

# **OWENS CORNING COMMUNITY INFORMATION SESSION**

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INNOVATIONS FOR LIVING®

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# FACILITY HISTORY



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**Site Location:** 160 Jackson Road, Berlin Borough, Camden County, NJ

**Site Size:** Approximately 45 acres

- Facility operated as a sand and brick manufacturing plant
- Owens-Illinois Glass Company purchased the facility and continued to manufacture brick
- Manufacturing operations converted to the production of high temperature insulating materials when Owens Corning purchased the facility
- Manufacturing operations ended
- Buildings removed

Today the site is vacant and enclosed by a fence. Roughly 25 percent is covered by paving, building pads and other improvements related to the former manufacturing operations.

# ABOUT OWENS CORNING



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- Owens Corning (NYSE: OC) is a leading global producer of residential and commercial building materials, glass-fiber reinforcements and engineered materials for composite systems
- A Fortune® 500 Company for 58 consecutive years, Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives
- Founded in 1938, Owens Corning is a market-leading innovator of glass-fiber technology with sales of \$5.3 Billion in 2011 and about 15,000 employees in 28 countries on five continents
- Additional information is available at: [www.owenscorning.com](http://www.owenscorning.com)



# PROJECT OVERVIEW



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Owens Corning entered the Berlin, NJ site into the Industrial Site Recovery Act (ISRA) program when manufacturing operations ceased in October 1993.

Site investigation activities, conducted in cooperation with and under the direction of the New Jersey Department of Environmental Protection (NJDEP), identified soil and groundwater impacts on-site related to the former manufacturing operations.

## On-Site

Investigation activities included:

- Sampling soil
- Sampling groundwater
- Further defining the extent of groundwater impacts
- Completion of an updated receptor evaluation including off-site well search and a baseline ecological evaluation

On-site impacts were identified as primarily related to the historic use of DOWTHERM A™ (a heat transfer fluid), fuel oil, and various lubricants.

## Off-Site

No migration of impacts to off-site soil.

Two constituents of DOWTHERM A™ were identified in off-site groundwater samples collected in February/March, 2012.

Owens Corning is pursuing a parallel path to:

- Define the extent of impacts to groundwater
- Conduct a limited well survey to identify private potable water wells in an area defined by NJDEP requirements and to test those wells in accordance with NJDEP guidance and protocols

# WHAT IS AN LSRP?



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**Licensed Site Remediation Professionals (LSRPs)** have responsibility for oversight of environmental investigation and cleanup in New Jersey. As of May 2012, LSRPs replaced NJDEP Case Managers for all sites not under direct oversight of the Department.

Day-to-day management of site remediation is now overseen by qualified LSRPs, but NJDEP will retain significant authority over the remediation process and ensure LSRPs comply with applicable regulations.

The LSRP program is one of many sweeping changes made by the NJ State Legislature to speed up the cleanup of environmental sites in the state. The program is part of the Site Remediation Reform Act.

David Thompson  
with ARCADIS US, Inc.  
is LSRP for the  
Owens Corning  
former Berlin, NJ site.



# THE REGULATORY PROCESS



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Owens Corning is responsible for the investigation and remediation of the former manufacturing facility site in Berlin, NJ.

All work is conducted in accordance with the rules and regulations of the New Jersey Department of Environmental Protection (NJDEP).

There are five primary phases of site investigation and remediation. For large and/or complex sites, activities in support of the various phases can sometimes overlap or be implemented at the same time.

## Primary phases of site investigation and remediation

### **SITE ASSESSMENT**

- Preliminary Assessment
- Historical Research
- Site Investigation
- Confirm Presence or Absence of Contamination
- Report

### **REMEDIAL INVESTIGATION**

- Work Plan
- Soil and Groundwater Sampling
- Define Nature and Extent of Contamination
- Interim Remedial Measures
- Report

### **REMEDIAL ACTION WORK PLAN**

- Define Remedial Objectives
- Evaluate Technologies
- Select Remedy
- Develop a Work Plan
- Report

### **REMEDIAL ACTION**

- Soil Excavation
- Groundwater Treatment
- Subsurface Barriers
- Site Caps
- Institutional Controls
- Report

### **SITE CLOSURE & MONITORING**

- Confirm Success of Remedial Action
- Remedial Action Outcome
- Monitor
- Conditions Over Time and Report

# CURRENT STATUS — GROUNDWATER INVESTIGATION



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- **Dec.**  
Owens Corning chooses to “opt in” early to the LSRP process

