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BEFORE THE ARIZONA CORPORATION COMMISSION

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KRISTIN K. MAYES – Chairman  
GARY PIERCE  
PAUL NEWMAN  
SANDRA KENNEDY  
BOB STUMP

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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

IN THE MATTER OF THE APPLICATION OF  
UNS ELECTRIC, INC. FOR A CERTIFICATE  
OF ENVIRONMENTAL COMPATIBILITY  
FOR THE VAIL TO VALENCIA 115 KV TO  
138 KV TRANSMISSION LINE UPGRADE  
PROJECT, ORIGINATING AT THE EXISTING  
VAIL SUBSTATION IN SEC. 4, T.16S., R.15E.,  
PIMA COUNTY, TO THE EXISTING  
VALENCIA SUBSTATION IN SEC. 5, T. 24S.,  
R.14E., IN THE CITY OF NOGALES, SANTA  
CRUZ COUNTY, ARIZONA.

Docket No. L-00000F-09-0190-00144  
Case No. 144

NOTICE OF FILING POLE FINSH  
PLAN

Pursuant to Decision No. 71282 (October 7, 2009), UNS Electric, Inc. hereby files its Pole  
Finish Plan, attached hereto as Attachment 1, in compliance with Condition No. 23 set forth in the  
Certificate of Environmental Compatibility.

RESPECTFULLY SUBMITTED this 6<sup>th</sup> day of November 2009.

UNS ELECTRIC, INC.

By Marcus Jerden  
Marcus Jerden  
Senior Counsel  
UNS Electric, Inc.  
One South Church Ave., Suite 1820  
Tucson, Arizona 85701

Arizona Corporation Commission  
DOCKETED  
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# **Attachment 1**

## **Pole Finish Plan**



**UES Moving Forward with Transmission Line Upgrade for Santa Cruz County;  
Pole Finish Plan Calls for Combination of Galvanized, Weathering Steel Structures**

To help serve growing energy needs in Santa Cruz County, UniSource Energy Services (UES) – which provides electric service through its subsidiary UNS Electric – is upgrading an existing 115-kilovolt (kV) transmission line to operate at 138 kV as part of the Vail to Valencia Transmission Line Project.

UES will replace existing wooden H-frame structures with steel monopoles along a slightly revised route designed to accommodate development that has occurred since the existing line was built. The project also involves construction of a new four-mile segment that would link the line to Tucson Electric Power's Vail Substation along Rita Road south of Interstate 10 in Tucson.

In September 2009, the Arizona Corporation Commission (ACC) issued final approval for construction of this project along a route that extends west from the Vail Substation before heading south and east to connect with UES' Valencia Substation in Nogales. UES is planning to complete the project by the summer of 2012.

UES will use two types of poles in this project. Structures with a galvanized steel finish will be used in the northern portion of the project that extends from the Vail Substation west to Wilmot Road. The remainder of the project will feature the same type of brown, weathering steel poles currently in use between the Nogales Tap (the existing line's point of origin, located southeast of Tucson) and UES' Kantor substation near Amado. Those structures were part of a previous upgrade to the existing line and will not be replaced as part of this project.

UES' plan for selecting appropriate pole finishes for this project is included in this document. The ACC directed the company to develop such a plan as part of this project and to distribute it to nearby landowners and others who have participated in this line siting process.

The ACC has directed that comments on the plan be forwarded to the commission within 30 days of the distribution of this document, which is dated November 6, 2009. Any such comments should reference the docket number for this matter, L-00000F-09-0190-00144, and may be sent to the following address:

