

(PA)

From: Richard Emch
To: Bill Vinikour; David Miller; Ellen Moret; Jessie Muir; Kirk LaGory; Michael Masnik; Samuel Hernandez-Quinones
Date: 09/19/2006 12:49:12 PM
Subject: Fwd: VYNPS ER - Supplemental Information Coolidge 345-kV Transmission Line Reference FTN 2006a

>>> Bob West <bmw@ftn-assoc.com> 09/18/2006 6:20 PM >>>
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Previous message concerned the Chestnut Hill 115-kV line. This message regards the Coolidge 345-kV line. I believe the email messages you need are attached and discussed below. thanks,

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>To: Rick Buckley
>From: Bob West <bmw@ftn-assoc.com>
>Subject: VYNPS ER - Supplemental Information Coolidge 345-kV Transmission Line Reference FTN 2006a
>Cc: jbroc94@entergy.com

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>Bob West

>FTN Associates, Ltd.

>#3 Innwood Circle

>Little Rock, AR 72211

>501-225-7779

>501-225-6738 (fax)

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Bob West
Project Manager
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Mail Envelope Properties (45101F88.8A4 : 12 : 35320)

Subject: Fwd: VYNPS ER - Supplemental Information Coolidge 345-kV
 Transmission Line Reference FTN 2006a
Creation Date 09/19/2006 12:49:12 PM
From: Richard Emch
Created By: RLE@nrc.gov

Recipients	Action	Date & Time
anl.gov PM david.s.miller (David Miller) lagory (Kirk LaGory) moret (Ellen Moret) vinikour (Bill Vinikour)	Transferred	09/19/2006 12:49:25

nrc.gov TWGWPO01.HQGWDO01 PM JMM7 (Jessie Muir) PM MTM2 (Michael Masnik)	Delivered Opened	09/19/2006 12:49:19 09/19/2006 12:55:45
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nrc.gov TWGWPO03.HQGWDO01 PM SHQ (Samuel Hernandez-Quinones) PM	Delivered Opened	09/19/2006 12:49:19 09/19/2006 12:51:33
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Post Office	Delivered	Route
TWGWPO01.HQGWDO01	09/19/2006 12:49:19 PM	anl.gov nrc.gov
TWGWPO03.HQGWDO01	09/19/2006 12:49:19 PM	nrc.gov

Files	Size	Date & Time
MESSAGE	6517	09/19/2006 12:49:12 PM
Coolidge emails.doc	31232	09/19/2006 12:48:26 PM
VELCO ROW Veg Mgmt Plan.doc	72192	09/19/2006 12:48:26

Options
Auto Delete: No
Expiration Date: None

Notify Recipients:	Yes
Priority:	Standard
ReplyRequested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard
To Be Delivered:	Immediate
Status Tracking:	Delivered & Opened

From: Richard Emch
To: Nathan Goodman
Date: 09/19/2006 4:33:47 PM
Subject: Fwd: VYNPS ER - Supplemental Information Coolidge 345-kV Transmission Line Reference FTN 2006a

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NEG (Nathan Goodman)	Opened	09/19/2006 4:45:34
PM		

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Return Notification: None

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To Be Delivered: Immediate
Status Tracking: Delivered & Opened

Vermont Electric Power Company, Inc.
Four Year
Right-of-Way Vegetation
Management Plan

I. Introduction

VELCO is responsible for maintaining the integrity and reliability of over 600 miles of high voltage electric transmission lines. This system of transmission rights-of-way extends throughout the State of Vermont. It is vital to the operation of all Vermont Utilities that VELCO's Vegetation Management Program does not allow any tree caused unscheduled outages on its transmission line system.

VELCO recognizes its responsibility to maintain its rights-of-way in a manner that best balances the objectives of providing reliable electric service; protecting the integrity of the natural environment; assuring the safety of those who use or work on the land on which or adjacent to which the rights of way lie; and minimizing financial costs to users of electricity. VELCO also recognizes that there are different risks to every course of action. For example, hand-cutting techniques for right-of-way maintenance are an alternative to the use of herbicides, and will therefore reduce the risk of adverse side effects from herbicides, but they pose greater risks of traumatic injury to applicators. They will also result in pollution from machine exhaust and fuel and lubricating oil spills. Different techniques will also result in different costs, which are eventually paid by the customers of Vermont's distribution utilities. These, and others, are the kinds of trade-offs that this Vegetation Management Plan attempts to reconcile in the best interests of the State of Vermont and its citizens.