- **Feb. - Mar.**  
Testing finds levels of constituents related to DOWTHERM A™ on-site near the fence line of the eastern property boundary
- **Apr. - Dec.**  
ARCADIS, Owens Corning’s environmental consultant, develops a work plan for off-site sampling and begins to pursue access for off-site investigation locations

- **Jan.**  
Obtain access from NJDOT and Camden Co. to collect samples at 8 off-site locations to the east of the property boundary
- **Feb. - Mar.**  
Collect samples from off-site locations and found levels of DOWTHERM A™-related constituents above NJDEP groundwater quality standards
- **April**  
Issue notification letters to properties in Berlin Twp. and Berlin Borough, and post a public notice of the findings in the *Camden Courier-Post*, in accordance with NJDEP requirements. Implement well survey of private potable water wells, in accordance with NJDEP guidance and protocols
- **May - Sept.**  
Conduct well survey and collect private potable water well samples. Conduct groundwater delineation activities and collect additional groundwater “grab” samples, in accordance with NJDEP guidance and protocols
- **Oct. - Nov.**  
Conduct second round of groundwater delineation activities and collect additional groundwater “grab” samples, in accordance with NJDEP guidance and protocols. Install 5 permanent monitoring wells for long-term monitoring
- **Late Nov./Dec.**  
Conduct well survey and collect private potable water well samples, if necessary



# NEXT STEPS — GROUNDWATER INVESTIGATION



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**Owens Corning is committed to protecting public health and the environment.**

We are pursuing three paths of action simultaneously.

## **A well survey and testing program**

To identify the existence and use of private potable water wells within close proximity to known impacts

To ensure through testing materials related to the Owens Corning site are not impacting private potable water wells

## **Delineation of the extent of impacts to groundwater**

Activities conducted east of the site include:

- Groundwater sampling from off-site locations
- Ongoing monitoring

## **Development of remedial plans**

To address on-site and off-site conditions contributing to groundwater impacts



# **WORKING IN ACCORDANCE WITH NJDEP REGULATIONS**



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Owens Corning is working in accordance with the rules and regulations of the New Jersey Department of Environmental Protection (NJDEP) and in cooperation with, and under the direction of, the site's Licensed Site Remediation Professional (LSRP) to investigate and remediate both the environmental conditions at our site and the effects to groundwater off-site from materials related to the former manufacturing site in Berlin, NJ.

# ABOUT DOWTHERM A™



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- DOWTHERM A™ is a heat transfer fluid which has been used in a wide range of industrial heating systems for over 60 years - it is still in use today
- It was used at the Owens Corning former Berlin, NJ facility in the insulation manufacturing process
- It is a mixture of two organic compounds, 1,1-Biphenyl and Diphenyl ether
- It is biodegradable and non-persistent in the environment
- There is no evidence that harmful products are formed as a result of biodegradation

(Source: Materials Safety Data Sheet - Dowtherm A™ The Dow Chemical Company, Published November 2001)

# ABOUT SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

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- The two DOWTHERM A™-related constituents identified in off-site groundwater (1,1-Biphenyl and Diphenyl ether) are semi-volatile organic compounds (SVOCs)
- SVOCs are a class of organic compounds made up of acid extractable and base neutral organic compounds and include hydrocarbon compounds related to heavier oil products



# WHY WE'RE TESTING FOR DEHP



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Because Owens Corning found levels of DEHP in some groundwater samples collected both on-site and off-site, we are required by NJDEP regulations to include it in our ongoing groundwater investigation.

There is no known connection between DEHP and the Owens Corning former Berlin, NJ facility operations.

There have been no significant findings of DEHP to date in our sampling of wells.

## WHAT IS DEHP?

- It is a manufactured chemical that is commonly added to plastics to make them flexible
- It is present in many plastic products and therefore found to be widespread in the environment
- DEHP is the acronym for Bis(2-Ethylhexyl)phthalate

# WHAT IS A WELL SURVEY AND WHY IT IS NEEDED

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**The purpose of a well survey is to identify the existence and use of private water wells. It is performed in steps.**

Step 1 Review state records to identify properties with possible private water wells

Step 2 Send letters to owners of properties asking them if they have a private water well and how it is used

Step 3 Sample private water wells used or designed for use as a potable water supply

It is needed to ensure public health and safety is protected and to help determine the appropriate steps to provide safe drinking water.



