summer Field Observations

			& weeds growing in parts of yard, vines & bushes growing thru and over fence -- may provide protection/cover for animals, motion detectors on fence to detect yard intruders, ground wire cover missing/broken off at one pole, fire department box visible on fence, Transformer 71 LTC looks OK, Conduit Sealant visible at Transformer 71.
377-8	1	Dev 4C1 @ 920 S 5 th St	Bad pole Top -- Bolts/HW loose
379	1	Dev 4C1 @ 920 S 5 th St	Ground wire cover missing/broken-off
	1	One pole North of Above Location	Bad pole Top
380-1	1	One pole South of Above Location @ 924 S 5 th St	Missing bolt on bracket supporting primary
382	1	One pole South of Above Location @ 924 S 5 th St	Ground wire cover missing/broken-off
383-4	1	Corner of 9 th & S 5 th St	Vine covering pole and pole top split
385-6	1	1004 S 5 th St	Bad Pole Top & loose HW
	1	727 7 th Ave	Bad Pole Top
	1	Gregory St btwn WY 251 & S 5 th St	Bad Pole Top
	1	S 4 th St btwn 6 th Ave & 7 th Ave	Trees close to Primary
	3	6 th & 20 th St	Silver Maple close/into Primary
	3	9 th & 20 th St	Locust tree close/into Primary
	3	On 9 th St btwn 23 rd St & 21 st St	A number of bad poles/bad pole tops
	RANDOM	Broadway in Rockford	Line hone on 2 phases of Primary over street light
	RANDOM	Broadway in Rockford	Some tree issues on Primaries along side streets off of Broadway

Appendix A: Log of Summer Field Observations

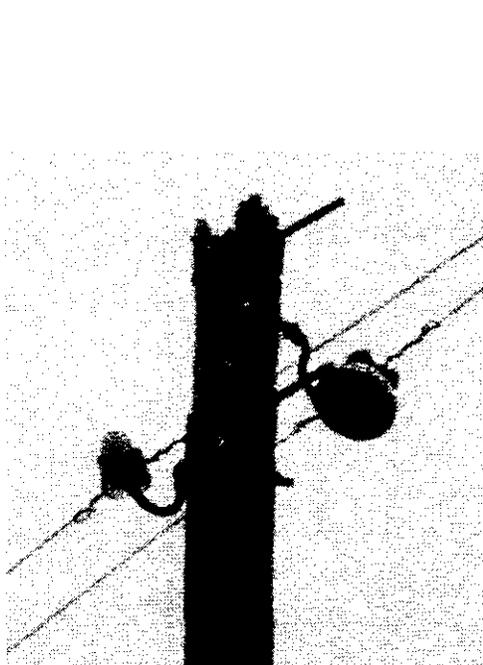
		<u>Feeder Ckt: B116 City: Popular Grove, Caledonia Township, Caledonia, Manchester Township, Roscoe Township Voltage: 12kV</u>	
387-98	1	DCB11 Popular Grove	Fence-line Inspection: 2 Corner posts visibly Grounded, Grounds not visible at Gate posts, Gates not bonded to ground posts, some equipment rust, some equipment in need of painting, minor grass & weeds growing in parts of yard, Transformer 51 has a lot of animal protection, Transformer 52 has some animal protection – not as much as 51, Transformer 52 is the feed for B116, Transformers 51 & 52 LTC's look OK, Transformer 51 & 52 Bushing oil levels look OK, Transformer metrics visible from fence-line look OK.
399-402	7	1 pole E of Device 4A7	Bad pole Top and Hardware loose – noted that split pole has been bolted above split to prevent further splitting
	7	2 Poles W of 1908 Quail Trap Rd	Bad Pole Top
	7	3 Poles W of 1908 Quail Trap Rd	Visible that Bad Pole has been tagged for Replacement
	7	3 & 4 Poles W of Device 4A3	Visible that Bad Poles have been tagged for replacement
404-5	7	2 Poles W of Wind Ridge Herb Farm	Bad Pole Top and Loose HW supporting Primary
	1	Curve on Wyman School Rd	A number of possible Bad Poles & Bad Pole Tops Loose/hanging ground wire and missing ground wire cover
	9	Curve on Wyman School Rd	Split Pole Top held together by 2 bolts.
	9	Several locations along Wyman School Road	Numerous Bad Pole Tops observed -- some with loose HW supporting Primary Loose ground wires Shell rotted pole East of Co Rd 7 Visible that a Bad Pole had been tagged for Replacement West of Co Rd 7
	9	Co Rd 7 North of N Boone School Rd	Numerous Bad Poles and Bad Pole Tops observed
406-8	11	19563 Free Church Rd	Bad Pole Top with loose HW supporting Primary
	11	Free Church Rd btwn Hunter Rd and McCurry Rd	Numerous Bad Poles