It is the policy of Vermont Electric Power Company, Inc. to manage the vegetation growing on its transmission line rights-of-way in accordance

with Federal and State laws and regulations and with the guidance of the Independent System Operator (ISO) vegetation management standards.

II. Goals

The goal of this vegetation management plan is to establish a steady, dependable rhythm of annual vegetation control that is sustainable year after year. A four-year maintenance cycle has been selected, established and time tested since 1980 (Appendix A). The objective of this cycle is to reduce the number of stems per acre of the tall growing tree species. Once this is accomplished, the program will basically be controlling tree seeds germinating throughout the four-year intervals. Biologically the plant community (trees, shrubs, forbes, ferns and grasses) stabilizes into a very low maintenance condition on this cycle.

The issue of right-of-way access is as critical as the control of vegetation by biologically manipulating the plant community. Each maintenance cycle involves a mile by mile inspection of the access conditions of the right-of-way. Washed out or damaged culverts and waterbars on access roads are repaired and/or renewed where necessary. Good roads provide good visibility for inspections, adequate working space and easy access to structures for routine and/or emergency repair work.

Keeping trees from blocking access roads and growing into the power lines must be a constant goal in the effort to prevent unscheduled outages. This minimizes the amount of time involved with routine and/or emergency repairs; thus minimizing the time customers are out of electricity.

Emergencies do not always happen under ideal conditions. In Vermont we have a great variety of weather conditions all year around, day and night, so our vegetation management program must consider access.

III. Tree Species to be Eliminated or Controlled

The decision to eliminate, control by trimming or topping, or save a tree is determined by location, age, health, and present line clearance. Other factors include ownership, aesthetic and environmental value such as wildlife habitat and/or food supply. Generally on a typical stretch of right-of-way all fast growing tree species are eliminated. They include softwoods such as: white pine, spruce, balsam fir and larch; and hardwoods such as: aspen (popple), maples, birches, cherry, locust, elm, ash and oak. At road crossings or at special scenic locations the trees may be topped, or thinned out (removing older, taller ones), or removed and replaced by another low-growing species. Tree and shrub species that may be saved where possible are: cedar, apple, pear, hazelnut, dogwood, sumac and shadbush. Wildlife and aesthetics are the primary factors involved here. Some softwood such as white pine, balsam and spruce are left on the right-of-way to break up the whiteness of winter where possible. All these trees will be monitored and perhaps some may be removed on the next maintenance cycle.

Tall trees on the edges of the rights-of-way or even those off the right-of-way are monitored closely and if they become a potential threat to the line due to height, health, ledge conditions, lightning damage or just leaning or bending towards the line, they are either topped or cut down as soon as possible.

The primary clearance factor is the engineering design of the line. The chart below shows the line clearance safety data by voltage that VELCO

has established for its maximum safe tree height allowed under the central strip of a right-of-way. This strip is the area directly under the conductors plus an additional 15 feet beyond the outside conductors. (Also see Appendix B – ISO Recommended Line Clearance)

LINE CLEARANCE SAFETY DATA CHART

LINE VOLTAGE (KV)	ROW WIDTH (FT)	POLE HEIGHT (FT)	AVERAGE SPAN (FT)	DESIGN GROUND CLEARANCE (FT)	DESIGN SAFETY CLEARANCE (FT)	MAX SAFE TREE HGT (FT)	MILES OF LINE
450DC	200	100	800	37	30	12	55
345	150+	90-95	800	31.5	20	12	70
230	150+	80-85	650	28.5	16	12	33
115	150	60-65	500	27	12	12	442

Other factors of nearly equal importance to safety clearances are exposure to sunlight, soil type and available soil moisture. In other words: GROWTH RATE POTENTIAL. In areas where a road screen is established or a stream crossing or buffer zone exists, these factors must be seriously considered when deciding how much clearance is necessary in order to maintain system reliability for five years. One year is added on to the normal four-year cycle to insure a good margin of safety.