# HOW THE PROCESS WORKS



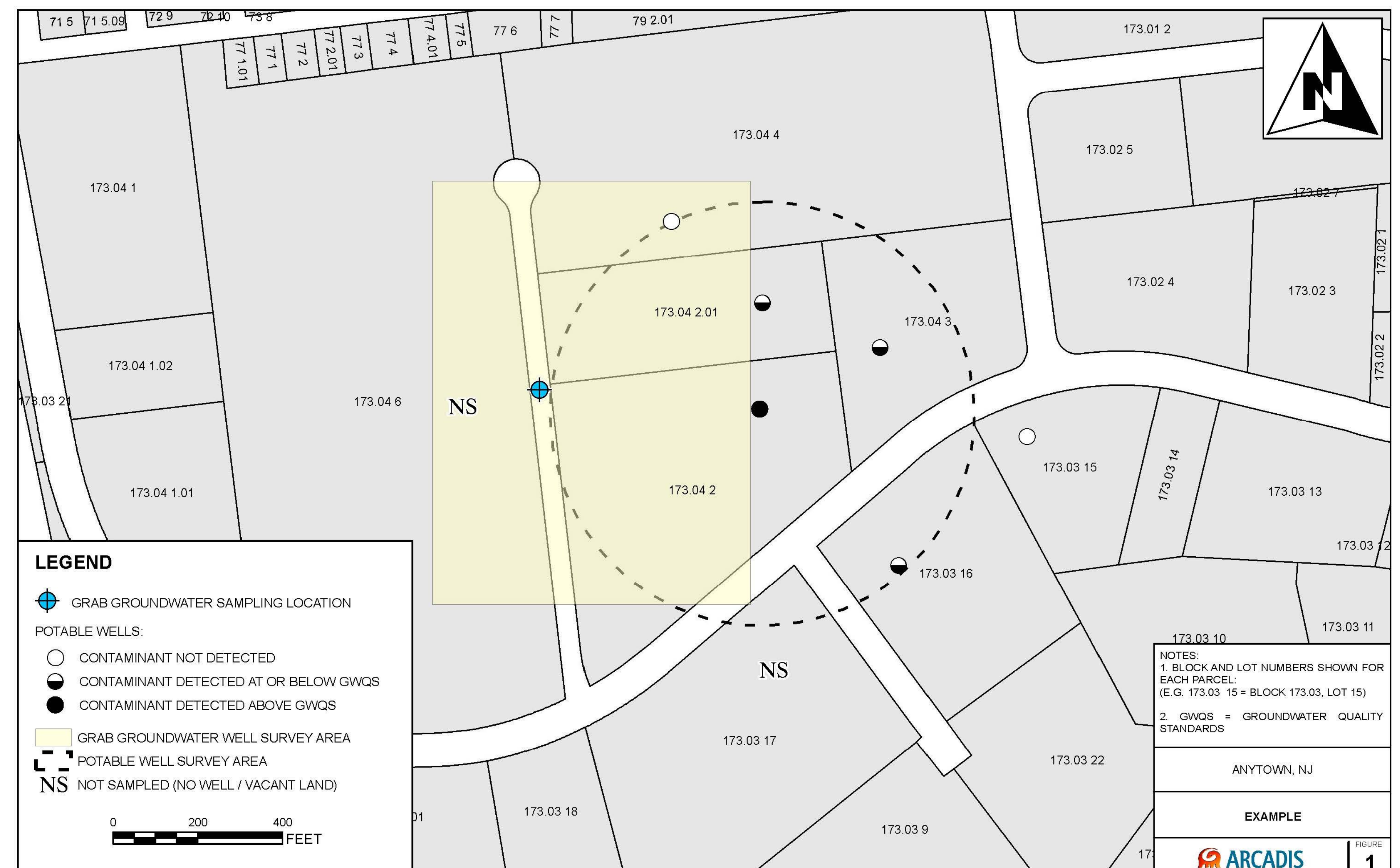
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**A well survey is triggered when impacts to off-site groundwater are identified.**

**Groundwater flows across the site in an easterly direction. As a result, Owens Corning is conducting the well survey in a defined area to the east of our site.**

NJDEP requires a well survey be conducted to identify the source of local drinking water within a defined distance of where the impacts were found, specifically:

- 500 feet down-gradient (same direction as the flow as groundwater)
- 500 feet side-gradient (perpendicular to the flow of groundwater)
- 500 feet up-gradient (opposite direction of the flow of groundwater) if impacts are identified in a potable well **OR** 250 feet up-gradient if impacts are identified through delineation sampling