Appendix A: Log of Summer Field Observations

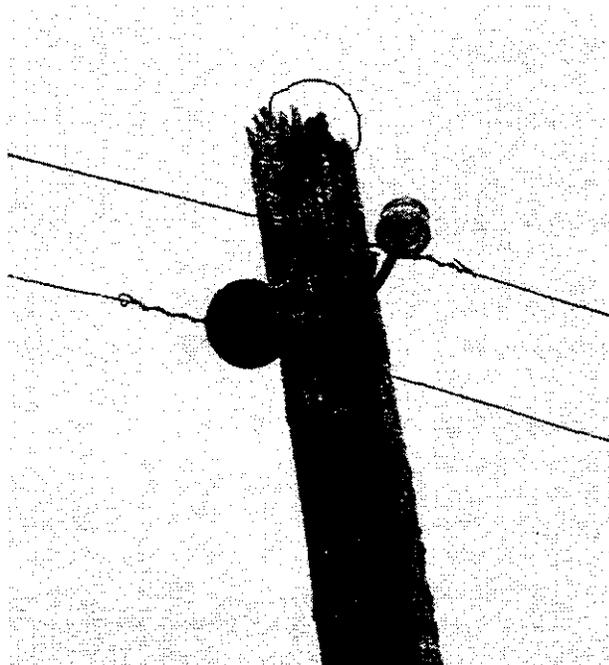
	11	Near Device 4B1	Live Vine growing on Pole
	11	Near Device 2A4	Remnants of Dead Vines on Pole
	11	Device 3A2	Can see daylight through Pole
		Feeder Ckt: <u>B182</u> City: <u>Harvard, Alden</u> <u>Twshp, Hartland Twshp</u> Voltage: <u>12kV</u>	
409-17	1	SS318 Harvard	Fence-line Inspection: Corner posts Grounded, Gate posts Grounded, Gates bonded to ground posts, some equipment rust, some equipment in need of painting, minor grass & weeds growing in parts of yard, Weed application tag on Fence dated 6-6-11, fire department box visible on fence, Transformer bushing oil levels and other Transformer metrics not visible from fence-line.
	7	Device 3X11	Dead Vine remnants visible on Pole & Transformer
	14	Device 1B3	Dead Vine Remnants visible on Pole & Transformer
	14	Device 2A8	Dead Vine Remnants visible on Pole & Transformer
	14	Just S of Hebron Rd	Dead Vine Remnants visible on Pole and Arrestors
	14	Various locations	Dead Vine Remnants visible on Pole and/or secondary wire
	15	2 poles W of Alden Rd on Hebron Rd	Branch on Cross Arm but not in contact with Primary
418	E of Dwg 15: Ckt E822	Ckt E822 just E of B182 Dwg 15 14502 Hebron Rd	Vine growing up Pole Pole is ragged/old
419	E of Dwg 15: Ckt E822	One Pole West of above – just East of the Dead-end of B182 2 Transformer Bank with Secondary Disconnected	Vine growing up Pole

Appendix A: Log of Summer Field Observations

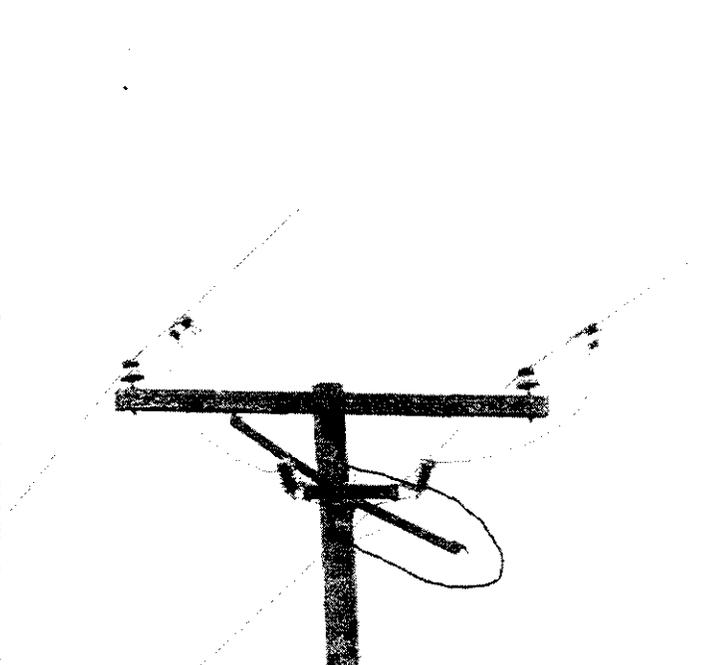
420	RANDOM	5929 McCauley Rd Approx 10 poles South of Thayer Rd	Disconnected Cross-Arm Support
	RANDOM	South of Above Location by Approx 1 mile	Tree into Primary
	RANDOM	T68 just S of 14	Disconnected Cross-Arm Support



Bad pole, Loose HW, Split pole top
400 Feeder B116



Bad pole, HW supporting Primary near failure
405 Feeder B116



Disconnected Cross-Arm Support
420 Feeder RANDOM

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff), [REDACTED] (ComEd) & other ComEd personnel

Feeder Ckt: TDC569 Sugar Grove City: Sugar Grove Voltage: NA Date: Monday, June 13, 2011

