



Motorola 52nd St. Superfund Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • May 2011

The U.S. Environmental Protection Agency (EPA) invites you to a community meeting to learn about:

- » Soil Gas Sampling Investigation and Preliminary Findings – Janet Rosati, Project Manager, EPA
- » Overview of Soil Gas Human Health Screening Levels and Regional Screening Levels for Indoor Air – Gerry Hiatt, Toxicologist, EPA
- » Preliminary Information on Upcoming Indoor Air Investigation – Janet Rosati, EPA and Jenn McCall, Freescale Project Manager
 - › How areas to be sampled will be determined
 - › How sampling will be done
 - › Anticipated schedule

There will be short presentations on each topic from 6:15-7:00 p.m., followed by a poster session for one-on-one comments and questions.

Community Meeting/ Open House

Wednesday, June 8, 2011

6:15 p.m. – 8:15 p.m.

Brunson-Lee Elementary School
1350 North 48th Street
Phoenix, AZ 85008
Activities Room



The US Environmental Protection Agency (EPA) invites you to a community meeting to discuss the preliminary results of the soil gas sampling investigation at the Motorola 52nd Street Superfund Site and the upcoming plans for indoor air sampling in the area. Beginning on April 18, 2011, and continuing into May, soil gas samples are being collected in the residential area west of the former Motorola 52nd Street facility, including part of the Lindon Park neighborhood. These samples are being collected as the first step in re-evaluating whether there may be a **vapor intrusion** (see Figure 1) issue in the area.

To date, the study area in which contaminants have been detected, and where some additional sampling will occur, is bounded by immediately north of McDowell Road to the north, Roosevelt St. to the south, 50th Street to the east, and approximately State Route 143 to the west (see Fig. 2).

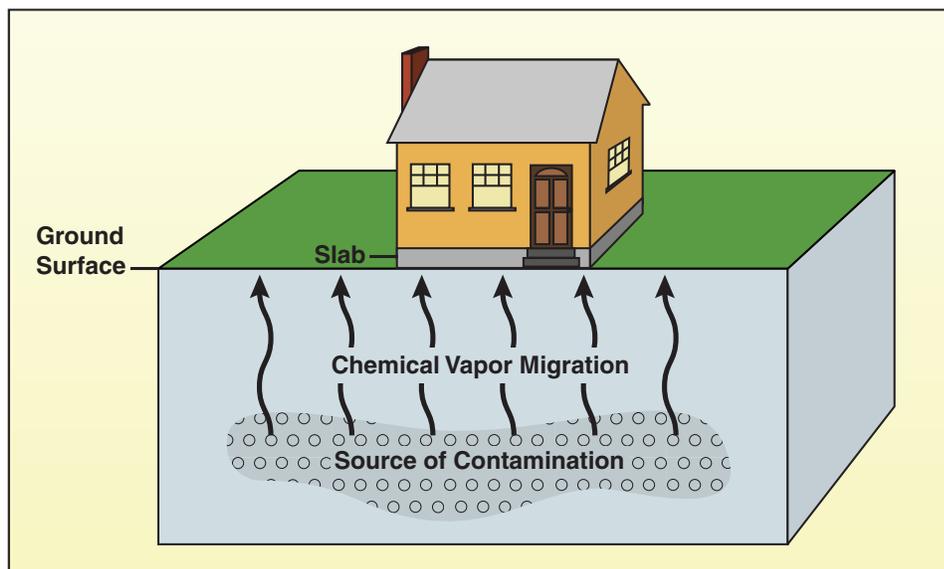


Figure 1: "Vapor intrusion" is the migration of chemicals that are in the subsurface that volatilize (become a gas) and can migrate into the air of overlying buildings. These chemicals include those called volatile organic compounds (VOCs), such as trichloroethene (TCE) and perchloroethylene (PCE) which are contaminants at the Motorola 52nd Street Site.

Preliminary Findings

Soil gas samples were collected at 15 feet and 5 feet below the ground surface along the public right-of-way throughout the neighborhood, as well as some locations at private properties such as schools, apartment complexes, office buildings, and other businesses. The soil gas results are still being collected and validated, and validated results will be available on the EPA website: www.epa.gov/region9/motorola52ndst, under "Fact Sheets," called "April/May 2011 Soil Gas Results" as soon as they are available. We are anticipating the first set of validated analytical results to be available after May 20.

