



# FIBERGLASS CONDUIT SOLVES FOR CORROSION AND A STEEP INSTALLATION

The TVA Apalachia Powerhouse is located 12 miles from the Apalachia Dam at the base of a steep-walled gorge along the Hiwassee River between two mountain formations. It is owned and operated by the Tennessee Valley Authority (TVA), which built the dam in the early 1940s to provide emergency power for aluminum production during World War II.

## Challenge

The TVA was performing some much needed maintenance on the Apalachia Powerhouse, removing ageing carcinogenic cement conduit. Their requirements for a replacement were two-fold. First they wanted to replace the cement conduit with a long-lasting alternative. Secondly, they desired a conduit that would help make installation along the steep mountainside a bit less troublesome.

## Solution

Champion Fiberglass conduit met TVA's project requirements head-on. TVA desired a strong electrical conduit requiring little maintenance that would last 50 to 100 years. Manufactured for durability with UV resistance and corrosion resistance to over 70 chemicals, Champion Fiberglass conduit provided the longevity TVA required for this outdoor utility project. Regarding installation, TVA gravitated toward the light weight and portability of fiberglass conduit, known for smooth and less time-consuming installations.

## Results

With durability that promotes longevity and light weight that supports easier installation, Champion Fiberglass was able to meet the project needs for TVA Apalachia Powerhouse. As added protection, the project engineers created a split duct protective cover for the conduit side facing the elements. This was a clever move that added even more longevity by shielding the original conduit. Additionally, the conduit was clamped securely down with "U" bolts so the bonding step was eliminated. To provide even more protection from rain, the engineers placed the belled end of the conduit facing downhill to prevent rainwater from entering and weathering the conduit.

## QUICK FACTS

### PROJECT NAME

TVA Apalachia Powerhouse

### APPLICATION

Utilities

### CHAMPION FIBERGLASS PRODUCT(S)

Champion Duct®

- » **Champion Duct®**  
Conduit met project demands for a strong, durable, UV- and chemical- resistant conduit that would last many years.
- » **Lightweight, portable fiberglass conduit** made installation along a steep mountainside easier than heavier conduit options.