Feeder Ckt: Random City: Random (Sugar Grove, Hinckley, Waterman, De Kalb, Creston) Voltage: NA kV

<u>Photo ID</u>	<u>Location Description</u>	<u>Observations at this Location</u>
421-487	TDC569 Sugar Grove	<p>In Substation Inspection:</p> <p>Gates didn't appear grounded. Gates not bound to post. Fire station box mounted on outside of building. Weed application tag on Fence dated 6-12-11, rock piled along fence bottom to prevent animal entrance into yard, riser molding and underground box & insulation in yard – insulation had gotten wet & had expanded. Some weeds & grass in yard but apparent (dye) that had as been sprayed. Some corner post grounds are visible. TR-77 and LTC oil levels and temps OK; TR-73 & LTC oil levels & temps OK with signs of past oil leaks visible uner radiators but nothing active apparent except leak visible below dissolved gas monitor – secondary cable conduits are sealed; TR-72 & LTC oil levels & temps OK, no active leaks visible; 34kV house – single line & station log reviewed; 12kV and station house – 12kV neutral bus box rusty on outside – reviewed single line on wall and station log; TDC 569 basement of station house – all seals and joints appeared OK and in order. 1 ladder to basement was in need of repair. Rust visible on some equipment.</p>
	<p>Feeder Ckt: <u>Random</u> City: <u>Random</u> <u>(Sugar Grove, Hinckley, Waterman, De Kalb, Creston)</u> Voltage: <u>NA kV</u></p>	
	Bliss Rd E of IL-47 Sugar Grove	Numerous locations of trees into primary
488	IL-47 & US-30 exchange	Field phase of primary into trees
489	IL-47 & US-30 exchange	Tree at primary with electro trimming visible

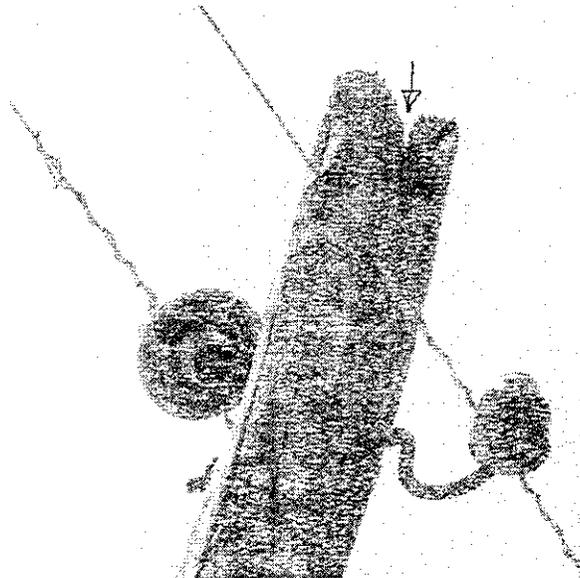
Appendix A: Log of Summer Field Observations

490	IL-47 & US-30 exchange	Vine on pole
491	IL-47 & US-30 exchange	Vine on pole and pole leaning heavily
492-3	17747 US-30	Bad pole top with J hook bracket for insulator falling out
494-5	1 pole E of above and 1 pole w of Co Line Rd (Kane Co)	Broken down guy and damaged pole top
497	49W308 US-30 at Big Creek River Bridge on US-30	Splintered cross-arm
	3 poles W of above	Bad pole
498	4 poles W of Big Creek River Bridge	Broken down guy
499	Dekalb btwn Colonial & Best Ave on Fourth St (Dekalb High School)	Disconnected cross arm brace on street side
500	16065 HWY 23 3 poles N of Elva Rd on IL 23	Disconnected cross arm brace on field side
501	16065 HWY 23 3 poles N of Elva Rd on IL 23	Blown center phase arrestor
502-3	2 poles N of Elva Rd on IL-23	Spawling shell on pole
504-7	4 poles N of Elva Rd 16020 Waterman Rd	Both sides of Rail Road Track have single cross-arm at RR crossing – NESC Violation
509	1 pole N of Device 355A0973 Corner of Walker Dr & Elva Rd	Bad pole top Broken Cross-arm
510-2	2 poles W of Anderland on Elva Rd 5292 Elva Rd	Broken down Guy
	General area above	Notes lots of arrestors – every other span
513	5262 Elva Rd	Very loose gnd wire – pulled from molding
514	5240 Elva Rd	Blown arrestors – center primary and field side primary
515	5228 Elva Rd	Blown arrestor – field side
	1 pole E of University Rd on Elva Rd	Missing guy guard
517-9	4412 Elva Rd (2 poles E of Device 34211 3A1)	Missing / damaged gnd cover – gnd disconnected from neutral Blown arrestors on field side & road side primaries

