State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: July 6, 2006

TO: Director, Division of the Commission Clerk & Administrative Services (Bayó)

FROM: Division of Competitive Markets & Enforcement (R. Moses, L. Harvey, C. Vinson)
Office of the General Counsel (A. Teitzman)

RE: Docket No. 060077 – Proposal to require local exchange telecommunications companies to implement ten-year wood pole inspection program.

AGENDA: 07/18/06 – Regular Agenda – Decision on Proposal Prior to Hearing – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: i:\060077.rcm.doc

Case Background

On February 7, 2006, the Commission approved a staff recommendation in this docket requiring Florida's incumbent local exchange companies to implement wood pole inspection programs based upon an eight-year cycle and requiring the companies to provide annual reporting on pole inspection results. The Commission directed staff to conduct an informal meeting with the parties to discuss the order's requirements and possible alternatives. This meeting was held on February 21, 2006.

On March 1, 2006, the Commission issued Order No. PSC-06-0168-PAA-TL (PAA order.) The order required the companies to file plans for implementing their pole inspection programs. The order also specifically afforded a degree of flexibility in the manner the

companies would implement the order, directing staff to bring before the Commission any plans that materially deviate from its stated requirements.

On March 22, 2006, Verizon and Embarq (formerly Sprint) filed separate protests of the Commission's PAA order requesting formal hearings. The remaining Florida ILECs all filed proposals that complied with the order's requirements. Due to the PAA order's treatment of severability, the protests by Verizon and Embarq did not prevent the PAA from becoming final at the end of the protest period for the other parties.

However, in its protest, Verizon recognized pole inspection as a "worthy goal" and stated its interest in reaching an agreement on an inspection program that would allow the company to withdraw its protest. On April 3, 2006, Verizon filed a wood pole inspection program proposal. Subsequent discussions between staff and Verizon yielded a revised wood pole inspection program proposal. On June 23, 2006, Verizon filed clarifications to the April 3 inspection and maintenance plan. This recommendation proposes that the Commission accept that amended proposal.

Discussion of Issues

Issue 1: Should the Commission approve Verizon's revised wood pole inspection plan (Attachment A)?

Recommendation: Yes. **(Moses, Harvey, Vinson)**

Staff Analysis: Staff believes the Commission's approval of Verizon's revised wood pole inspection plan is necessary because the current plan differs from the specified requirements of the PAA order.

In its proposals and responses to the PAA, Verizon noted that many of the National Electric Safety Code (NESC) rules regarding pole strength and loadings (e.g. Sections 25 and 26) apply only to Grades B or C construction standards for poles bearing electric distribution and transmission conductors. Poles bearing only telephone facilities are generally subject to Grade N standards, and Verizon notes that NESC requirements "do not specify strength or load factors or limits on deterioration" for Grade N. Therefore, Verizon did not initally propose to conduct scheduled inspections of its Grade N poles on an eight-year cycle.

Joint-use electric and telephone poles are subject to the applicable higher standard, usually Grade B. The Grade B and C NESC requirements were a key basis for staff's original recommendation in favor of Commission-mandated wood pole inspections to determine loss of strength and overload conditions. Under its plan, Verizon proposes to inspect all its joint-use electric and telephone Grade B and C poles.

Variations from the Inspections Plans as Ordered by the Commission

First, rather than scheduled cyclical inspections, Verizon proposes to perform inspections in the course of other work tasks requiring climbing of Grade N poles (also called Business As Usual inspections.) Second, Verizon proposes an alternative to pole excavation during its inspections. The revised Verizon proposal is provided in Attachment A to this recommendation.

Through discussions between the company and staff, Verizon modified its inspection plan to gather data through its routine inspections of Grade N poles as they occur during normal operations. Verizon also enhanced the initial inspection criteria and guidelines used by its field technicians. Before climbing poles in the course of clearing troubles and completing work orders, Verizon technicians will sound and prod poles and, if necessary, refer them for further inspection by specialized personnel. Staff noted that some mid-span poles may not receive Business As Usual inspections. Therefore, in its June 23, 2006 clarifications, Verizon proposed to identify and test a limited sub-set of Grade N poles on an eight-year cycle.

Additionally, Verizon agreed to conduct inspections of separate statistically valid random samples of Grade N poles located in coastal and inland environments. This effort will also provide data for study.

Staff's intent is that the data collected by Verizon on Grade N poles from both the Business As Usual inspections and the statistical sample will provide an objective basis upon which to base a decision about ongoing inspections of Verizon's Grade N poles. Verizon's proposal indicates that the one-time random sampling data collection effort is not part of the ongoing eight-year cycle inspections ordered by the Commission. Staff anticipates that it may be necessary to revisit this issue once the data from these inspections has been collected and analyzed.

The second variation from the order's requirements is Verizon's proposed use of the Resistograph device (manufactured by IML, Inc.) for performing inspections instead of traditional sound and bore with excavation of poles. The order specified excavation of all Southern Pine poles as the means of determining the extent of insect damage, fungal damage or other below-ground deterioration. As a substitute for excavation, the Resistograph's fine-diameter drill bit penetrates all the way through the pole at a 45-degree angle, providing an indication of the pole's condition underground. Due to the small diameter of the drill bit involved with the Resistograph method, Verizon believes this device may be less intrusive and preferable to traditional sound and bore technique. Staff notes that the Resistograph represents new technology that has seen limited application. Still, staff believes the Resistograph to be a reasonable alternative, worthy of consideration for longer term use. As such, staff believes its use should be accepted on an experimental basis.

All other requirements of the PAA order have been met in staff's opinion within Verizon's revised pole inspection program plan. Verizon's pole inspection plan is included in Attachment A, which contains the original *Inspection and Reporting Plan* proposal dated April 3, 2006, and the *Clarification to Verizon's Pole Inspection and Maintenance Plan* dated June 23, 2006.

Staff recommends that Verizon's plan, as modified in Attachment A, should be approved by the Commission as an experimental plan.

Issue 2: Should this docket be closed?

