

news

TMI: New generator a delicate process

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the reactor building and placed in the used fuel pool. The outside air will be pulled into the reactor building so that the air inside does not go out. Once the generators are replaced, the opening in the reactor building will be restored to its original design configuration and the reactor building will be pressure tested prior to start-up of the plant," according to the Fall 2009 community update.

The installation of the steam generators was contracted to The Steam Generator Team, LLC, which has successfully completed 14 similar steam generator replacement projects. To install the steam generators, an opening will be created in the containment building wall to remove the old steam generators and install the new steam generators, according to the Three Mile Island Steam Generator Replacement fact sheet.

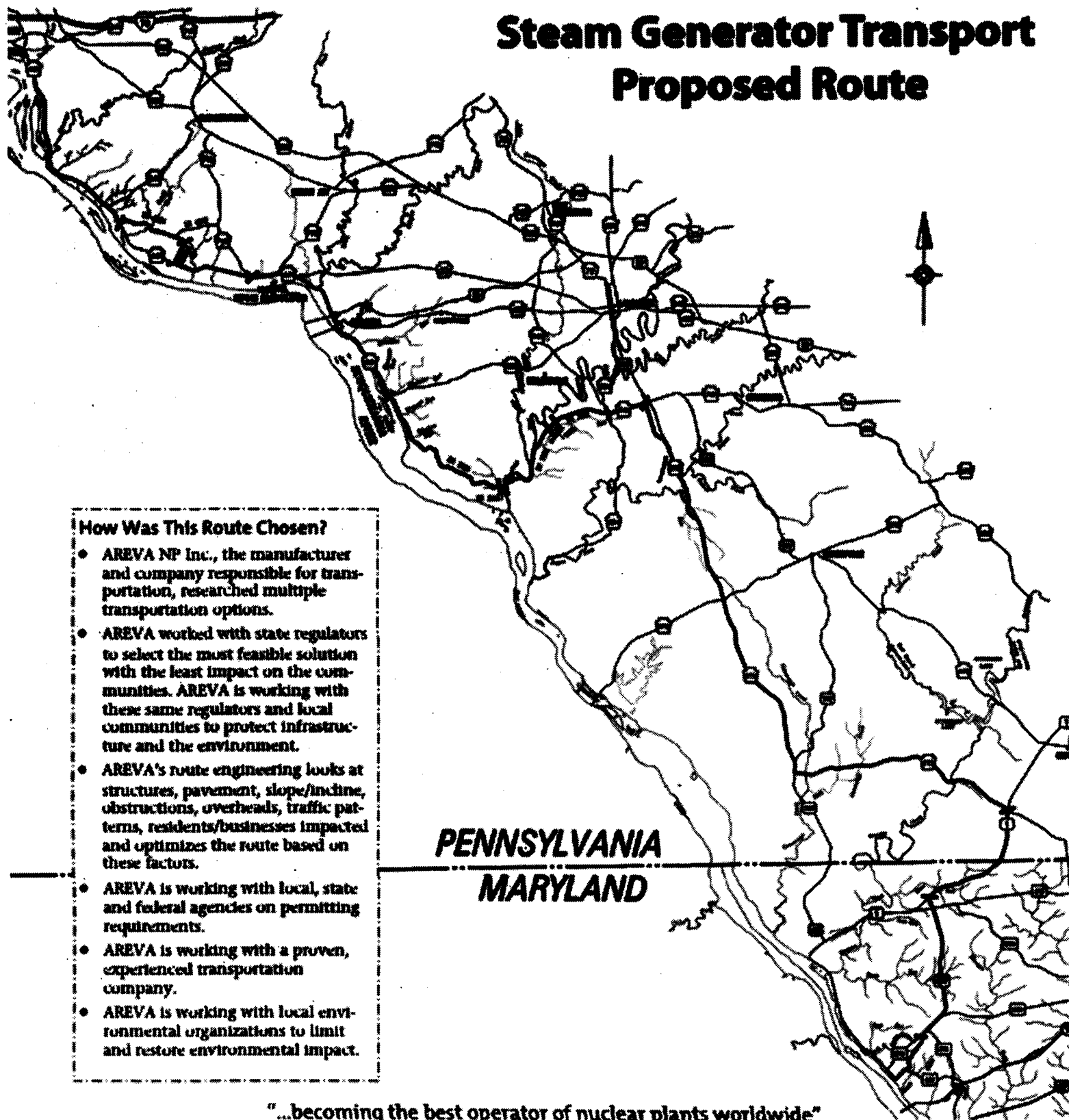
"I don't worry about the installation," said Richard Ciocci, Associate Professor of Mechanical Engineering at Penn State Harrisburg, "I would say the steam generator portion worries me less than other parts of the process."