Appendix A: Log of Summer Field Observations

520-1	1 pole W of Device 34211 3A1 (4364 Elva Rd)	Blown arrester – road side primary
522	3899 Elva Rd. (1 pole W of Device 34215 2A2)	Loose gnd wire and bad looking pole
523	3889 Elva Rd (2 pole W of Device 34215 2A2)	Split cross-arm
524-5	3817 Elva Rd (~9 pole W of Device 34215 2A2)	Splintered / split cross-arm – field side w/ insulator pin exposed
526-7	3807 Elva Rd (~10 pole W of Device 34215 2A2)	Shattered / split cross-arm – field side insulator pin is free Cross-arm brace bolt has lost mounting nut and is nearly completely worked out of the pole ~30-40% of one side of pole is missing at base on field side
	3 poles W of Shabbona (Co Rt 6) on Elva Rd	Very loose gnd wire down side of pole
528	3 poles S of Kessler Rd on Willrett Rd 16816 Willrett Rd (3 pole S of Device 35928030A)	Bad cross-arm
	NE corner of Kessler Rd & Tower Rd	Broken down guy
529	1 pole W from SW corner of Kessler Rd & Tower Rd	Old & splintered pole top
530	SW corner of Kessler Rd & Tower Rd	Missing guy guard Missing / broken gnd cover / molding
532-5	2 pole S of Gurler Rd on Tower Rd 17884 Tower Rd	Pole top shattered Insulator mount HW is loose & mount has dropped so that bell of insulator is nearly touching top of pole Neutral wire HW is loose
536-7	2 pole E of County Line Rd ~ ½ mile W of Tower Rd on Gurler Rd	Shattered pole top w/ ~30% gone
538	RR crossing at Woodlawn Rd & North St Device 03808100A on N side Device 08311 on S side	S side of RR Crossing is single cross-arm – does not appear to be double – NESC Violation N side OK

Appendix A: Log of Summer Field Observations



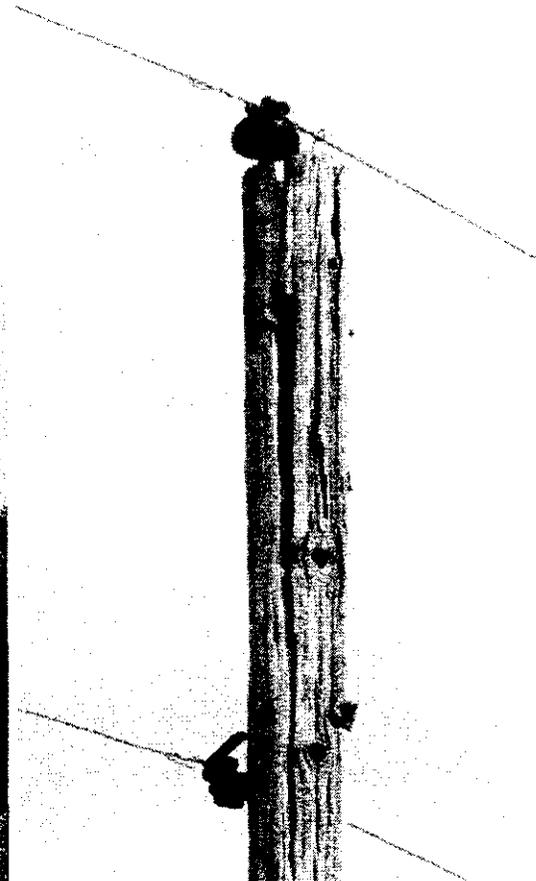
Bad pole, Loose HW supporting Primary near failure

492 Feeder RANDOM



NESC Violation

504 Feeder RANDOM



Bad pole, Primary HW sliding down split to Insulator Bell
Neutral HW loose

535 Feeder RANDOM

Field Inspection Log

Appendix A: Log of Summer Field Observations

Utility: ComEd Investigators: J. Stutsman (Staff)

Feeder Ckt: Random City: Random (Freeport, Pearl City, Bolton, Evarts, Seward, Winnebago)

Voltage: NA kV

Date: Tuesday, June 14, 2011

<u>Photo ID</u>	<u>Location Description</u>	<u>Observations at this Location</u>
539-40	Freeport, IL Stephenson St	Tree trimmers active in street Saw various places on Stephenson St where trees were close that tree trimmers hadn't gotten to yet Saw pole marked for removal on Stephenson St
541-4	TDC370 Eleroy Substation	Very quick visual inspection from fence line Fire department box visible – gate post gnded & gate bonded to post. Corner posts gnded – bushing oil levels visible from fence line appear good – yard has been sprayed for vegetation
545	Outside TDC370 Eleroy substation gate	Missing / damaged gnd cover / guard
546	Co Rd 25 – W of Freeport	Tree into primary
547	10910 W Dublin Rd	Missing guy guard / marker
	W Dublin Rd	A number of old / questionable poles
	W Babbs Grove Rd	A number of old / questionable poles
548-9	7694 W Babbs Grove Rd	Damaged/split cross-arm – insulator pin partly exposed Loose HW Old ragged pole Gnd wire hanging loose with missing gnd cover/molding
551-4	7594 W Babbs Grove Rd	Bad pole loose HW subsidence of pole material on top
	7494 W Babbs Grove Rd	Another pole & pole top like above
555-6	Pearl City Rd	Vine on guy wire
	Park Ave in Freeport	Lots of locations where vegetation is close to primary – at least 4 locations where trees are into primary
557	NE corner of Valley View Dr & Westwood Ave	Splintered pole top resulting in loose HW