IV. Methods of Vegetation Control

VELCO will maintain its rights-of-way in the manner, including the limited and selective use of herbicides, that most appropriately balances the following objectives: (a) promoting the reliability of the VELCO transmission system, (b) avoiding unreasonable risk of harm to the environment, workers, neighbors, occupants, and users of the land on which or adjacent to which its rights-of-way lie, and (c) minimizing expenses over the long term. The Company’s overall strategy is to promote the growth and propagation of low-growing plant species, and

thereby reduce the need for maintenance over the long term. This is collectively called Integrated Vegetation Management (IVM).

There are two general methods of vegetation control; mechanical and chemical. Each method has various types of tools and applications.

A. Mechanical Methods

- Primary:
1. Chainsaw - unlimited use/best time early spring & fall.
 2. Brushsaw – stem diameter limit 2 ½ -3 inches.
 3. Mowing – non-selective, limited on ledge & rocky areas.
 4. Mowing, dozing, seeding & mulching – creates monoculture of grass.
- Secondary:
1. Girdling/cut bark into cambium circle around tree.
 2. Topping – for aesthetics or screening.
 3. Pruning/Trimming – aesthetic or screening.
 4. Grazing/sheep, cattle, etc.
 5. Cultivate the soil using agricultural methods.
- Other:
1. Plant low-growing brush and/or allelopathic plants.
 2. Mulch the right-of-way.
 3. Gravel the right-of-way
 4. Burn the right-of-way.
 5. Biological – introduce gypsy moths, spruce budworms or other plant-eating insects.
 6. Steam the brush.
 7. Sell standing brush for chips and firewood.
 8. Change acidity of soil (Salt, borax, etc.).
 9. Bury conductors, seed and mulch, then mow.

Currently, VELCO utilizes all of the primary methods. The “secondary” and “other” methods are not considered feasible on a large scale at this time. The primary methods are used in areas where herbicides are either restricted by regulations or prohibited by a landowner. The choice of a primary method depends on brush height and density and degree of difficulty of the terrain (ledge, rocks, etc.).

Except for the mowing, dozing, seeding and mulching, none of the primary methods do any more than clear the right-of-way for a few years leaving a good deal of fallen brush. This brush can become an obstacle to access and a fire hazard.

Additional factors that could possibly cause mechanical methods to be more involved and complicated are:

1. Loss of bio-diversity.
2. More exposure to personal injuries as time spent with chainsaws increases.
3. Increase in illegal dumping due to increased brush density.
4. Reduced wildlife habitat (it becomes cyclic rather than stable).
5. Increase in petroleum product pollution (bar oil/chainsaws).

In summary mechanical methods are effective, expensive and temporary.

B. Chemical Methods

VELCO has conscientiously attempted to assess all of the significant benefits and risks of the use of herbicides and their alternatives in the maintenance of its rights-of-way. It has concluded that the risks of using the specific herbicides that it employs, in the manner in which it uses them, are small, and that the benefits are substantial. Consequently, it has concluded that it will best discharge its responsibilities as a public utility by continuing the limited and selective use of herbicides as described in this plan.

No herbicides shall be used for right-of-way maintenance unless it is (1) registered for general use by the U.S. Environmental Agency (under authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA must classify all pesticide products for either "**general**" or "**restricted**" use), (2) approved for use by the Vermont Department of Agriculture, (3) determined by the Company's experience, or the experience of others, to be effective for purposes for which it is used.

General use pesticides, as defined by the EPA, are those that will not cause unreasonable adverse effects to the user or the environment when used in accordance with the label instructions. Under FIFRA, "unreasonable adverse effects on the environment" means any unreasonable risk to man or the environment, taking into account the

economic, social, and environmental costs and benefits of the use of any pesticide.

Restricted use pesticides are those which may cause adverse effects to the applicator or the environment unless applied by persons who have been specifically trained in their use. VELCO does not use any restricted herbicides.