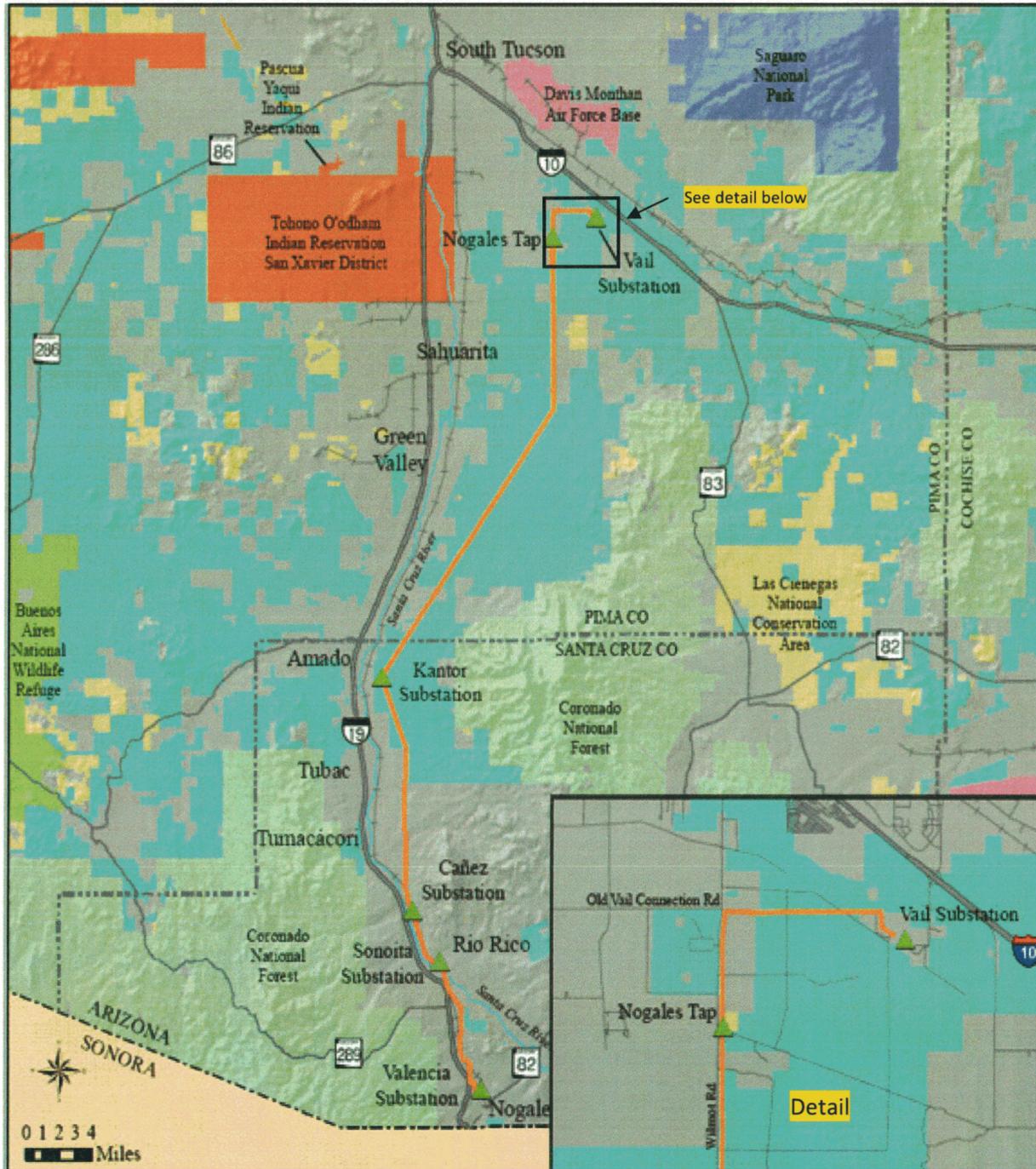
**Arizona Corporation Commission  
1200 W. Washington St.  
Phoenix, AZ 85007  
ATTN: Docket Control**

If you have any questions or would like more information about this project, please visit [uesaz.com](http://uesaz.com) and follow the link to "Transmission Line Projects" to reach the Vail to Valencia Project Web page.

# UniSource Energy Services (UES) 138kV Pole Finish Plan For ACC Siting Case No. 144 Vail to Valencia line, Docket No. L-00000F-09-0190-00144

The northern portion of the project from the Vail Substation west to Wilmot Road will use dulled galvanized structures in accordance with Condition 23 of ACC Decision No. 71282 (Oct. 7, 2009).

The balance of the project shall be constructed from poles that feature a weathering steel finish in accordance with UES' 138kV Pole Finish Plan Color Selection Process.



# **UniSource Energy Services**

## **138kV Pole Finish Plan Color Selection Process**

### **Objective**

Develop criteria for the color selection process of 138kV tubular steel transmission line structures as required by the Arizona Corporation Commission.

### **Material/Color Selection Process**

1. The primary selection is based on the best engineering material practices and cost.
2. Where requested for aesthetics, structure finish will be selected through a process that follows the following guidelines:
  - a. Vantage Point for Visual Perspective
    - i. A major traffic artery that has the greatest volume of traffic in vicinity of the proposed transmission line. In most cases, a nearby interstate highway will be identified as the vantage point.
    - ii. The perspective viewpoint from the interstate would be observed and recorded from the nearest travel lane.
    - iii. The elevation chosen for perspective will be a prospective driver's view from a typical passenger vehicle.
  - b. Determination of View Perspective Models
    - i. If a three-dimensional model is available through Google Earth, that application will be used to simulate the view from the vantage point through a View Perspective Model.
    - ii. Alternately, a site visit will be used to record the view from the chosen vantage point for that purpose.
  - c. Color Selection Based on Background Criteria
    - i. Structures that would appear from the chosen vantage point to have natural backdrops – including (but not limited to) desert areas (with either heavy or limited vegetation), forests, mountains, hillsides, rural or urban farmland, wetlands or river basins – will utilize an uncoated weathering steel finish. This finish has a wood-like color and blends well with a natural background.
    - ii. Structures that would appear from the chosen vantage point to extend largely above the horizon would utilize a dulled, galvanized finish to better blend in with the sky.
    - iii. In developed urban areas, structures will utilize a weathering steel finish that blends more closely with varying building colors.
    - iv. Structures that replace weathering or wood poles will utilize a weathering steel finish to match the color of the previous poles.
    - v. New structures located near existing wood or weathering steel poles will utilize a weathering steel finish. New structures adjacent to painted or galvanized poles will be finished with a similar paint color to better blend with the existing infrastructure.