Appendix A: Log of Summer Field Observations

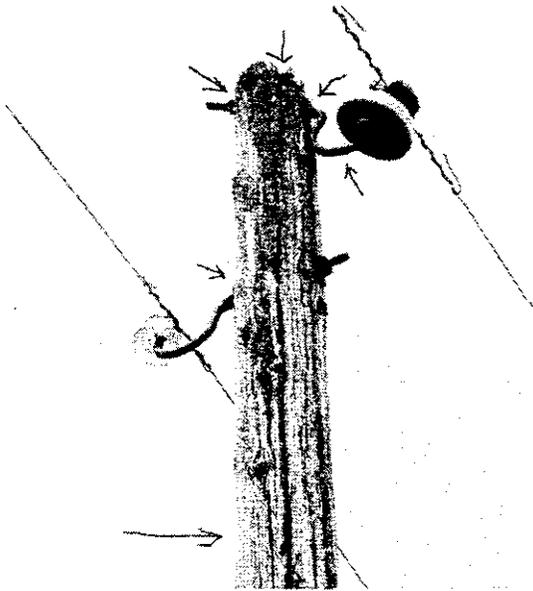
558	3123 S Bunker Hill Rd	Vine on guy Ragged pole top at RR crossing
	1 pole north of above location (other side of RR tracks)	Pole missing guy guard
	E Lamm Rd	4 bad looking poles with very ragged tops
	Cherry Hill Rd on S side of RR crossing	Vine on pole near bottom of xfmr tank
559	Cherry Hill Rd on pole N of RR crossing	Subsidence of top of cross-arms exposing HW
	Device 270074X120A	Disconnected guy
	1 pole S of Device 270074X120A	Bad pole top – insulator mounting J bracket appears loose
	US-20 & Cherry Hill Rd	Blown Arrestor
560-1	8569 US-20 E	Loose HW – Found 4 similar on US-20 btwn Freeport and Rockford
562	2881 S Fairfield Bridge Rd 3 pole N of Lamm Rd & Fairfield Bridge Rd	Blown arrestor – field side
	2 pole N of Lamm Rd & Fairfield Bridge Rd	Broken/missing gnd guard
563	9453 E Lamm Rd	Blown arrestor
564-6	2 pole W from Fire Address 10271 E Lamm Rd	Damaged pole top – loose HW
	SW corner of Lamm Rd & Klinger Rd	Blown arrestor
567-8	264 S Klinger Rd	Cross-arm used as pole extension
569	15790 W State Rd (US-20)	Damaged pole top
	3 pole W of above	Vine growing up pole
570	2170 Osborn Rd	Bad pole top Loose mounting HW
571	2178 Osborne Rd	Bad pole top Loose HW
572	Osborne Rd & Kelley Rd	Primary into trees

Appendix A: Log of Summer Field Observations

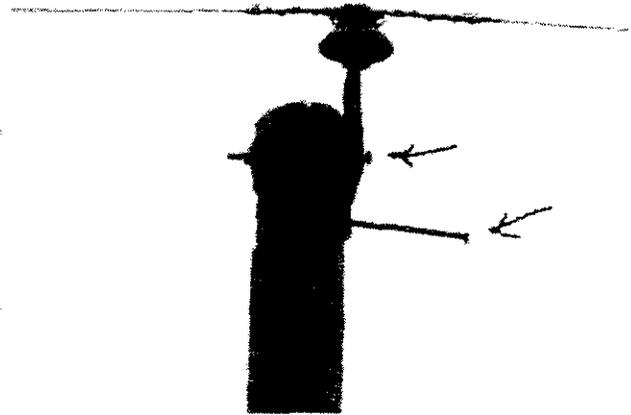
573	1 pole E of Osborne Rd and Edwardsville Rd	Vine on loose gnd wire
574-5	9463 Edwardsville Rd	Broken crossarm Primary twisted against pole/cross-arm Guy wire broken
	Near above location	A number of vegetation issues on this stretch of Rd – vines on guy wires & poles
	8710 Edwardsville RD	Primary into trees



Bad pole, Split Cross-Arm, Loose & exposed HW,
Gnd wire hanging loose
549 Feeder RANDOM



Subsidence of pole on top, Bad Pole, Loose Hardware
553 Feeder RANDOM



Loose Hardware
560 Feeder RANDOM

Field Inspection Log

Appendix A: Log of Summer Field Observations

Utility: ComEd Investigators: J. Stutsman (Staff), [REDACTED] (ComEd) & other ComEd personnel

Feeder Ckt: DCH53 Somonawk City: Somonawk Voltage: NA Date: Tuesday, June 21, 2011

Feeder Ckt: Random City: Random (Somonawk, Leland, Earlville, Mendota, North Utica, Bourbonnais) Voltage: NA kV