# HOW THE SAMPLING PROCESS WORKS



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- Step 1** Obtain written permission from the property owner for access to collect a sample of the well water
- Step 2** In accordance with NJDEP guidance and protocols, we are required to:
- Identify an access point to collect water that has not gone through a filtration or water softening system
  - Let the water run for 15 minutes before collecting a sample to ensure the water analyzed is from the well and not from the holding tank or pipes
  - Use only dark, glass containers to help prevent impacts to the sample from sunlight and contamination from the sample container
  - Take photos of the sampling point, the well, and the system
  - Complete a questionnaire to identify use, depth of well, and other information about the system
- Step 3** Send the samples to a NJ certified laboratory for analysis
- Analysis of semi-volatile organic compounds or SVOCs (required by NJDEP)
  - Standard turn around for results is typically 8 days
- Step 4** Provide copies of the laboratory analysis report to the property owner, NJDEP, County Health Official, and municipal clerk

# **IF TESTING CONFIRMS APPLICABLE GROUNDWATER QUALITY STANDARDS ARE MET**



INNOVATIONS FOR LIVING®

**Owens Corning's testing is focused on the two constituents of  
DOWTHERM A™ (1,1-Biphenyl and Diphenyl ether).**

- If testing confirms the applicable groundwater quality standards are met, then no immediate action by Owens Corning is required

## **It's important to note**

Even if results show “no impacts” of the materials we are focusing on, it does not mean the water sampled meets all groundwater quality standards.

Residents should have their water tested if they have any questions related to water quality issues.

# IF MATERIALS RELATED TO OWENS CORNING ARE FOUND



INNOVATIONS FOR LIVING®

**Owens Corning's testing is focused on the two constituents of  
DOWTHERM A™ (1,1-Biphenyl and Diphenyl ether).**

- If results show levels of these materials above the applicable groundwater quality standards, Owens Corning is prepared to address the property owner's near-term and long-term potable water supply needs for drinking and cooking
- We will offer to meet with the property owner to provide test results and answer any questions
- Within 5 days of receiving the laboratory report, we will provide bottled water for drinking and cooking
  - At no cost to the property owner
- Within 60 days, we will install an appropriate filtration system that is designed to work with the existing home water supply system
  - Installation and maintenance of the filtration system will be paid by Owens Corning



# IF MATERIALS NOT RELATED TO OWENS CORNING ARE FOUND



INNOVATIONS FOR LIVING®

## Owens Corning's testing is focused on the two constituents of **DOWTHERM A™ (1,1-Biphenyl and Diphenyl ether)**.

- If results find levels of materials not related to the Owens Corning site above the applicable groundwater quality standards, Owens Corning is prepared to work with local health agencies and authorities to address the property owner's potable water supply needs for drinking and cooking
- We will offer to meet with the property owner to provide the results and answer any questions
- Within 5 days of receiving the laboratory report, we will provide bottled water for use with drinking and cooking  
— At no cost to the property owner
- Owens Corning and NJDEP will provide direction to identifying options for a long-term solution

These actions are required by NJDEP, and do not mean and should not be interpreted to mean Owens Corning is responsible for those constituents.

# **THE NEAR-TERM SOLUTION: BOTTLED WATER**

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INNOVATIONS FOR LIVING®

**Owens Corning will provide bottled water for drinking and cooking needs within 5 days of receiving laboratory results finding levels above applicable groundwater quality standards, in accordance with NJDEP requirements.**

- Water can be provided in a variety of appropriately sized containers to meet the property owner's needs
- The amount and frequency of the deliveries will depend on an owner's average weekly use
- The property owner will be provided with a number to call to request a future delivery, if needed
- Bottled water will be provided until the long-term solution is implemented (no more than 60 days)

# **A LONG-TERM SOLUTION: INSTALLING A FILTRATION SYSTEM**

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- A filtration system is an effective long-term solution for addressing the constituents related to the Owens Corning site and ensuring safe, potable water related to these materials
- Owens Corning has contracted with a local representative of Paragon Resource Management, Inc. to supervise and manage the installation and maintenance of the filtration system  
— At no cost to the property owner
- Paragon will work with the property owner to collect information needed to design a filtration system that will work best with the water system
- Paragon will work directly with the property owner to schedule dates and times for the initial site evaluation and installation



# WELL SURVEY RESULTS TO DATE



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## 45 Private Wells Tested in Berlin Township, Waterford Township and Evesham Township

### Berlin Township

- All 6 wells tested met the applicable groundwater quality (GWQ) standards for the DOWTHERM A™ constituents

### Waterford Township

- 27 wells tested met the GWQ standards for the DOWTHERM A™ constituents
- 5 wells contained levels of one or both of the DOWTHERM A™ constituents above the GWQ standards
  - Owens Corning supplied bottled water within five days of receiving the laboratory results
  - Owens Corning is working with property owners to establish an appropriate filtration system
- Sample results from 2 wells are pending

### Evesham Township

- All 5 wells tested met the applicable GWQ standards for DOWTHERM A™ constituents



# WHAT IS THE DELINEATION PROCESS



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Owens Corning is working to further delineate – or define – both the horizontal and vertical extent of impacts to groundwater related to the Owens Corning site, in accordance with NJDEP guidance. This is a necessary first step before designing a remediation approach to address both on-site and off-site conditions contributing to groundwater impacts.