Recommendation: No. If the Commission accepts staff's recommendation, the docket should remain open pending the resolution Embarq's protest of the PAA order. If the Commission does not approve Issue 1, a hearing track should commence for Verizon. **(Teitzman)**

ATTACHMENT A

David M. Christian
Vice President
Regulatory Affairs Florida

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April 3, 2006 – **VIA ELECTRONIC MAIL**

Ms. Blanca S. Bayo, Director
Division of Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 060077-TL – Pole Inspection Plan

Dear Ms. Bayo:

Pursuant to Order No. PSC-06-0168-PAA-TL, Verizon Florida Inc. (Verizon) hereby submits its comprehensive wood pole inspection plan to the Division of Competitive Markets and Enforcement. Verizon's plan requires targeted pole inspections based on reasonable criteria to identify "at risk" poles and adopts enhanced record keeping and reporting requirements. Verizon believes that, given the flexibility afforded by the Commission in the ordering paragraphs of the PAA Order, this plan meets the objectives identified in Order No. PSC-06-0168-PAA-TL and should be approved.

Specifically, Verizon will inspect poles that meet the Priority 1 selection criteria identified in the plan over an 8-year cycle and will collect data necessary for reporting and follow-up. Priority 2 poles are primarily used to carry low voltage telephone cables and equipment and will not be placed into the 8-year inspection program. Verizon's existing practices and procedures conducted in the normal course of business will still apply.

Verizon will implement its Priority 1 pole inspection program based on logical geographical areas such as wire center boundaries and other parameters as appropriate. This geographical approach will concentrate resources in one sector at a time so that a systematic and thorough evaluation is conducted in each area.

If you require additional information, please do not hesitate to contact me.

Sincerely,

David M. Christian
Vice President
Regulatory Affairs Florida

Attachments

CERTIFICATE OF SERVICE

I hereby certify that copies of Verizon Florida Inc.'s Pole Inspection and Reporting Plan in Docket No. 060077-TL were sent via U.S. mail on April 3, 2006 to the parties on the attached list.

s/ David Christian

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INSPECTION AND REPORTING PLAN
WOOD UTILITY POLES

VERIZON FLORIDA INC.
April 3, 2006

Docket No 060077-TL
Order No. PSC-06-0168-PAA-TL

INSPECTION AND REPORTING PLAN
WOOD UTILITY POLES

VERIZON FLORIDA INC.

1.0 INSPECTION METHODOLOGY

1.1 GENERAL APPROACH

Verizon Florida Inc. (Verizon) has approximately 107,205[1] wood utility poles in its serving territory. Verizon will inspect poles that meet the selection criteria over an 8-year cycle and will collect data necessary for reporting and follow-up. Verizon will inspect poles that do not meet the selection criteria using its existing practices and procedures in the normal course of business.

Verizon will implement its pole inspection program based on logical geographical areas such as wire center boundaries and other parameters as appropriate. This geographical approach will concentrate resources in one sector at a time so that a systematic and through evaluation is conducted in each area.

Verizon will document its inspection schedule for the year and will track any variance from the plan and the reasons for the variance.

Verizon will adjust its inspection program as needed if it determines, based on experience, that a different approach may be more effective. This may include inspecting poles based on geography other than wire center boundaries, coastal exposure, known soil conditions, age of poles, height of poles, class of poles, manufacturer, concentration of poles, wood type, or other factors.

1.2 POLE INSPECTION SELECTION CRITERIA

Verizon will place poles in the following categories for inspection purposes:

[1] Pole count as of 3/30/06.

Priority 1 Poles – Verizon-owned, joint use poles with electric power attachments.

All Verizon-owned poles carrying electric power will be inspected within an 8-year cycle. Verizon has approximately 30,000 joint use poles, representing 28% of its total pole inventory.

Priority 2 Poles – Verizon-owned poles without electric power attachments.

Priority 2 poles are primarily used to carry low voltage telephone cables and equipment and will not be placed into the 8-year inspection program. Verizon's existing practices and procedures conducted in the normal course of business will still apply.

Priority 2 poles serve a much different purpose than, and do not pose the same level of danger as, poles that carry power lines and transformers. Experience has shown that Priority 2 poles damaged during a storm do not fall to the ground causing unsafe conditions or service outages, but are instead supported in place by telephone cabling/guys or similar equipment until repaired. In addition, Verizon routinely uses Class 5 poles[2] for its telephone plant, even though Class 5 poles are larger than required and are capable of carrying greater loads than the facilities Verizon actually attaches. Eighty percent of Verizon's poles are under 35 feet in height and are typically used as telephone cable drop poles.

Most of the National Electric Safety Code (NESC) rules regarding pole strength and loadings (e.g., Section 25 and Section 26), including rules regarding pole deterioration, by rule apply only to Grades B or C construction. These grades are defined in Section 24 of the NESC, and they exclude most poles that carry only telephone plant, or joint telephone/electric usage poles with low voltages (< 750V). Since the majority of Verizon-owned poles do not have power attachments at all, they are subject to the NESC Grade N strength requirements, which do not specify strength or load factors or limits on deterioration.

Priority 3 Poles – New Poles

Poles will be placed into the 8-year inspection program when they reach 10 years of age. Verizon has approximately 10,000 poles, or slightly less than 10% of its inventory, that are less than 10 years old. In addition to following its existing practice of identifying the year when poles are placed in inventory in the property database, Verizon will put an inspection tag on new poles showing the year placed to identify those poles in the field.

[2] A Class 5 Pole has a breaking Load of 1900 lbs 2' from the top of the pole. It is available up to 70' in length, and would weigh 2400 lbs at that maximum length. Verizon typically uses Class 5 poles 30 and 35 feet in length.