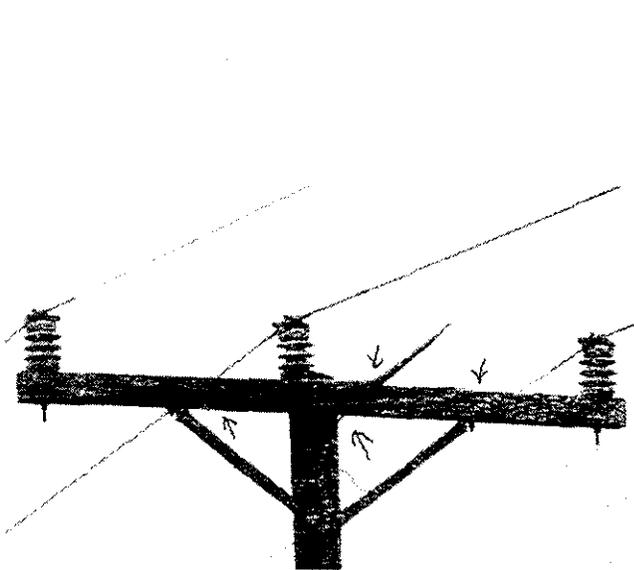
<u>Photo ID</u>	<u>Location Description</u>	<u>Observations at this Location</u>
576-621	DCH53 Somonawk	In Station Inspection: Gates bound to grounded gate posts. Weed application tag on Fence dated 4-28-11, Animal protection on transformers, breakers, & bushings on steel. On feeder 537 exiting the station from Transformer 52's breaker there are animal guards on the primary lines but not the neutral. Feeder 535 exits the station from Transformer 51's breaker via riser/underground cable. Transformers oil levels, temps, and LTC appear OK. Station log book appeared in order. Minimal grass & weeds in station. Some encroachment from neighboring trees onto and over station property. Rust visible on some equipment.
	<u>Feeder Ckt: Random City: Random (Somonawk, Leland, Earlville, Mendota, North Utica, Bourbonnais) Voltage: NA kV</u>	
623	SE Corner of 1400E & 50N, Somonawk 41.63817 88.68017	Field Side and Center Primary into/touching Tree when wind is blowing
624-625	41.63355 88.71252	Shell rotted pole & bad pole top
626-627	41.63264 88.71252	Shell rotted pole & bad pole top with loose J bracket
628, 629, 630, 631	41.63166 88.71251	Shell rotted pole & bad pole top with loose J bracket in danger of falling
632	41.59602 88.78465 Leland	Blown arrestor – street side
633	41.59513 88.78613	Blown arrestor – street side

Appendix A: Log of Summer Field Observations

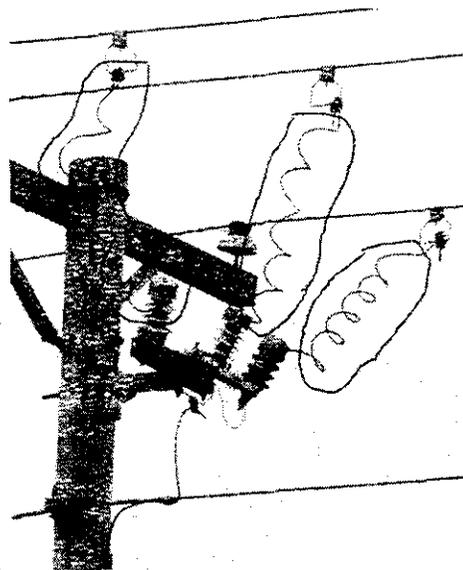
	Leland	
634	41.59421 88.78768 2009 US-34, Leland	Blown arrestor – street side
635-636	41.598 88.789 4570 E 20 th Rd, Leland	Shell rotted pole / broken gnd to neutral / cross-arm HW loose
--	Near above area	6+ additional shell rotted or bad poles near this location
--	Between US-34 & N 45 th Rd. on E 20 th Rd.	3 shell rotted poles
637	41.59046 88.7888 4521 E 20 th Rd, Leland	Blown arrestor – field side
638	41.58633 88.79845 Leland	Blown arrestor – street side
639	41.57321 88.80322 1873 N 44 th Rd, Leland	Broken cross-arm brace
640	41.58698 88.85192 1597 N 45 th Rd, Earlville	Disconnected cross-arm brace
641	41.5865 88.87242 1519 N 45 th Rd, Earlville	Splintered/Broken cross-arm
642	41.5863 88.87945 1485 N 45 th Rd, Earlville	Disconnected cross-arm brace
643-644	41.56543 88.99548 4875 E 9 th Rd, Earlville	Shell rotted pole / bad pole top / split top
645	41.56684 88.9954	Bad pole / bad & split pole top
--	US-34 curve short distance from above	2 blown arrestors
--	41.56739 88.99539	Shell rotted pole