Herbicides Selected

Three of the five general use herbicides that VELCO has selected for use on its rights-of-way are available to the public in retail stores throughout the country. They are:

<u>Industrial Name</u>	<u>Retail Name</u>
Accord	Roundup
Arsenal	Orthotriox
Garlon 4	Weed-B-gone

The other two are:

Escort : approved for use in pastures (agricultural use)
Krenite: approved for use on municipal watersheds

Manner of Application

Various methods of herbicide applications are:

1. Foliar – low volume mist-blowers and/or hand-pumps/high density brush.
2. Basal – low volume/low density brush.
3. Cut Stump – low volume/low density brush.
4. Gridling – low volume/low density brush.
5. Injection – growth inhibitor/selective application.

VELCO utilizes the first three application methods. The last two methods are not practical enough to be considered feasible on the scale that would be required by VELCO. They are special use methods only.

The following describes VELCO's specific methods of herbicide use.

- a. Herbicides shall be applied only by manual methods that target individual plants or compact clusters of plants. Aerial or wide-area spraying shall not be utilized.
- b. Herbicides shall be applied in strict accordance with the instructions of the manufacturer and the requirements of any state or federal agency having jurisdiction, provided that, if VELCO's experience, or generally accepted practices within the industry, indicate the need for more restrictive application, then such greater restrictions shall be observed.
- c. Herbicides shall be applied only by applicators trained as required by FIFRA or, if FIFRA has no training requirements for the particular herbicide, then the applicator shall be trained by, or according to the direction of and to the satisfaction of VELCO's Manager of Support Systems.
- d. Herbicides shall be applied in the smallest amounts and weakest concentrations determined by the Company's experience to be effective for the purposes for which they are used.
- e. The requirements and limitations of this policy shall apply both to VELCO personnel and to any outside contractor engaged by the Company to perform right-of-way maintenance.

Prohibition on use of herbicides

- a. Herbicides shall not be used in violation of any applicable law or regulation.
- b. Herbicides shall not be used at locations where or during times when they may pose a greater than normal risk of off-target dispersion (e.g., adjacent to streams or gardens, or in more than moderate wind).
- c. Herbicides shall not be used in easements within the property of any landowner who has, pursuant to the procedures of Vermont Public Service Board Rule No. 3.640, requested that they not be used.

- d. Herbicides shall not be used at any location where the Manager of Support Systems or his or her designee has determined that non-chemical measures would be substantially as effective, substantially as safe to applicators, and not substantially more costly than chemical means of maintenance.

Regulatory Herbicide Use Instructions

Specific instructions for the use of herbicides in Vermont are listed in the Revised Regulation for Control of Pesticides In Accordance With 6 V.S.A. Chapter 87. These regulations are administered through the Plant Industry Division, Department of Agriculture. A request for permission to apply herbicides on rights of way must be submitted to the Department of Agriculture.

The application is reviewed by the Vermont Pesticide Advisory Council and they make a recommendation to the Commissioner of Agriculture regarding the approval of the permit. The Department of Agriculture conducts field inspections on programs having approved permits to ensure compliance with regulations. Herbicide applications are made according to labeling instructions and permit conditions.

The following is required to be on site and available to the herbicide application crews prior to and during herbicide application operations:

1. VT Department of Agriculture issued permit (including all herbicide labels and MSDS sheets).
2. One crewmember who is a certified herbicide applicator.
3. A VELCO line map showing details; county lines, town boundaries, property ownership, water supplies, wetlands, access and any special data available or gathered over the years (property owner requests, etc.).
4. Required personal protective equipment in accordance with herbicide labels.
5. Drinking water and wash water.

6. Spill Kit (including spill response instructions), shovel, absorbent material and container.
7. Herbicide Spill Response Instructions (Appendix C)

The contractors shall conduct annual training on herbicide use for all members of the herbicide application crews prior to beginning the vegetation control program.

Miscellaneous

- a. Any person who requests that herbicides not be used on right-of-way located on land that he or she owns or occupies shall be informed of the provisions of Vermont Public Service Board Rule No. 3.640.
- b. The Manager of Support Systems or a person designated by the Manager of Support Systems shall be responsible for acquiring and maintaining a high level of expertise in all relevant subjects related to the use of herbicides for right-of-way maintenance, including, but not limited to the effectiveness, benefits and risks of all herbicides used by or considered for use by the Company or its contractor, regulatory requirements concerning such use, and the need for and techniques of the training of personnel in the application, transport, and storage of such substances.
- c. The Manager of Support Systems will maintain current and sufficiently comprehensive files on all herbicides that it uses. The files shall cover such subjects as toxicities, effectiveness, regulatory developments, short- and long-term environmental and health effects, cost-effectiveness, industry practices, etc.

