

Texas Instruments North Campus Facility

# Voluntary Cleanup Program Fact Sheet

**Texas Instruments is committed to environmental stewardship. This fact sheet outlines our environmental activities at the North Campus Facility.**

## Site Background — Texas Instruments North Campus

Texas Instruments North Campus Facility is located on the northeast corner of U.S. Highway 75 (Central Expressway) and Interstate Highway 635 (LBJ) in Dallas. The property encompasses approximately 300 acres. The company has manufactured semiconductors — devices that make electronics equipment work — at the facility since about 1958.

Texas Instruments (TI) historically used cleaning solvents at this site to clean parts during manufacturing operations. These compounds are commonly used by businesses throughout the world and were historically used as ingredients in many household products and can still be found in commercial cleaning products.

Accidental leaks occurred in some areas where TI historically used or stored solvents, which resulted in some solvents entering shallow soil and groundwater. Solvents entering groundwater is not an issue unique to Texas Instruments. Manufacturing facilities around the world are addressing these same issues and while many advances have been made, cleanup of affected groundwater often takes years to accomplish.

TI's first discovery of such impacts was in connection with some construction activity. The company promptly reported its findings to Texas environmental regulators.

After this discovery, as with several subsequent discoveries, TI took proper actions to:

- Drain and remove pipes and tanks where needed.
- Evaluate surrounding soils and areas of contamination and remove or remediate, as appropriate.

After these actions were completed, the remaining solvent levels in the groundwater were low. Since the discovery, TI has invested in new chemical management systems that are better equipped to safely handle, store and transport chemicals and prevent accidental leaks and spills. These include above-ground tanks with robust spill control, above-ground lines for transporting chemicals that are double-contained where needed, and level-sensing

devices to prevent overfill. Where possible, more environmentally-friendly chemicals have been introduced, and use of solvents has been reduced across the company, resulting in the elimination of Trichloroethylene (TCE) and Perchloroethylene (PCE) use at the TI North Campus facility.

### TI Action Plan

#### We found low levels of solvents and started cleaning them up

- TI promptly notified the state of Texas
- Drained and removed pipes and below ground tanks
- Evaluated soils and areas of contamination and removed or remediated as appropriate
- Installed groundwater interception and treatment systems for each of the three plume areas
- Conducted extensive testing to define conditions at the site and determine next steps
- Invested in new chemical management systems to prevent accidental leaks and spills
- Introduced more environmentally-friendly chemicals and reduced solvent use