Appendix A: Log of Summer Field Observations

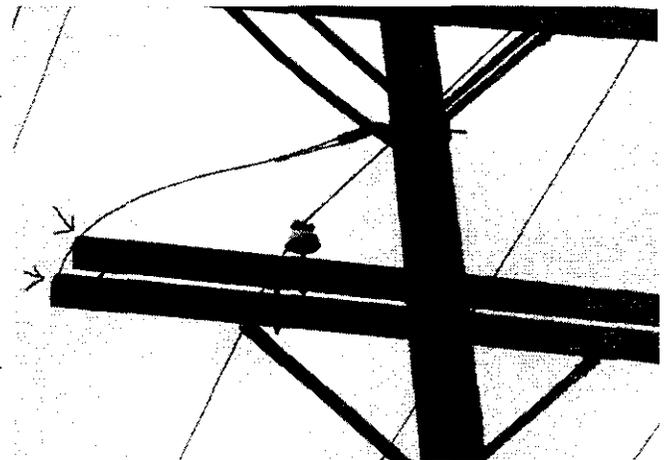
646	41.57663 88.99471	Blown arrestor
647-648	41.56707 89.03417 4381 E 7 th Rd, Mendota	2 examples (locations) that were 4 poles apart that represent over 9 locations of "curley" or "high impedance" connections to arrestors.
649	41.55335 89.03369 4293 E 7 th Rd, Mendota	Blown arrestor
--	41.53899 89.06853 505 N 42 nd Rd, Mendota	Damaged cross-arm – part of support for insulator pin is gone
--	41.54094 89.09442 4216 E 4 th Rd, Mendota	Blown arrestor – street side
--	While in Mendota	Saw ComEd truck replacing pole
651	41.21814 88.03259	Guy wire broken and resting on end of cross-arm



Splintered/Broken Cross-Arm



"Curley" or High Impedance connections



Down guy broken and resting on end of Cross-Arm

Appendix A: Log of Summer Field Observations

641 Feeder RANDOM

To Arrestors
648 Feeder RANDOM

651 Feeder RANDOM

Field Inspection Log

Utility: ComEd Investigators: J. Stutsman (Staff)

Feeder Ckt: Random City: Random (Bourbonnais, Kankakee, Momence, Grant Park, St. Anne, Herscher, Buckingham, Reddick)

Voltage: NA kV Date: Wednesday, June 22, 2011

<u>Photo ID</u>	<u>Location Description</u>	<u>Observations at this Location</u>
652	41.19215 87.79726 4094 E. 5000 N Rd, Bourbonnais	Broken/disconnected cross-arm brace
653	41.19251 87.75999 4986 N 6000 E Rd, Bourbonnais	Missing guy guard/marker
--	41.18969 87.75996 4798 N 6000 E Rd, Bourbonnais	Shell rotted pole
654	41.17937 87.75971	Blown arrestors
655	41.7802 87.75159	Broken/disconnected cross-arm brace
656	41.17616 87.72081	Disconnected Arrestors – approx 10' of gnd wire & cover missing
657	41.17473 87.72066 1 pole from device 597162A2	Approx 10-12' of gnd wire & cover missing
658	41.17104 87.72108	Loose gnd wire / missing gnd cover / spalding shell on pole
659, 660	41.171 87.74036	Low hanging & disconnected neutral

Appendix A: Log of Summer Field Observations

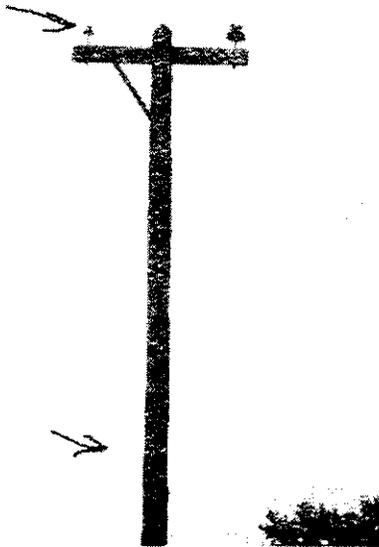
661	41.17065 87.76395	Blown arrestor – field side
662	41.17065 87.76527	Blown arrestor – field side
663	41.17065 87.76706	Blown arrestor – field side
664-683	DCK39 Exline Rd Substation 4000 North Exline Rd, Kankakee 41.177838 87.769346	Fence-line Inspection: Station yard is weedy, cross-arms and other materials piled in yard, gate posts gnded and gate bound to post gnd, oil levels visible from fence-line appear OK, minimal animal protection visible in structure, missing guy guard/markers, animal guards on xfmr secondaries and bkr bushings, birds nests in yard, loose wire guard on 6804 outside station
684	41.17811 87.75119	Broken or disconnected cross-arm brace
685, 686	41.17808 87.75198	Both cross-arm braces disconnected and 1 is resting on nearby arrestor
687	41.1781 87.74347	Broken cross-arm brace (top cross-arm street side)
688	41.17835 87.72733	Broken cross-arm brace (middle cross-arm street side)
689-693	K18 Momence Substation	Fence-line Inspection: Weeds in yard, rust on some equipment, L TC's appear OK from fence-line, oil levels and oil in bushings that are visible from fence-line appear OK, some animal protection on secondaries, red veg management tag on fence dated May 2010
694	41.16582 87.66051 349 N Walnut St, Momence	Vine growing up pole / pole appears in bad shape
695, 696	41.16878 87.62819 12745 E Metcalf Ave, Momence	Tree into or close to primary
697	41.1693 87.63099	Tree into or close to primary