V. Special Elements of Right-of-Way Management

There are several special elements of a right-of-way that must be considered in a vegetation management plan. They are:

- A. Wetlands
- B. Wildlife

- C. Aesthetics
 - D. Erosion Control
 - E. Rare and Uncommon natural areas and sites with rare plants or invasive nuisance plants.
- A. **WETLANDS** are regulated by the VT Water Resource Board. This board has developed and issued the VT Wetland Rules by which activities in wetlands are guided.

While wetlands are not specifically mentioned in the VT Pesticide Control Act (6 VSA Chapter 87 – Section IV) or in the VT Department of Agriculture herbicide application permits, VELCO uses mechanical methods to control tree species in wetlands. The National Wetlands Inventory Maps are used to identify the location, size and type of wetland areas associated with right-of-ways. It is acknowledged that the NWI maps do not show every wetland nor precise locations. Field decisions are made from time to time by the foreman of the crew (generally a forester). Formal wetlands identification training is conducted by a qualified biologist periodically to the crew foremen for familiarization and review.

When a herbicide use permit is approved and issued by the VT Department of Agriculture, it contains specific instructions related to protecting the waters of the State. This is done by requiring various widths of buffer zones near streams, rivers, ponds and lakes. These instructions insure that no herbicide applications ever take place in running, or standing water. Currently all herbicides that VELCO is permitted to use are labeled for use in wetlands. If the opportunity became available to judiciously use herbicides in wetlands in accordance with specific permitted guidelines; it would be the method of choice by which to minimize adverse effects on wetlands and associated buffer zones.

B. **WILDLIFE** benefits a great deal from well-managed right-of-ways.

There have been many studies on this subject. The most well known is a continuing research project initiated by Purdue University professors Dr. William Byrnes and Dr. William Bramble have directed on a transmission line right-of-way in Pennsylvania over the last 47 years. The project concentrated on the vegetation on utility rights-of-ways and the relationship to the habitat of wildlife. The research documented the effects that many different vegetation management techniques have on food and cover for whitetail deer, cottontail rabbit, ruffed grouse, wild turkey, songbirds and other small mammals and birds. The conclusions to date document that good right-of-way management is very beneficial to wildlife.

Wildlife travel lanes are maintained on VELCO rights-of-way in appropriate locations to promote the movement of white-tailed deer and other wildlife across the right-of-way corridor. In general, the management objectives are to favor vegetation that can support snow (softwoods) and thereby keep the snow depth on the ground shallow enough for deer to move about and conceal wildlife as they cross through wildlife travel lanes.

Specific maintenance practices shall include:

1. Cutting tops to the height prescribed in the line plan.
2. Removing cut material that would interfere with animal movement in the travel lane.
3. Selective removal or topping of deciduous tree species.
4. Favoring the continued growth and reproduction of coniferous vegetation with canopies that intercept snow.
5. Favoring tight crown closure.

General observations on VELCO rights-of-way indicate a noticeable bio-diversity on the rights-of-ways that provide very favorable habitat for many wildlife species. VELCO is actively involved in an Osprey nesting program and with the National Wild Turkey Federation.

C. **AESTHETICS** on a 150 foot right-of-way with 70-90+ foot tall poles is an important issue. VELCO endeavors to establish good looking, effective, road crossing screens where possible and practical. Vegetation is also manipulated on long vistas of right-of-way as seen from secondary roads and primary highways where possible, to add color and texture to the landscape. Apple trees, cedar, white pine, hemlock, dogwood, sumac and shadbush are used to break up the outline of a right-of-way as much as possible. These trees also provide some food and shelter for wildlife.