## Groundwater Impacts and Solutions

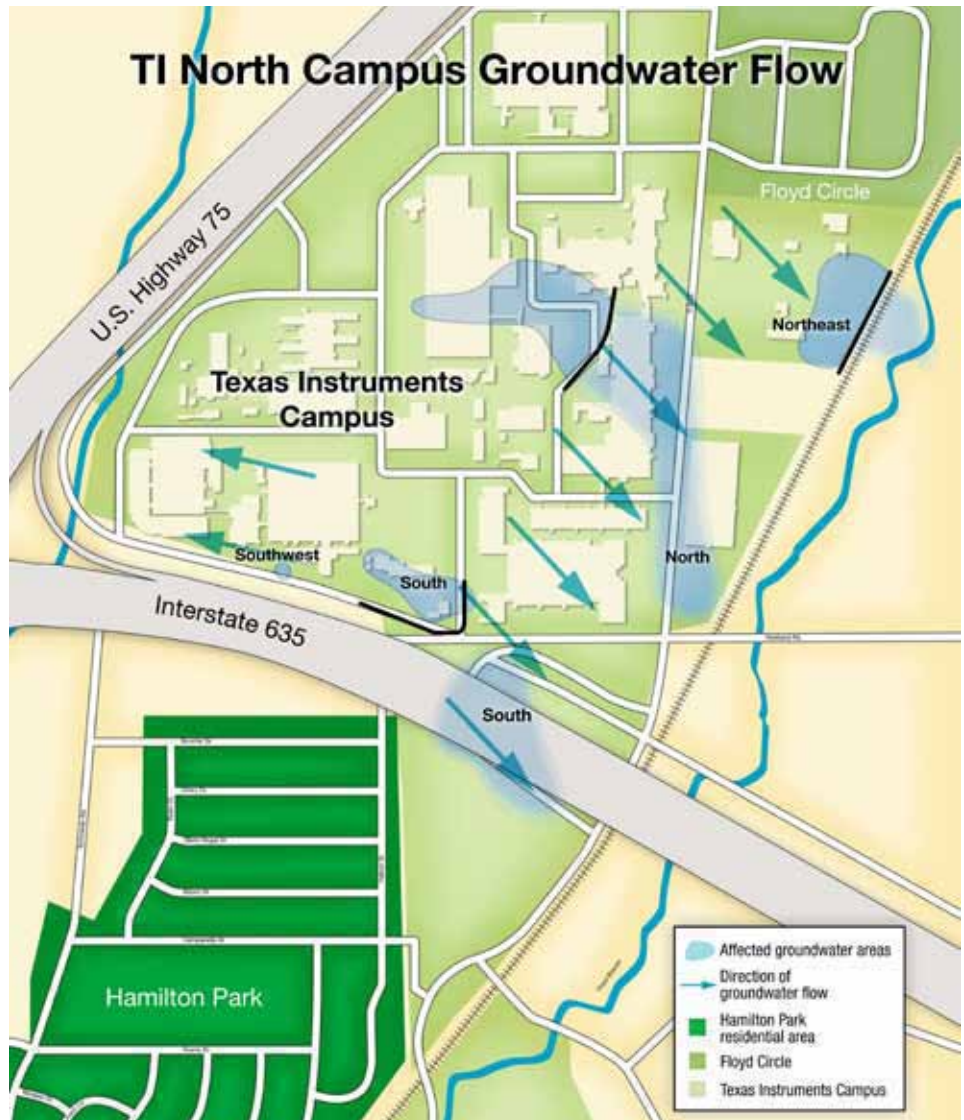
TI has identified four areas where affected soil came into contact with groundwater. The data shows that due to the underground geology in the area, one of these is a small localized area confined to TI property and the other three have moved towards TI Boulevard to the east and southeast of the facility, but not toward the Hamilton Park residential area.

In 1997, TI installed a groundwater cut-off and treatment system (known as an interceptor trench) in the south plume area to treat the very small amounts of solvents (about 1/10 drop per gallon) in the groundwater. This cuts off further migration past the trench. In 2010, TI added groundwater cut-off and treatment systems to its north and northeast plume areas.