Appendix A: Log of Summer Field Observations

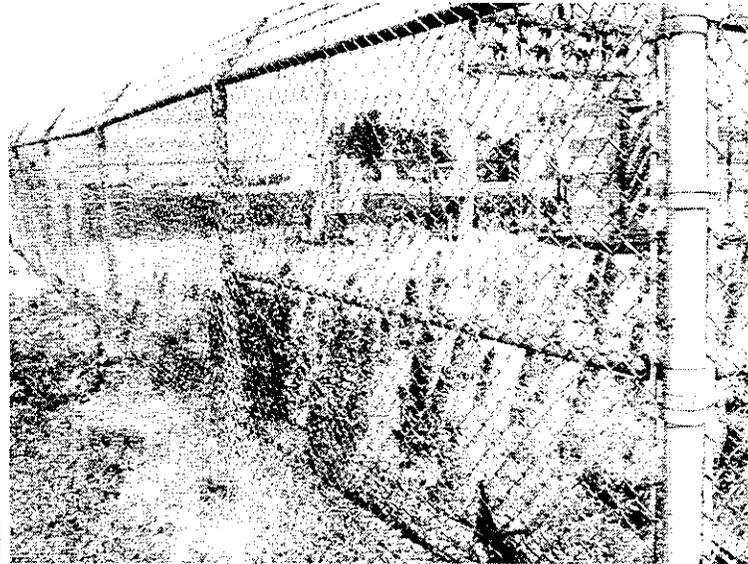
	12627 E Metcalf Ave, Momence	
--	1 pole from above	Dead vine visible and new vine started on pole
698	41.19452 87.62457	Electro trimming of trees into primary
699	41.18031 87.60501 4078 N 14000E Rd, Grant Park	Field side primary into tree for approx 1 span
--	4 poles N of 41.08591 87.72408	Blown arrestor
700	41.02657 87.71982 503 W Dewey St, St. Anne	Trees into primary
701	41.02551 87.71974 498 W Grant St, St. Anne	Loose HW & bad pole
702, 703	41.02551 87.71952 480 W. Grant St, St. Anne	Primary runs through tree
704	41.0205 87.74982 6363 E 7000S Rd, St. Anne	Broken or disconnected cross-arm brace and twisted cross-arm
705	41.02044 87.75254	Broken or disconnected cross-arm brace
--	41.02034 87.7635	Broken cross-arm brace field side
--	2 poles W of above	Broken cross-arm brace street side
706	41.06012 87.95661 4580 W 4000S Rd, Kankakee	Broken or disconnected cross-arm brace street side
--	41.05877 88.01612	Blown arrestor field side
707	41.05934 88.00278 At HWY 115 and CR-28, Herscher	RR Crossing NESC Violation – West side (East side is OK)
708	41.05903 88.00723 Herscher	Split cross-arm street side

Appendix A: Log of Summer Field Observations

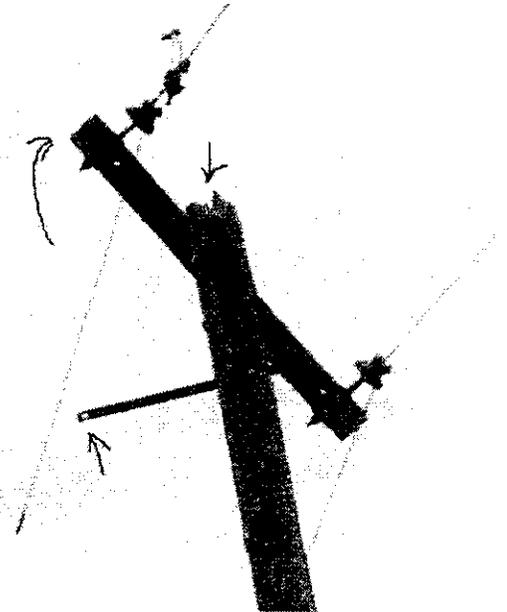
--	Btwn above location and Herscher	3 locations of blown arrestors
709	41.05598 88.14069 Buckingham	Blown arrestors
--	2 poles W of above	Blown arrestors
710, 711	41.05399 88.19799 Buckingham	Bolt supporting cross-arm braces is completely out of pole and tilting
712	41.05329 88.22456 Reddick	Broken cross-arm brace and floating (disconnected) neutral
713	41.05283 88.24432 Reddick	Disconnected or broken cross-arm braces
--	3 poles West of above location	Disconnected or broken cross-arm braces



Neutral disconnected and hanging low



Weeds in yard could provide animal cover



Bad pole top, disconnected Cross-Arm Brace, Twisted Cross-Arm

Appendix A: Log of Summer Field Observations

660 Feeder RANDOM

671 Exline Rd Substation

704 Feeder RANDOM