1.3 COORDINATION OF INSPECTION EFFORTS FOR PRIORITY 1 POLES

Verizon currently has joint use pole agreements with seven power companies in Florida. These agreements will be reviewed and modified, as necessary, to reflect any changes in procedures. Verizon's plan will include the following guidelines with regard to joint use facilities:

Inspections: During inspections of Verizon-owned joint use poles where power company attachments exist (Priority 1), Verizon will calculate the loadings to determine if any action is required. Poles found not to be in compliance with NESC standards due to Verizon attachments will be corrected by Verizon within 90 days. If action is required for compliance with NESC standards due to another company's attachment loadings, that company will be responsible for correcting the deficiency within 90 days. Replacement of poles due to strength deficiencies will be the responsibility of the pole owner. If, however, the load failure is caused by another company's attachments, that company will bear the cost of pole replacement.

Attachments: A company placing attachments to existing poles[3] will be responsible for performing loadings calculations and providing that information to the pole owner. If any action (including but not limited to pole replacement) is necessary as a result of such attachments, that action will be the responsibility of the attaching company. Verizon will review joint-use pole agreements and modify them as required to address pole inspections, attachments, and load calculations.

Inter-company Communications: Verizon will establish protocols for communication with the respective joint use administrator for each power and CATV company. Every effort will be made to communicate pole transfers and pole loading issues using the National Joint Use Notification System (NJUNS). However, when a company that does not participate in NJUNS attaches facilities to a pole, the joint use administrator will coordinate the attachment using established processes (i.e., email, telephone, fax), as appropriate. Verizon will keep a log indicating when a request is made, the date and time it is referred, to whom it is referred, the reason for referral, and when the request is complete.

[3] A start date or demarcation date will be determined.

2.0 INSPECTION PROCEDURES

Verizon field inspectors will perform the following inspection tasks:

(1) Review pole records for each area to be inspected
(2) Perform a visual inspection on selected poles that meet the inspection criteria and identify attachments
(3) Perform the Sound/Prod test to determine if further testing is required
(4) Perform a Resistograph drilling, if needed, on poles with electric power[4] (See Attachment A for inspection guidelines)
(5) Record results in a pole inspection database
(6) Tag pole with inspection tag indicating year inspected (Attachment B)
(7) Report defective poles to OSP Engineering for replacement using standard procedures

3.0 POLE STRENGTH AND LOADING EVALUATIONS

3.1 PHYSICAL STRENGTH EVALUATION

Verizon will use the Resistograph instrument on selected poles that meet the inspection criteria and is currently investigating use of D-Calc™ pole damage assessment software from EDM International, Inc., which will calculate the percent of remaining strength.

3.2 LOADING EVALUATION

Verizon will use O-Calc™, a program specifically developed to accurately assess loads on existing and new pole structures.

O-Calc™ was specifically developed to aid companies in their efforts to accurately assess transverse and vertical loads on existing poles. Included among the graphic outputs are:

- Individual component load as well as total load
- Loads as a percent of pole capacity
- Indications of overload or reserve capacity
- Indication of stress along the length of the pole

Once O-Calc™ has analyzed the existing load on a pole, it is easy to evaluate the impact of adding cables or increasing the size of conductors.

[4] Verizon will use the Resistograph instrument, which uses a drilling needle 1.5 to 3 mm in diameter that backfills the hole, in lieu of invasive boring and excavation techniques.

4.0 DATA COLLECTION AND REPORTING

4.1 DOCUMENTATION FOR EACH POLE

Verizon's pole inspection process will document certain key items for each inspected pole such as:[5]

(1) Type of inspection performed
(2) Type of pole inspected (class, material, year placed)
(3) Number and type of attachments on pole[6]
(4) Bonding and grounding inspected where applicable
(5) Pole overloading conditions[7]
(6) Remaining strength of pole[8]
(7) Pass/Fail
(8) Reason for pole failure and/or replacement
(9) Record of recommendation and corrective action taken

Data will be captured in the appropriate field and recorded (an example is provided in Attachment C). The information will be uploaded into a database specifically designed for this purpose, together with Resistograph readings if taken.

4.2 ANNUAL REPORTING TO FLPSC

Verizon will submit an annual report of pole inspections to the Florida Public Service Commission, Division of Competitive Markets and Enforcement by March 1 of each year. The report will contain the following information:

(1) A review of the methods Verizon used to determine NESC compliance for strength and structural integrity of the wood poles included in the report, taking into account pole loadings where required;

(2) An explanation of the selection criteria for poles subject to inspection, including, among other things, geographic location and the rationale for including each selection criterion;

(3) Summary data and results of Verizon's pole inspections addressing the strength, structural integrity, and loading requirements of the NESC, Summary data will include[9]:

[5] This list may be revised as experience deems necessary.
[6] Anchoring and guying inspected where applicable.
[7] Loading estimates using O-Calc™ apply to Priority 1 poles.
[8] Verizon is currently evaluating a method for estimating remaining pole strength for Priority 1 poles.
[9] This list may be revised as Verizon's experience deems necessary.

- Type of inspection.
- Type of pole (class, material, vintage, installed population).
- Number of inspections planned and completed, including the reason for any deviation from the plan. Justification may address backlog issues and plans to address any backlog, as necessary.
- Number of inspected poles addressing a prior backlog.
- Number of poles failing inspection.
- Number of poles requiring minor follow-up.
- Number of poles requiring a change in inspection cycle.
- Number of poles that required no change in inspection cycle or remediation.
- Number of poles that were overloaded.
- Number of poles replaced.
- Number of poles with estimated remaining pole life of less than 8 years.

(4) For poles failing inspection, the cause(s) of each pole failure, to the extent that such causes(s) can be discerned in the inspection, and the specific actions the company has taken or will take to correct each pole failure.

ATTACHMENT A

POLE TESTING PROCEDURES WITH RESISTOGRAPH GUIDELINES

Determine pole(s) to be inspected with the Resistograph. Perform a visual, sounding, and prod inspection and if necessary, the Resistograph test. Follow procedures for tagging defective poles.