D. **EROSION CONTROL** stabilizes the plant community on the right-of-way and promotes strong, healthy root-mat conditions. This Vegetation Management Program encourages plants such as: ferns and grasses, sweet-fern, blueberries, blackberries, raspberries, dogwood and other low-growing shrubs as well as a variety of wild flowers.

Upon completion of culvert and/or road repair, the work area is seeded with a hardy grass mix and then a hay mulch is usually applied to keep the seeds moist and in place depending upon the circumstances (size of area, soil conditions, slope, etc.). There are two publications that are used as reference for this kind of work:

1. Wetlands Rules & Regulations – what they mean to your logging operation in Vermont. Provided by the University of Vermont Extension Service.
2. Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont. Provided by the VT Department of Forest, Parks and Recreation.

E. RARE AND UNCOMMON NATURAL AREAS & SITES WITH

RARE PLANTS will be identified, based on Vermont State information, on line maps and flagged before any method of brush control is used to prevent damage in these sensitive areas. The primary reference source is called "How To Include Fish & Wildlife Resources In Town and Regional Planning." It is produced and published by the VT Fish & Wildlife Department of the Agency of Natural Resources.

VI. INSPECTION STANDARDS

Growth rates of vegetation vary due to species, soil, site conditions and climate conditions. It is therefore required that each line be periodically patrolled for the specific purpose of detecting locations where minimum clearances are being approached.

A. Frequency

1. An aerial or foot patrol shall be performed at least once a year to determine where vegetation is not in compliance with the standard clearances. If an aerial patrol is utilized, it shall be followed, where necessary, by a foot patrol.

B. Nature of Patrol

1. All vegetation conditions that might immediately affect the operation or maintenance of the lines shall be observed and recorded.
2. The following list is representative of observations to make:
 - a. Heights of vegetation in the transmission corridor.
 - b. Clearance of road crossing screens/buffers.
 - c. Vegetation which is not in compliance with standard clearances.
 - d. Any evidence of vegetation-conductor contact or burning caused by contact.
 - e. Trees which because of their condition are an immediate threat to the lines.

C. Action Following Patrols

When vegetation is determined not to be in compliance with the standard, action shall be initiated within a reasonable time frame to obtain at least the conductor-to-vegetation clearance standard recommended on page 4.

VII. GUIDANCE & CONTROL FOR CONTRACTORS

The beginning of a vegetation management program for each cycle starts with a letter to qualified vegetation management contractors. This letter (adjusted for each cycle) sets the basic guidelines for the contractor. (See Appendix D)

Following the award of the work to a specific contractor, and the approval of a herbicide use permit, a meeting is held with the contractor. The purpose of this meeting is to discuss the details of the permit application (Appendix E) and the approved permit (Appendix F) issued by the Department of Agriculture.

In the meeting, requirements of the following are discussed:

1. Bid request letter
2. Permit Application
3. Herbicide Use Permit Issued

Additionally, the following issues are reviewed in detail:

1. Community Water Supplies-Locations/Water Supply Division
2. Wetlands/Water Quality Division & National Wetlands Inventory Maps
3. Significant Habitat Maps/VT Fish & Wildlife Department
4. Selective Areas (buffers & wildlife crossings)
5. VELCO's line maps/Reviewed with Field Foreman of crew.

In accordance with VELCO's initial letter inviting firm price bids, the contractor conducts an annual training session which includes chainsaw safety, herbicide use safety and applications, safe driving techniques, good public relations habits, tree & shrub identification and various logistical matters for the maintenance season.

VIII. ACCOUNTABILITY AND EVALUATION OF CONTRACTORS

The company expects the contractor to train its field personnel (supervisors & technicians) in the concepts of this document.

VELCO's field representative, together with various assistants from time to time, will inspect the field crews on a frequent basis (not less than once a week) to monitor activities and insure compliance with this vegetation management plan and all related regulations and safety standards. It is the responsibility of VELCO's field representative to evaluate the quality of performance of the field crews.

The elements of an evaluation are as follows:

1. Compliance with all safety regulations.
2. Clear understanding of what is expected.
3. Good work production.
4. Good work quality.
5. Good public relations with property owners and general public:
6. Dependability.
7. Good communication with VELCO inspector.
8. Maintenance of daily records/herbicide data, time sheets, etc.
9. Maintenance of equipment in good and safe condition.

