



LANDFILL-TO-ELECTRICITY PROJECT COUNTS ON UNDERGROUND CABLE IN CONDUIT

Wins Top Industry Award

GEORGETOWN, Ky - Running power lines from the Central Kentucky Landfill to the Toyota Motor Manufacturing Kentucky, Inc. plant here won the Project of the Year Award for Cable in Conduit (CIC) producer Southwire Company, LLC (Carrollton, Ga.). Presented by the Plastics Pipe Institute, Inc. (PPI), the honor recognized the project for its use of nearly 120,000 feet of electrical cable in conduit installed underground without the need to cut into miles of private property.

"This project was developed as part of Toyota's on-going effort to reduce its carbon footprint," stated Tony Radoszewski, president of PPI. "In addition to this environmental initiative, the company was able to preserve the land by using a non-invasive means to install the large cables underground from the landfill cogeneration plant. Toyota estimates the locally generated landfill gas will supply enough electric power each year to produce 10,000 vehicles."

New power lines were needed to bring electricity to the Toyota plant from the landfill 6.5 miles away. Typically, this would have required overhead lines with new poles and tree trimming or removal. Putting the lines underground using traditional methods would have meant using cut and cover trenching with heavy equipment plus gaining permission from the many landowners to enter their property. Instead, because of CIC, the project was able

to use Horizontal Directional Drilling (HDD) to avoid disrupting the land and subsequent costly restoration work. "The high-density polyethylene (HDPE) conduit made this possible," Radoszewski stated. "This product comes with the electrical cable already installed inside. And it is flexible and strong enough to fit the needs of HDD and stand up to the tough terrain."



Three sets of CIC were bored into the limestone bed at depths of 15-18 feet for the entire length of the run. Underground concrete vaults were spaced at predetermined locations for splicing cables and to allow for slack to be coiled in case any future repairs were needed.

"By utilizing Cable in Conduit, the project was able to take advantage of the long lengths of conduit installed safely within the local natural limestone rock layer," explained Lance MacNevin, P.Eng., director of engineering for PPI's Conduit Division. "It also allowed them to put the vaults in areas that were best suited for access and location. After the route was laid out and underground utility vault locations determined, reel lengths of CIC were planned



by Southwire to meet the project's specifications. In total, the company produced 118,443 feet of 2-1/2 inch CIC on 93 reels that held from 600 to 2,000 feet each.



"Boring in the three conduit lines together for the 3-phase Delta 35kV system went smoothly with no installation issues. This allowed the project to be completed on time with no delays. By utilizing CIC, the labor savings eliminated any additional costs of pulling cable or any issue with excessive pulling tension on cable over the extended runs. The new power source was brought on line with no start up issues."

"This project is very deserving of the PPI honor because it allowed Toyota to take advantage of a new "Green" power source," Radoszewski said. "Utilizing HDPE Cable in Conduit enabled Toyota to economically utilize, environmentally-friendly energy from the local landfill."

For additional information, visit the PPI's website at: www.plasticpipe.org.

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About PPI:

The Plastics Pipe Institute Inc. (PPI) is the major trade association representing all segments of the plastic pipe industry and is dedicated to promoting plastics as the material of choice for pipe applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in development and design of plastic pipe systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.