1.0 INSPECTION PROCEDURES

1.1 VISUAL INSPECTION

1.1.1 Perform visual inspection. Refer to document number **2004-00453-OSP.**

http://consos.verizon.com/mas/reference/2004-00453-OSP.pdf

1.1.2 Before working on any pole or testing it for safe conditions, review the following documents and make a visual check for the conditions identified:

- **Document number 2001-00514-OSP for Chemical Cautions and Inspection Tag related information.**

  http://i.verizon.com/engplng/PublishedDocuments/Flash/0100514.pdf

- **Document number 2002-00923-OSP for Pole Treatment Precautions**

  http://i.verizon.com/engplng/PublishedDocuments/Flash/0200923.pdf

1.2 SOUNDING TEST

The Sounding test consists of applying blows with a hammer, such as a drilling hammer, or the back of a hand axe, to the pole surface completely around the pole from points close to the ground-line to as high as can conveniently be reached. The presence of a hollow heart condition or advanced internal decay can usually be recognized by the characteristic hollow or dull sound resulting from the blows on the wood. A pole free from decay usually sounds clear and the hammer usually rebounds noticeably when the pole is struck sharply and squarely. Wet surfaces due to recent rains, wet interior near the ground-line due to high soil moisture, wide checks, or shakes in the pole near the surface may change the sound of a solid pole. Care must be taken not to mistake the altered sound due to these causes for the sound associated with internal decay.

1.3 PROD TEST

Prod the pole as near the ground line as possible using a pole prod or a screwdriver with a blade at least 5 inches long. Prod as close to the ground-line as practicable at an angle of approximately 45 degrees around the pole. If substantial decay is encountered, the pole shall be considered unsafe. The presence of general sapwood decay or decay pockets will usually be evident from this test.

1.4 RESISTOGRAPH TEST

The Resistograph decay detection instrument should be set against the utility pole with the use of the 45 degree adapter attachment to perform the first drilling. If the first graph profile is misleading or does not show enough information a second drilling needs to be performed under a 45 degree angle and one drilling 90 degrees (straight across at ground level).

2.0 TAGGING POLES

2.1 BUSINESS-AS-USUAL PROCEDURES

Poles found by the previously described tests to be unsafe shall be marked immediately with a B or C Pole Tag by the technician / craftsperson. The unsafe condition will be reported promptly to a supervisor or Engineer.

If the pole has been broken, resulting in an unsafe condition and requiring immediate attention, steps shall be taken to warn passers-by or traffic away from the location until a safe condition can be restored.

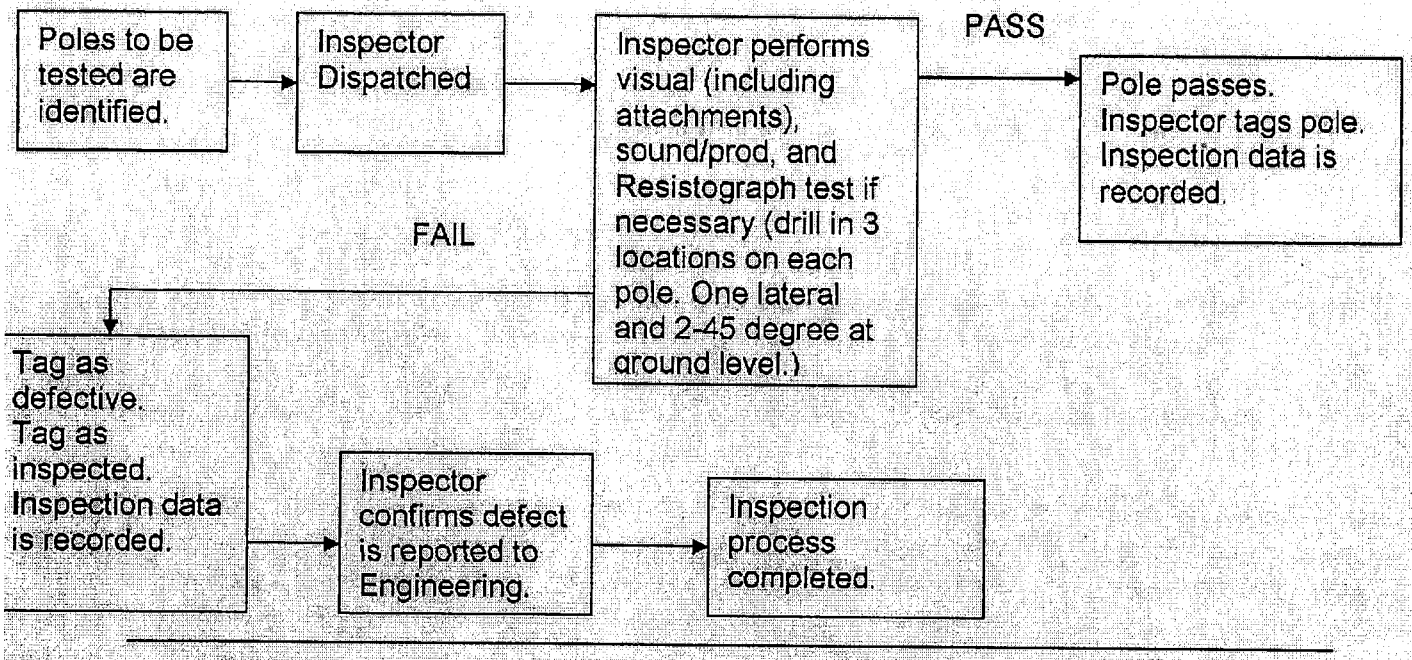
The B Pole Tag has a white arrow on a red background. It is intended for marking defective poles which do not require immediate replacement, that is, defective poles which are not yet considered dangerous.

The C Pole Tag is similar to the B Pole Tag except that an "X" inscribed in a circle is imposed on the shaft of the arrow. This tag is intended for marking poles which are in a dangerous condition and require immediate replacement.

2.2 INSPECTION PROGRAM

A new Verizon inspection tag has been developed for poles that are part of this inspection program. A tag will be placed on each pole inspected clearly showing the year of inspection. Attachment B shows the new tag.

3.0 INSPECTION PROCESS FLOW CHART



April 3, 2006
Verizon Florida Inc.