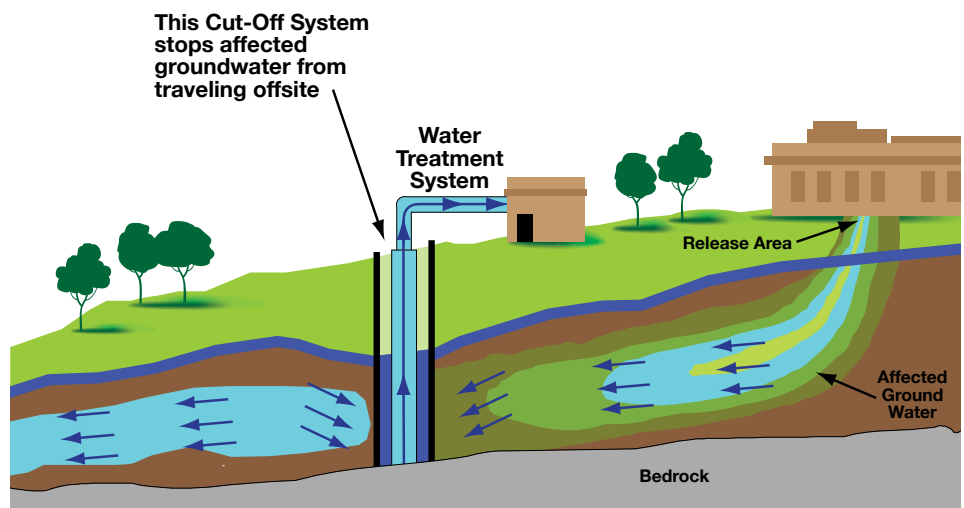
## Testing and Monitoring

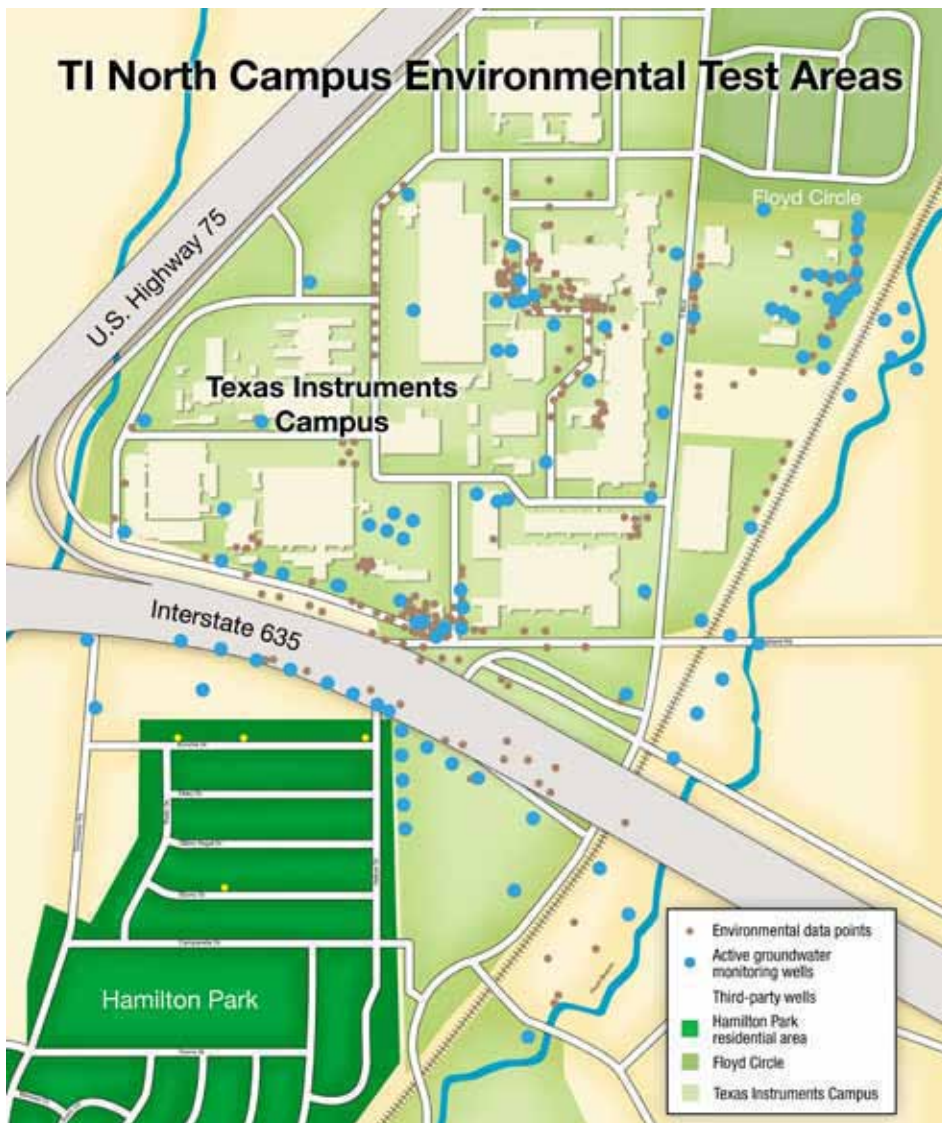
We have used a network of more than 100 wells installed over the years to evaluate and analyze the groundwater. In all these years, with thousands of groundwater samples, the labs have never detected solvent levels from samples collected in close proximity to Hamilton Park that would adversely impact the neighborhood or the current use of all nearby areas. Samples continue to be collected and analyzed regularly.