To accomplish this evaluation the field representative must:

1. Make frequent visits to the active job sites and observe activities.
2. Look ahead to preview upcoming work and communicate with crew foreman so plans can be made in a timely manner.
3. Review work previously done to evaluate effectiveness and quality and to determine whether or not plans were understood and followed.

As a result of this process, compliments and/or comments can be given to the crew. Adjustments can be made to improve or correct work activities if and where necessary.

The company will insist that its contractors apply current techniques in compliance with State and Federal Laws and Regulations and the principles expressed herein. These principles have the primary purpose of assuring the continuous operation of electrical transmission lines in an economical and safe manner.

This document will become part of the conditions of agreement between VELCO and its contractors relative to vegetation management activities.

X-Modus-BlackList: JCARRARA@velco.com=OK
Subject: FW: Coolidge 345-kV Transmission Line
Date: Mon, 24 Jul 2006 09:12:16 -0400
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Thread-Topic: Coolidge 345-kV Transmission Line
Thread-Index: AcakONr/ffbBZz9ISs63I+dGuZ6v8wAAJbRwAABelaAAxHwG4AH1dT6g
From: "Jeff Carrara" <JCARRARA@velco.com>
To: "Bob West" <bmw@ftn-assoc.com>
X-Virus-Scanned: by local mailserver

From: Ryan Johnson
Sent: Friday, July 14, 2006 9:54 AM
To: bmw@ftn-assoc.com
Cc: ENGDESIGN
Subject: RE: Coolidge 345-kV Transmission Line

Bob,

I am forwarding this email to you as I'm not sure if John had a chance to pass it on to you.

Take care,

Ryan

From: Ryan Johnson
Sent: Monday, July 10, 2006 12:11 PM
To: John Fiske
Cc: Donald Chase
Subject: RE: Coolidge 345-kV Transmission Line

John,

I'm not sure what else Entergy needs other than state that our lines do meet NESC clearance standards, which they do. They certainly are not sagging too much, because the line is not operated at more than its maximum capacity (conductor temperature over 212 degrees F). We do ROW surveys checking for infringements from the public during our multiple flights during each year.

RcJ

From: John Fiske
Sent: Monday, July 10, 2006 11:58 AM
To: Ryan Johnson
Cc: Donald Chase
Subject: FW: Coolidge 345-kV Transmission Line

Ryan,

Is this something that you could do later this week once we receive the PO?

John

From: Bob West [mailto:bmw@ftn-assoc.com]
Sent: Monday, July 10, 2006 11:56 AM
To: John Fiske
Cc: ldewald@entergy.com; rbuckle@entergy.com; jbroc94@entergy.com; Jeff Carrara;
dlach@entergy.com; jhoffm1@entergy.com
Subject: Coolidge 345-kV Transmission Line

John:

1. Someone from Entergy Vermont Yankee will be contacting you soon regarding the unpaid invoices. There was obviously some accounting problem, but it sounds like it has been resolved and the invoices are now being processed for payment.
2. Hopefully today we'll have a PO number so you can invoice Entergy for your time to provide the needed information on the Coolidge line.
3. During our call on Wednesday, I commented that transmission lines that are designed to limit electric fields at roadways to about 7 kV/m comply with the induced shock hazard limit of 5 mA. The source of this information is the attached Nuclear Regulatory Commission document. We do not have a specific NESC code reference for this.
4. Note that the attached document points out that if the lines meet the current NESC clearance standards, we just need to state that they do. And, we'll need to briefly describe your program to ensure the lines aren't sagging too much and the public is not infringing in the ROW. Periodic ROW surveys typically address these two topics.
5. We've called Jeff Wright several times and haven't been able to reach him. Dean LaForest will be back in the office on Monday, so we'll work with Dean on the issues related to threatened and endangered species and cultural resources.

Please call Lynn DeWald (802-258-5526) at Vermont Yankee or me with any questions.

Thanks again for your help.

Bob West
Project Manager
FTN Associates, Ltd.
Water Resources - Environmental Consultants
#3 Innwood Circle
Little Rock, AR 72211
501-225-7779
501-225-6738 (fax)

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