ATTACHMENT B

INSPECTION TAG

Material: Aluminum
Size: 1.5" x 1.5" x .025
Color: Black on Orange

.125" Ø Hole

April 3, 2006
Verizon Florida Inc.

ATTACHMENT C

DATA COLLECTION – SAMPLE EXCEL SPREADSHEET[10]

verizon

POLE INSPECTION SHEET

INSPECTION DATE:	
WIRE CENTER:	
POLE NUMBER:	
PID NUMBER:	
GPS LAT:	
GPS LONG:	

P-PAGE:	
YEAR:	
HEIGHT:	
CLASS:	

PHYSICAL ADDRESS:	

ATTACHMENT INFO

UTILITY	COMPANY	TYPE OF ATTACHMENT	DOWNGUY Y	DOWNGUY N	DEAD END Y	DEAD END N	COMMENTS
TELEPHONE	VERIZON						
POWER							
CATV 1							
CATV 2							
OTHER							

INSPECTION RESULTS

RECOMMENDATION:	

REPLACEMENT TIMELINE (IF REQUIRED)

FUNCTION	ECD
TO ENGINEERING:	
WO TO FIELD:	
PLACE NEW POLE:	
TRANSFER FACILITIES:	
REMOVE OLD POLE:	
CLOSE WORK ORDER:	

[10] Data collection requirements are under review and this draft spreadsheet is subject to revision.

ATTACHMENT A

David M. Christian
Vice President - Regulatory Affairs

verizon

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June 23, 2006

Ms. Blanca Bayo, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 060077-TL - Clarifications to Verizon's Pole Inspection and Maintenance Plan

Dear Ms. Bayo:

Verizon Florida Inc. (Verizon) hereby submits further written clarifications to Verizon's Wood Pole Inspection Plan filed with the Commission on April 3, 2006. These clarifications complement Verizon's responses to Commission Staff's questions filed on May 9, 2006.

1. **Testing[1] of "Remote" Grade N Poles**: Commission Staff expressed concern that Verizon technicians may not be dispatched to some Grade N, Priority 2 poles that do not have termination points or terminal equipment (e.g. mid-span poles) during the course of performing normal work activities creating a potential for these poles to go untested for an undetermined period of time. Verizon reiterates that it maintains a safe, reliable network and that these poles are tested during plant replacement and/or maintenance operations.

   In an effort to assist Commission Staff in collecting study data[2] faster than may otherwise occur, Verizon will identify and test this limited sub-set of Grade N poles on an 8-year cycle[3] using business as usual testing procedures[4].

[1] "Testing" refers to work that Verizon performs during the normal course of business per OSHA and Verizon standards (See footnote 4).
[2] "Study data" is defined as information collected for Public Service Commission study purposes through work performed by Verizon beyond what is required by the NESC and/or Verizon's testing methods and procedures performed during the normal course of business.
[3] Verizon's Wood Pole Inspection Plan filed April 3, 2006 with subsequent modifications and clarifications outlines how scheduled inspections of Grade B and C poles that are subject to NESC loading and strength requirements will be conducted and that Grade N poles are not subject to specific NESC strength and loading requirements and are tested using Verizon's methods and procedures used during the normal course of business (See footnote 4).
[4] See Revised Attachment A - "Verizon FL Routine (BAU) Technician Pre-Work Pole Testing Procedures and Escalation (Validation) Process" for Verizon's testing methods and procedures performed during the normal course of business.

2. **Coastal and Inland Pole Study** - Commission Staff is interested in collecting study data on poles located in coastal environments and poles that are located approximately 5 miles inland. Verizon understands that Staff plans to analyze this data to determine if there are notable differences in pole conditions based on proximity to coastal elements. Verizon indicated this information will be available from inspection data collected for Grade B and C poles located in coastal and inland areas. Staff requested that Verizon also provide information on a percentage of its Grade N poles located in coastal and inland environments for study purposes.

   In an effort to assist Commission Staff in collecting study data, Verizon will provide test results for a statistically valid sample of Grade N poles located in coastal and inland environments with the understanding that this is not required by the NESC, that this is a one-time data collection effort, and that these poles are not part of the 8-year inspection requirements ordered by the Commission.

3. **Verizon's Current Pole Testing Methods and Procedures** – Verizon revised its pole testing methods and procedures performed during the normal course of business as requested by Commission Staff. The revisions clarify the testing process flow and add a new path for a Verizon Supervisor to request Resistograph inspection of a Priority 2 pole in the event Sound and Prod tests performed are not conclusive (see Revised Attachment A, "Verizon FL Routine (BAU) Technician Pre-Work Pole Testing Procedures and Escalation (Validation) Process". This revision replaces Attachment A contained in "Verizon's Inspection and Reporting Plan for Wood Utility Poles" filed with the Commission on April 3, 2006.

4. **Pole Inspection Categories** – Attached are revised pole inspection category descriptions which reflect previous discussions and clarifications made with Staff. This revision replaces Section 1.2 of "Verizon's Inspection and Reporting Plan for Wood Utility Poles" filed with the Commission on April 3, 2006.

If you require additional information, please do not hesitate to contact me.

Sincerely,

David M. Christian DMW

David M. Christian
Vice President
Regulatory Affairs Florida

Attachments

REVISED ATTACHMENT A
(Amended for Clarification)

VERIZON FL ROUTINE (BAU) TECHNICIAN PRE-WORK POLE TESTING PROCEDURES AND ESCALATION (VALIDATION) PROCESS.

This document supersedes 2004-00453-OSP for VZ FL only.

Index

1.0 MANDATORY TECHNICIAN PRE-WORK POLE INSPECTION PROCEDURES (Required prior to all work on poles using any means / tools for access)

OSHA 1910.268(n)(4)
Unsafe poles or structures. Poles or structures determined to be unsafe by test or observation may not be climbed until made safe by guying, bracing or other adequate means. Poles determined to be unsafe to climb shall, until they are made safe, be tagged in a conspicuous place to alert and warn all employees of the unsafe condition.