- The groundwater samples are collected from depths between 30 and 125 feet below ground surface.
- Locations are identified based on our knowledge of area groundwater conditions and the impacts we have identified to date. We work to identify locations on commercial property or municipal rights-of-way to minimize inconvenience.
- The sampling work is done using a track-mounted Geoprobe®. A Geoprobe® inserts a small-diameter rod or pipe into the ground to the preferred depth and allows a groundwater sample to be collected from various depths at the same location.





# STAFF GAUGE INSTALLATION

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- In November 2012, we installed staff gauges in the Mullica River in a continued effort to better understand the area's hydrogeology
- A staff gauge looks like a measuring stick and is used to facilitate easy measurement of the surface level of water bodies
- These staff gauges will be removed when the study is completed



# DELINEATION RESULTS TO DATE

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- Owens Corning completed sampling at 39 locations in Berlin Borough, Berlin Township, Waterford Township and Evesham Township
  - Multiple samples were collected from different depths at each location
- From the results to date, we have fairly well defined the horizontal and vertical extents of DOWTHERM A™ constituents in the groundwater
  - The 3rd round of delineation data is being evaluated
- Additional delineation work may be needed to fill in data gaps

# NEXT STEPS



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## **Owens Corning will continue to take steps to protect public health and safety and the environment**

- **Develop long-term monitoring plan and submit to LSRP for approval**
  - Includes scheduled sampling of permanent monitoring wells installed in November 2012
  - Includes scheduling and sampling of private potable wells and POET systems to ensure that impacted residences are not at risk
- **Complete delineation and develop Groundwater Remedial Investigation Report**
  - Submit report to LSRP for approval
- **Continue implementation of Interim Corrective Measure to address on-site impacts contributing to off-site groundwater impacts**
  - A pump and treatment well was installed on-site in late-October 2012 and is anticipated to be operational by May 2013
- **Establish administrative controls as required by the NJDEP and in cooperation with the Camden County Health Department to ensure that no new wells are drilled into the area impacted by DOWTHERM A™ constituents**
  - This is called a Classification Exception Area or CEA
- **Develop Remedial Action Work Plan to address groundwater impacts over the next 12 to 24 months**

# **OWENS CORNING IS COMMITTED TO...**

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INNOVATIONS FOR LIVING®

- Working to protect public health and safety
- Meeting our regulatory requirements
- Sharing information directly, and in a timely manner, with property owners participating in the well survey
- Providing project updates as appropriate to local and county officials and interested citizens
- Responding to questions and concerns quickly and with an earnest effort to reach a mutually-acceptable result
- Safeguarding, sustaining and improving the environment for the benefit of current and future generations



# WORKING WITH THE COMMUNITY



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**Owens Corning is committed to keeping well survey participants and the communities of Waterford Township, Berlin Township, Berlin Borough and Evesham Township informed of our plans and activities.**

If you have a question or concern, contact us directly and we'll do our best to provide you with the information you seek.

## Ongoing Community Outreach Efforts in 2012

- Regular presentations/meetings with elected officials and environmental commissions including but not limited to:
  - Waterford Twp. Council – Sept. 12, Oct. 24
  - Waterford Twp. Environmental Commission – Apr. 26, Jul. 25, Dec. 4
  - Evesham Twp. Environmental Commission – Aug. 13
  - Camden County Health Department – May 15, Aug. 2, Sept. 6
- One-on-one meetings with property owners
- Monthly Project Updates & mailings
- Regular updates to Project Website
- December 5 - Community Information Session
- July 26 - Community Information Session
- May 16 - Community Information Session
- April 16 - Advertisement in the *Courier-Post*
- April 5 - Public Notification Mailing

# WORKING WITH THE COMMUNITY



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## Questions?

**Call our Community Information Line at (888) 827-0983**

**Email us at: [OCBerlin@owenscorning.com](mailto:OCBerlin@owenscorning.com)**

Kelly Henry, Owens Corning Community Liaison, will be the first person to respond.

**Check out our website:  
[occommunityinformationsite.com](http://occommunityinformationsite.com)**