Preliminary data show that soil gas levels exceed the soil gas screening level for either TCE, PCE, or both in some locations. With the exception of two locations, concentrations were higher at the 15 foot depth than at the 5 foot depth. This is because chemical concentrations in soil gas decrease as soil gas migrates away from the source of contamination in groundwater or bedrock. TCE was detected more frequently than PCE. Figures 2 and 3 show all of the sampling locations to date.

By sampling indoor air, outdoor air, and the soil gas under the slab foundation of a building, and comparing the results against each other, it can be determined whether it is likely that vapor intrusion is occurring. Freescale Semiconductor, Inc. is cooperating with EPA to quickly move forward in preparing a work plan for sampling indoor air in residences and buildings where there is a potential risk of vapor intrusion. We would like to share these plans along with the soil gas investigation preliminary results with the community.

Use of Soil Gas Human Health Screening Levels (SGHHSLs) in a Vapor Intrusion to Indoor Air Investigation

EPA uses Soil Gas Human Health Screening Levels to evaluate soil gas sample results and to determine next steps. The assumptions used to calculate SGHHSLs are conservative and therefore protective of human health. If soil gas results are less than the corresponding SGHHSLs, then no further investigation of the vapor intrusion to indoor air pathway is needed. If soil gas results are equal to or above the corresponding SGHHSLs, the next step is to sample indoor air. Results above SGHHSLs do not necessarily mean that indoor air is contaminated above unsafe levels; they simply mean further testing should be performed. Most indoor air comes from outdoor air and any soil gas that might enter a building will be diluted as a result.



Figure 2: Preliminary results of the soil gas sampling as of May 13, 2011 (15 feet deep)

What does it mean if vapor intrusion is occurring?

After indoor air, outdoor air, and subslab samples are taken in select areas, a careful analysis will be performed to determine whether vapor intrusion is likely to be occurring. If the investigation shows that vapor intrusion is occurring, this means that very low concentrations of VOCs from the sub-surface are collecting in indoor air. This does not pose a risk in the short term, but it could pose a risk to human health if someone breathes this air for a very long period of time (i.e., 24 hours a day, 7 days a week for 30 years), therefore it is important to eliminate the problem. This can be done easily through the installation of a sub-slab depressurization system, which vacuums gas from underneath a building and expels it to the outside. These systems are very effective in preventing vapors from entering homes. If vapor intrusion is found to be occurring in a home or building, these systems will be installed at no cost to the resident and/or owner.



Figure 3: Preliminary results of the soil gas sampling as of May 13, 2011 (5 feet deep)

Motorola 52nd St. Superfund Site Background

The Motorola 52nd Street Superfund Site is located in the City of Phoenix, Maricopa County, Arizona.

Motorola Semiconductor Products Sector (Motorola) owned and operated the 52nd Street facility from 1956 to 1999. As part of its electronics manufacturing operation, Motorola used solvents, including VOCs such as TCE and PCE to clean and degrease parts and equipment. Investigations in the 1980s revealed groundwater contamination at the 52nd Street facility and to the west. In 1989 the site was added to the Superfund National Priorities List, or NPL. Freescale (formerly a part of Motorola) has been operating a groundwater extraction and treatment system since 1992 to contain and treat the contaminated groundwater. Groundwater treatment is expected to continue for many years.

Several soil gas investigations were conducted at the 52nd Street Facility and throughout the neighborhood to the west in the 1980s and 1990s as part of the overall site investigation.

Why is this investigation happening now?

EPA's understanding of both (1) the health risks of TCE and PCE and (2) how these VOCs volatilize and can enter buildings overlying contamination has evolved. Technology for measuring VOCs more accurately has also improved. Groundwater and bedrock underneath the neighborhood in the Study Area is contaminated with TCE, PCE and other VOCs. Therefore, under EPA oversight, Freescale is conducting this soil gas investigation to re-evaluate whether there is a need to conduct indoor air sampling.

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For additional information, contact:

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Information Repositories:

Community members can review site information at the following repositories or on the EPA or ADEQ websites at:

www.epa.gov/region09/Motorola52ndSt

Burton Barr Public Library

1221 N. Central Avenue
(602) 262-4636

ADEQ Records

Management Center
(M-F 8:30 am - 4:30 pm)
1110 W. Washington St.
(602) 771-4380

Phoenix Public Library, Saguaro Branch

(Information primarily
stored on CD's)
2802 North 46th Street
(602) 262-6801

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