Review:

- **Document number 2001-00514-OSP for Chemical Cautions and Inspection Tag related information.**

http://i.verizon.com/engplng/PublishedDocuments/Flash/0100514.pdf

- **Document number 2002-00923-OSP for Pole Treatment Precautions**

http://i.verizon.com/engplng/PublishedDocuments/Flash/0200923.pdf

1.1 VISUAL INSPECTION

Perform Visual Inspection.

Visual Hazard Conditions To Observe:

(a) Excessive rake or unexplained leaning of a pole.
This may be due to a failure of the pole at or below ground-line.

(b) Insufficient depth of setting. This may be due to erosion of the earth around the pole as a result of heavy rainfall, flood water, road widening, etc. and would affect the stability of the pole. The depth of setting can frequently be checked by reference to the brand which is present on most poles at a distance of ten feet (measured to the bottom of the brand) from the butt of the pole. Do not rely upon the brand mark to determine the depth of setting.

(d) Evidence of collision damage if the pole is at an exposed location along a highway.

(e) Presence of fungus growth in checks or protruding from the pole surface or on areas near ground-line where the wood appears water-soaked in contrast to surrounding wood. These symptoms usually indicate a condition of advanced decay in the interior of the pole.

(f) Presence of termite or carpenter ant infestation, evidenced by mud Channels or debris in the checks, wood dust at the base of the pole, or movement of ants when the pole is stuck with a hammer or other tool.

(g) Bent, loose, improperly spaced or missing pole steps.
Review 2004-00454-OSP for Verizon Pole Step Requirements.

(h) Wide seasoning checks which could result in loosening of pole steps or a climbing hazard.

(i) Evidence of compression wood indicated by short horizontal cracks along one side of the surface of the pole, or by curling of short sections out away from the pole surface.

(j) Presence and distribution of large knots, excessive knot clusters, climber gaff splinters, unauthorized signs, other aerial attachments, private property customer attachments (clotheslines), and nearby interfering tree growth.

(k) Presence of large stones, ground irregularities, and debris at the base of the pole.

(k) Presence of conduits or vertical runs on pole which might interfere with use of pole steps or climbing.

(m) Broken wires in adjacent span.

(n) Excessively tight or excessively slack drop or line wires on one side of pole.

(o) Contact or insufficient separation between telephone and power wires or other plant on the pole, or in the span or spans adjacent to the pole.

(p) Woodpecker holes.

(q) Evidence of lightning or fire damage.

(r) Presence of markings or pole tags placed by others to indicate an unsafe pole or pole to be replaced.

1.2 PHYSICAL TEST

1.2.1 SOUNDING TEST

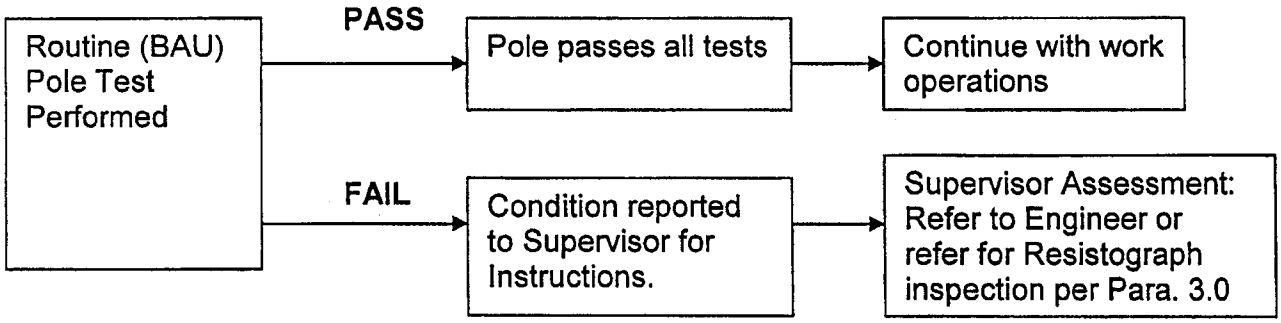
The Sounding test consists of applying blows with a hammer, such as a drilling hammer, or the back of a hand axe, to the pole surface completely around the pole from points close to the ground-line to as high as can conveniently be reached. The presence of a hollow heart condition or advanced internal decay can usually be recognized by the characteristic hollow or dull sound resulting from the blows on the wood. Wet surfaces due to recent rains, wet interior near the ground-line due to high soil moisture, wide checks, or shakes in the pole near the surface may change the sound of a solid pole. Care must be taken not to mistake the altered sound due to these causes for the sound associated with internal decay.
A pole free from decay usually sounds clear and the hammer usually rebounds noticeably when the pole is struck sharply and squarely.

1.2.2 PROD TEST

Prod the pole as near the ground line as possible using a pole prod or a screwdriver with a blade at least 5 inches long. Prod as close to the ground-line as practicable at an angle of approximately 45 degrees around the pole. The presence of general sapwood decay or decay pockets will usually be evident from this test.
If substantial decay is encountered, the pole shall be considered unsafe.

2.0 Defect Reporting

Defects found will include the condition report to the Technician's supervisor for review. Verizon FL Supervisors will assess the defects reported and follow routine reporting to Engineering for replacement or have further assessment preformed by Inspectors using Resistograph and D-Calc technology.



2.1 Tagging Defective Poles.

Poles found to be unsafe shall be marked immediately with a B or C Pole Tag by the technician / craftsperson. The unsafe condition should be reported promptly to a supervisor or Engineer.

If the pole has been broken, resulting in an unsafe condition and requiring immediate attention, steps shall be taken to warn passers-by or traffic away from the location until a safe condition can be restored.

Place one tag on the road side of the pole just below the pole number, if the pole is numbered, or at approximately 6 feet above ground-line if the pole is not numbered. Place another tag at approximately the same height on the field side of the pole. If the pole is defective in the ground-line section, place the tags so that the arrow points downward. If the pole is defective in the upper portion, place the tags so that the arrow points upward. If, however, the pole is defective in both the ground-line section and in the upper portion place a double set of tags, one set with the arrow pointing downward and the other set with the arrow pointing upward. Attach the tags with Pole Tag Nails.