Within the next five years, the license for Unit 1 on TMI will expire on April 19, 2014 according to the Applicant's Environmental Report License Renewal Operating Stage, part of the license renewal process.

The replacement of the steam generators ensures another 20 years of service. According to Noll in the Fall 2009 community update, "In January 2008 we submitted an application to the U.S. Nuclear Regulatory Commission (NRC) to extend our operating license for 20 years. We are nearing the end of that process and if the application is approved TMI will be able to operate until 2034," he said.

"Three Mile Island (TMI) Unit 1 located in Londonderry Township, Dauphin County, in Pennsylvania, generates 852 megawatts of clean, safe and reliable electricity for more than 800,000 homes," according to TMI's Web Site.

For more information about Three mile Island and the steam generator replacement visit: <http://www.threemileislandinfo.com/>



Three Mile Island Steam Generator Transport Proposed Route

How Was This Route Chosen?

- AREVA NP Inc., the manufacturer and company responsible for transportation, researched multiple transportation options.
- AREVA worked with state regulators to select the most feasible solution with the least impact on the communities. AREVA is working with these same regulators and local communities to protect infrastructure and the environment.
- AREVA's route engineering looks at structures, pavement, slope/incline, obstructions, overheads, traffic patterns, residents/businesses impacted and optimizes the route based on these factors.
- AREVA is working with local, state and federal agencies on permitting requirements.
- AREVA is working with a proven, experienced transportation company.
- AREVA is working with local environmental organizations to limit and restore environmental impact.

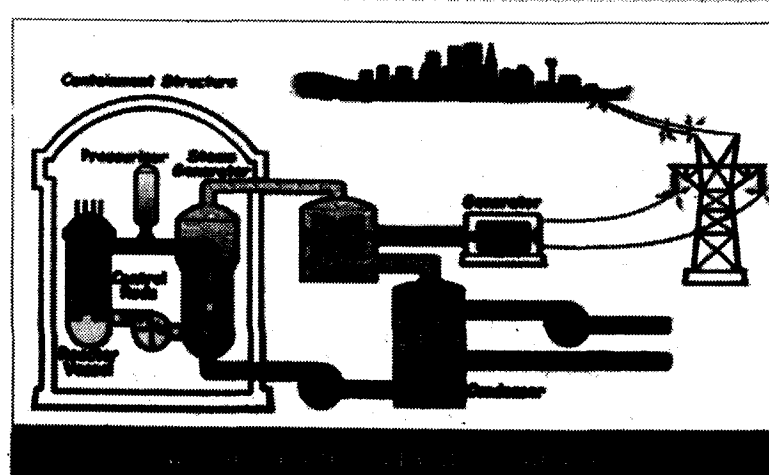
"...becoming the best operator of nuclear plants worldwide"

What is a Steam Generator?

Steam generators are heat exchangers used in Pressurized Water Reactors (PWR) like Three Mile Island Unit 1.

Steam generators act like giant double boilers. Pressurized hot water from the reactor enters the steam generator, passing through thousands of small tubes, similar to hot water passing through a car radiator. The heat from inside of the tubes is transferred to a second supply of water outside the

tubes, which flashes into steam. The steam is then sent through large pipes to spin the turbines and generator. The two supplies of water inside and outside of the steam generator tubes never mix.



Images courtesy of TMIinfo.com