The cleanup measures TI implemented, along with natural processes that degrade and reduce chemical concentrations in groundwater, has helped reduce the levels of solvents in the groundwater. Samples taken from monitoring wells nearest to the Hamilton Park neighborhood have all tested below the Texas Commission on Environmental Quality's (TCEQ) most conservative applicable regulatory level (for residential areas).



## Typical Groundwater Cut-off and Treatment System





In 2007 TI sampled four groundwater monitoring wells installed by another party inside the northern part of the Hamilton Park neighborhood. The groundwater from the wells was collected and analyzed using industry accepted procedures and EPA's standard analytical method. No chemicals were detected in the water from these wells.

Based on extensive scientific testing and monitoring, with oversight by regulatory agencies, the data has shown there have been no adverse impacts to Hamilton Park, or to the current use of all nearby areas from our operations.

In all these years, with thousands of groundwater samples, the labs have never detected solvent levels from samples collected in close proximity to Hamilton Park that would adversely impact the neighborhood or the current use of all nearby areas.

### Voluntary Cleanup Program

TI has worked with the Texas regulatory agencies since discovery of these events and enrolled in the Voluntary Cleanup Program (VCP) after its inception. The TCEQ is responsible for overseeing TI's environmental activities to ensure appropriate investigation and cleanup actions are performed.

Under the VCP, TI has conducted a thorough investigation of the environmental conditions at the site. In November 2006, TI submitted an Affected Property Assessment Report to the TCEQ, which provided a detailed and comprehensive history of environmental activities, investigations and responsive measures conducted at the North Campus site. In early 2010, TI gained final approval of its Response Action Plans (RAP) from the TCEQ for its south, north, and northeast plume areas. These plans outline TI's ongoing and proposed cleanup measures for the groundwater plumes. In February 2011, TI also received approval of its RAP for the southwest plume area.

### Response Action Plan

#### Proposed Actions:

- A small localized area on the south side of the TI property is stable and not expanding. No offsite impacts are currently occurring and none are expected in the future. TI has installed an additional monitoring well in this location and ongoing monitoring will continue.
- For the south, north, and northeast plumes, TI plans to maintain its groundwater interception and treatment systems near source areas and conduct ongoing monitoring to measure plume reductions. Natural processes that degrade and reduce chemical concentrations in groundwater will continue to shrink the size of the affected areas beyond the interception systems. Additionally, although not required, TI will evaluate and implement localized cleanup techniques to speed up natural processes that break down solvents in groundwater and shrink the size of the plumes, where

feasible and necessary. Ongoing monitoring of these areas will continue, and onsite land use restrictions will be applied where appropriate. Following implementation of Response Action Plans, TI will seek the TCEQ's approval of a conditional certificate of completion.

### **What we are doing even though people and property are safe**

- Extensive testing shows no adverse impacts to neighborhoods or use of nearby areas
- Groundwater testing in the neighborhood did not detect any chemicals, confirming no levels of concern
- TI samples nearest the neighborhood have tested below most conservative regulatory levels for residential areas
- Maintain groundwater interception and treatment systems at the south, north, and northeast plume areas
- Evaluate and implement additional ways to enhance natural reduction of solvent concentrations where feasible and necessary
- TI is committed to ongoing monitoring

### **More Information**

To review a copy of the Response Action Plan, visit the Forest Green Library at 9015 Forest Lane, Dallas, Texas.

*Please provide comments in writing to:*

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