2.2 Tag Description

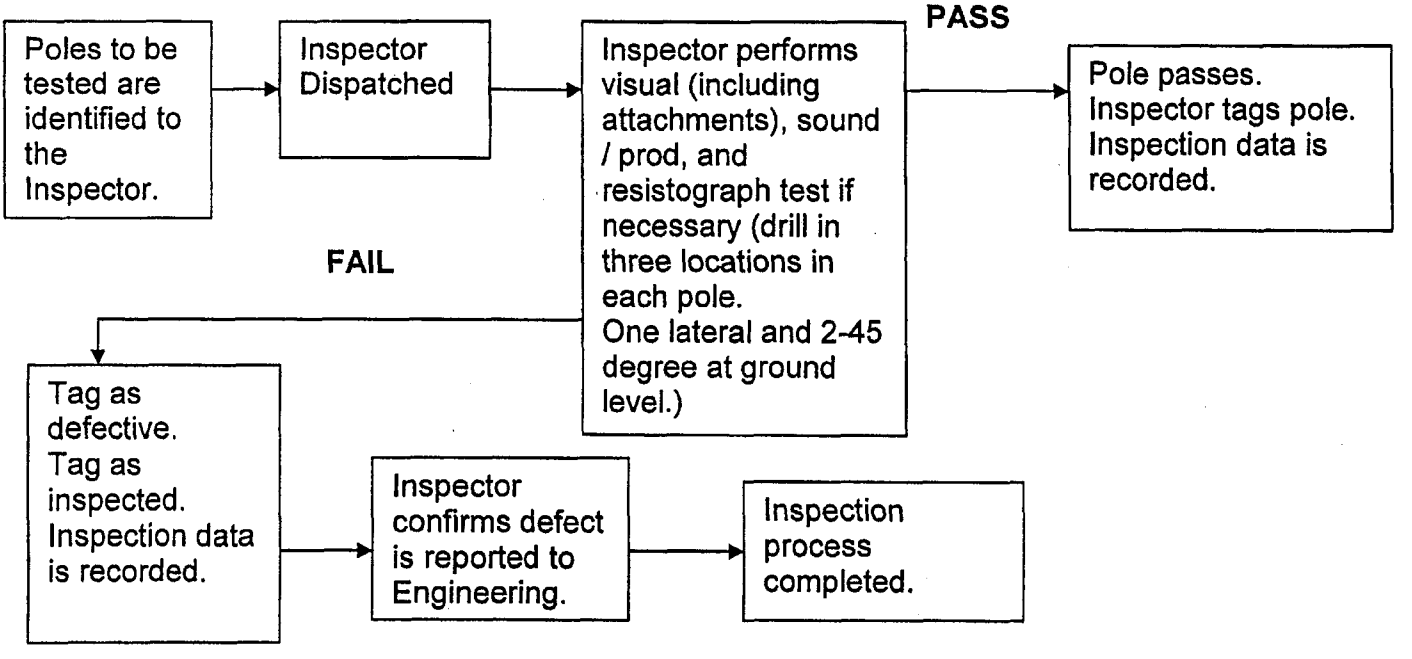
The B Pole Tag has a white arrow on a red background. It is intended for marking defective poles which do not require immediate replacement, that is, defective poles which are not yet considered dangerous.

The C Pole Tag is similar to the B Pole Tag except that an "X" inscribed in a circle is imposed on the shaft of the arrow. This tag is intended for marking poles which are in a dangerous condition and require immediate replacement.

3.0 RESISTOGRAPH TEST (TO BE PERFORMED BY QUALIFIED VERIZON INSPECTORS)

The "Resistograph decay detection instrument should be set against the utility pole drilling 90 degrees (straight across at ground level!). Use of the 45 degree adapter attachment will be performed at two 45 degree angles. See 3.1

3.1 Resistograph Test Flow Chart

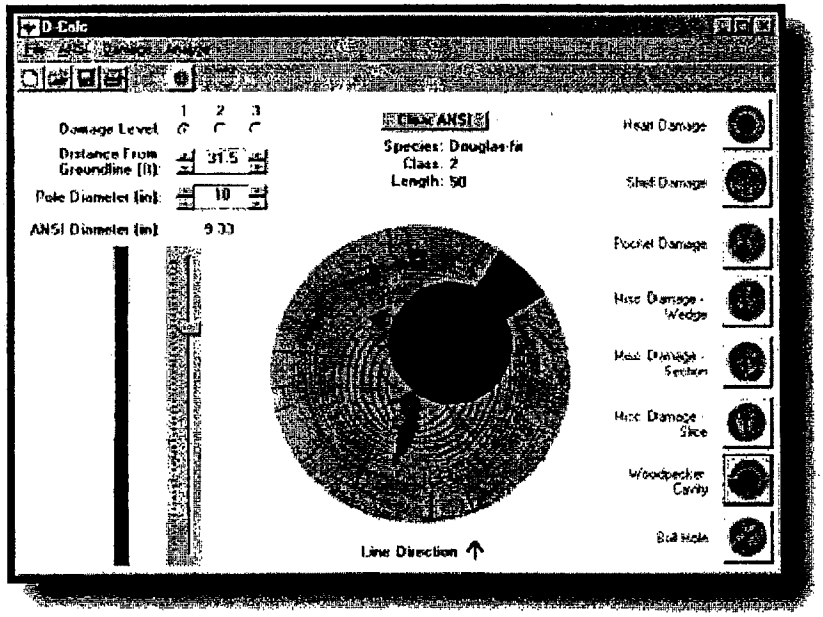


3.2 D-CALC EVALUATION DESCRIPTION

- D-Calc is very versatile software program and allows the user to calculate the remaining strength ("section modulus") of a degraded pole, relative to the original pole strength, based upon knowledge of the shape, location and extent of the internal or external damaged areas.
- Depending upon the geometry of the deteriorated portions, D-Calc avoids the need for complex calculations that would be beyond the capability of most engineers or inspectors.
- In contrast to the traditional boring method, the Resistograph is more likely to detect a problematic area, which may then be appropriately indicated as a void or pocket to D-Calc.

