

April 16, 2004

Ms. Pamela B. Katz  
Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: Docket No. 272 - Middletown-Norwalk 345kV Transmission Line

Dear Ms. Katz:

This letter provides the response to requests for the information listed below.

This filing completes all the requested information for the SCCRWA-01 set of interrogatories.

Response to SCCRWA-01 Interrogatories dated 03/15/2004  
SCCRWA - 001 , 002 , 003 , 004 , 005 , 006 , 007 , 008 , 009

Very truly yours,

Anne B. Bartosewicz  
Project Director - Transmission Business

ABB/tms  
cc: Service List

**CL&P/UI**  
**Docket No. 272**

**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-001**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Besides polybutene and alkyl benzene fluids, and the potential use of perfluorocarbon as a leak detection tracer gas, will the underground transmission cable contain other chemicals or materials such as alternative fluids, additives or impurities? Including polybutene, alkylbenzene and perfluorocarbon, please list each and every fluid, additive or impurity, describe its use and characteristics, the estimated volume per unit of length of cable and the potential for harm to groundwater, surface water and human health.

**Response:**

CL&P and UI intend to use polybutene as the dielectric fluid for the HPFF cable system. There are no other fluids, additives, or impurities added in the fluid. Polybutene is a colorless, tasteless, and odorless fluid. It is not petroleum based and has not been designated as a health or environmental hazard or a RCRA-classified hazard waste carcinogen. The Material Safety Data Sheet (MSDS) for polybutene indicates that it is nontoxic, non-hazardous, non-sensitizing, non-teratogenic and non-mutagenic. The estimated volume per unit length is 3.2 gallons per foot for the two-pipe system. Because polybutene is nontoxic, it poses no harm to groundwater, surface water and/or human health.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-002**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

In the event of a leak of fluids or other material, what is the average volume of fluid that is lost before a leak is detected and repaired?

**Response:**

The HPFF (high pressure fluid filled) pipe cable system will utilize a leak detection system that is designed to detect a possible leak as low as 200 gallons. Once detected, the cable will be de-energized and pressure on the line will be reduced. A low positive pressure will be maintained to avoid contaminants from entering the pipe cable system. A leak associated with an accidental dig-in is typically more significant and can vary in magnitude. The fact that the exact location of the leak is known provides for immediate control and containment of the spill. Utility crews will be trained in both leak detection and leak repair techniques.

Additional discussion regarding leak detection can be found in the CSC filing, Volume 6 of 12, "Evaluation of Potential 345-kV and 115-kV Cable Systems as part of the Middletown-Norwalk Project", Appendix A, pages A-4 thru A-6.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-003**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

In the event of a leak of fluids or other material, what is the maximum volume of fluid that is lost before a leak is detected and repaired?

**Response:**

The longest section of HPFF pipe cable system being proposed is between the new Singer Substation in Bridgeport and the existing Norwalk Substation in Norwalk. The total volume of dielectric fluid contained in both pump plant reservoir tanks and the two steel pipes along the 15.5 mile route between the Singer Substation and Norwalk Substation is approximately 300,000 gallons. In the event of a catastrophic breach of the HPFF pipe, such as would occur from a total mechanical severing of the pipe that could be caused by a back hoe, a total loss of approximately 5,000 to 10,000 gallons of fluid could occur.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-004**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide a list all of the installations of underground transmission cables in public water supply watersheds, the date of installation, and the type of technology used.

**Response:**

The vast majority of CL&P and UI (the "Companies") transmission facilities have been built using overhead technology, with very limited underground transmission installations. A review by the Companies has identified no locations where underground transmission facilities are located in public water supply watersheds. In this Project, the Companies are proposing to place approximately 4900 feet (of which approximately 720 feet will be underground in the existing ROW) of 115-kV XLPE (which does not contain dielectric fluid) cable under street in the Lake Whitney/Mill River public water supply watershed.

The Companies have based this response on a review of watershed information provided in the "Atlas of the Public Water Supply Sources & Drainage Basins of Connecticut", dated June 1982, by the State of Connecticut Department of Environmental Protection, Natural Resources Center, D.E.P. Bulletin No. 4.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-005**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide an assessment and all available supporting information regarding known impacts that are documented or potential impacts to groundwater from a release of fluids or other materials from underground transmission cables.

**Response:**

Polybutene is nontoxic and will move very slowly through soil following a leak. If polybutene did reach groundwater, it is likely that it would be diluted to negligible levels as a result of the very slow migration through the overlying soils over a long period of time.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-006**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide an assessment and all available supporting information regarding known impacts that are documented or potential impacts to surface water and aquatic life from a release of fluids or other materials from underground transmission cables.

**Response:**

Polybutene has a specific gravity of less than 1.0; therefore it floats on water. It will also move very slowly through soil. In an aquatic system, it would rapidly bind to particulates and be removed from the water column. No effect on aquatic organisms is expected following exposure to polybutene.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-007**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide an assessment and all available supporting information regarding known impacts that are documented or potential impacts to human health from a release of fluids or other materials from underground transmission cables to the environment.

**Response:**

Polybutene is nontoxic and non-hazardous to humans. The Material Safety Data Sheet (MSDS) for polybutene indicates that it is nontoxic, non-hazardous, non-sensitizing, non-teratogenic and non-mutagenic. The U.S. Environmental Protection Agency (EPA) has stated that polybutene will pose no appreciable risks to human health under reasonably foreseeable conditions.



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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-008**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide an assessment and all available supporting information regarding known impacts that are documented or potential impacts of taste, odor, color or other aesthetic properties to public water supplies from the release of fluids or other materials from underground transmission cables.

**Response:**

Polybutene is a colorless, tasteless, and odorless. It is not petroleum based and has not been designated as a carcinogen, health or environmental hazard. It would have little effect on public water supplies.

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**Data Request SCCRWA-01**  
**Dated: 03/15/2004**  
**Q- SCCRWA-009**  
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**Witness: Roger C. Zaklukiewicz**  
**Request from: South Central Connecticut Regional Water Authority**

**Question:**

Please provide an assessment and all available supporting information regarding known impacts that are documented or potential impacts to the operation of surface water or groundwater treatment facilities if a release of fluid or other materials from underground transmission cables were to enter such treatment facilities.

**Response:**

Polybutene is a colorless, tasteless, and odorless. It is not petroleum based and has not been designated as a carcinogen, health or environmental hazard. It would have a negligible effect on water treatment facilities.