- The Resistograph data may be temporarily stored (paper or electronically) until subsequently accessed by the engineer for further evaluation via D-Calc.
- In general, the use of the D-Calc software in combination with the data obtained from the Resistograph equipment appears to represent the best available means of meeting the basic intent of the NESC (as specified for Grade B and C construction).
- **Pass / Fail would be determined by ANSI 05.1 reference tables and or reported to Verizon Engineering for evaluation.**

D-CALC SAMPLE DISPLAY

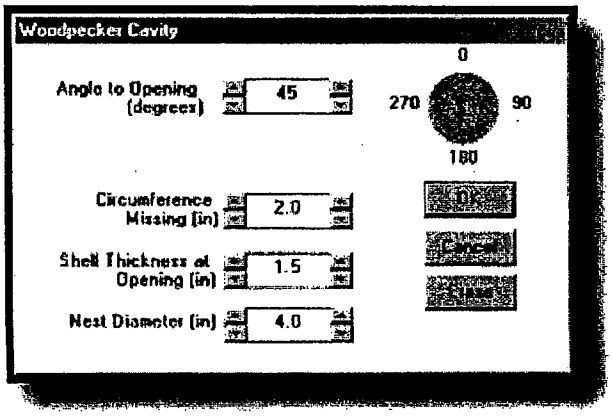


FEATURES:

- **Simple data entry**
- **Graphic display of damage**
- **Optimized for pen computers**
- **Built-in ANSI O5.1** reference tables**

OUTPUT:

- **Percent remaining strength based on user-defined modulus of rupture (MOR) and actual and ANSI dimensions**
- **Pole properties including: section modulus, moment of inertia and area**



1.2 POLE INSPECTION SELECTION CRITERIA

Verizon will place poles in the following two basic categories for inspection purposes[1]:

Priority 1 - Scheduled inspections performed on an 8-year Cycle

- Verizon-owned poles where electric supply cables or components exceed 750 volts and/or have communications cables crossing railroad tracks or limited-access highways. Poles in this category are subject to NESC rules for Grade B and C construction[2].

- Visual, Sound and Prod tests will be performed and strength assessments done if required using the Resistograph and strength assessment software. Loading calculations will be performed for Verizon attachments.

Priority 2 - Testing performed during the normal course of business or routine work activities following Verizon's documented testing methods and procedures.

- Verizon-owned poles where electric supply cables or components do not exceed 750 volts and do not have communications cables crossing railroad tracks or limited-access highways. Poles in this category are subject to NESC rules for Grade N construction.

- Visual, Sound and Prod tests will be performed during the normal course of business or routine work activities. Strength

[1] New Poles or Poles in Transition: New poles placed will be assigned either a Priority 1 or Priority 2 status based on their characteristics and inspected accordingly. Poles that undergo a transition due to the addition or removal of power attachments will be assigned either a Priority 1 or a Priority 2 status based on their new attachment characteristics and inspected accordingly.

[2] The strength and loading requirements in NESC Section 25 and most of Section 26, including those concerning pole deterioration, only apply to Grade B and Grade C construction. The NESC does not provide specific loading requirements for Grade N Construction. NESC pole strength requirements for communication poles are based on the grades of construction specified in Section 24 of the NESC, Table 242-1 "Grades of Construction for Supply Conductors Alone, at Crossing, or on the Same Structures with Other Conductors" or Table 242-2 "Grades of Construction for Communication Conductors Alone or in Upper Position of Crossing on Joint Poles." These tables provide that only Grade N construction is typically required for communication-only poles. Exceptions include joint use poles where electric supply cables exceed 750 volts and communication cables crossing railroad tracks and limited-access highways.

Note: This revised Section 1.2 is dated June 23, 2006 and replaces Section 1.2 of "Verizon's Inspection and Reporting Plan for Wood Utility Poles" filed with the Commission on April 3, 2006.

assessments will be done using the Resistograph on an exception basis if ordered by a Verizon Supervisor.

Experimental Plan - PSC Study Data[3]

Verizon will collect study data for the Public Service Commission for study purposes outlined below. Study data will be collected through work performed by Verizon beyond what is required by the NESC and/or Verizon's testing[4] methods and procedures performed during the normal course of business.

- **Testing of "Remote" Grade N Poles** - In an effort to assist the Commission in collecting study data faster than may otherwise occur, Verizon will identify and place this limited sub-set of Grade N, Priority 2 poles on an 8-year cycle. These poles will remain classified as Priority 2 and will remain subject to Priority 2 testing procedures with the exception that they will initially have a scheduled inspection timetable to accelerate data collection for study purposes.

- **Coastal and Inland Pole Study** - In an effort to assist the Commission in collecting study data, Verizon will provide test results for a statistically valid sample of Grade N, Priority 2 poles located in coastal and inland environments with the understanding that this is not required by the NESC, this is a one-time data collection effort and that these poles are not part of the 8-year inspection requirements ordered by the Commission. This study data collected for Grade N poles will augment data collected through inspections of coastal and inland Grade B and C poles.

[3] "Study data" is defined as information collected for Public Service Commission study purposes through work performed by Verizon beyond what is required by the NESC and/or Verizon's testing methods and procedures performed during the normal course of business.

[4] "Testing" refers to work that Verizon performs during the normal course of business per OSHA and Verizon standards. See Revised Attachment A - "Verizon FL Routine (BAU) Technician Pre-Work Pole Testing Procedures and Escalation (Validation) Process" for Verizon's testing methods and procedures performed during the normal course of business.

Note: This revised Section 1.2 is dated June 23, 2006 and replaces Section 1.2 of "Verizon's Inspection and Reporting Plan for Wood Utility Poles" filed with the Commission on April 3, 2006.