



## AIR QUALITY Remedial Investigation Results

### Algona and Auburn's Air Quality is Safe from Contaminated Groundwater Vapor

#### Remedial Investigation Determined Algona and Auburn's Air Quality Is Not at Risk from Boeing Auburn Site

The Department of Ecology (Ecology) oversaw a comprehensive investigation of contamination, called a Remedial Investigation (RI), at the Boeing Facility (Facility). Since 2003, industrial, commercial and residential air quality has been evaluated as part of that investigation. Based on those findings, exposure to volatile organic compounds (VOCs) is not a health concern at the site. Ecology is not requiring further indoor air evaluation, and air quality will not be investigated further in the Feasibility Study (FS).

#### Ecology Oversaw the Remedial Investigation of Air Quality

Air was tested to determine if VOCs that were used at the Facility were affecting the air quality. The most frequently found VOCs at the site include trichloroethene (TCE) and its breakdown product, vinyl chloride (VC). While some detections of TCE were found in indoor air, it was concluded that the concentrations do not pose a health risk. No VC was detected in indoor air samples.

#### Residences Are Not at Risk for Vapor Intrusion

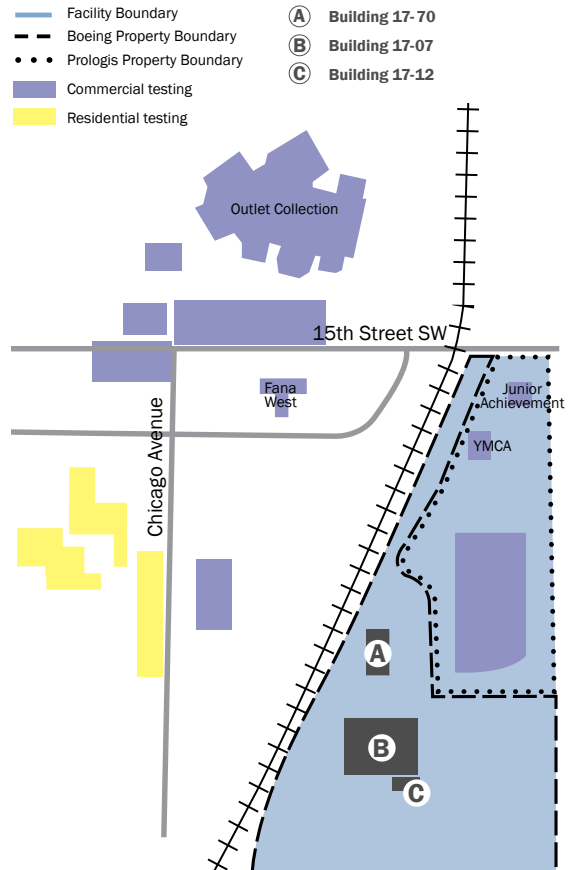
Vapor intrusion from groundwater contamination is not the source of limited detections of TCE in homes tested. In northeast Algona, two phases of indoor air testing was done in homes in areas where contamination was found in shallow groundwater. The initial groundwater testing was done in 2012 and 2013. Ecology required the Boeing Company (Boeing) to offer testing for vapor intrusion at 24 homes in two phases: Phase I during summer 2013 and phase 2 during the following winter.

Results from the Phase I and Phase II vapor intrusion sampling events concluded that vapor intrusion could not be identified as the source of the limited detections of TCE at the homes tested. In addition, exposure to VOCs was determined to not be a health concern in residential Algona. Therefore, no further action was needed to assess conditions or reduce exposure in any of the residences.

### Provide Your Comments on the Draft RI Report: **MARCH 8 - MAY 8, 2017**

You can provide comments on the draft RI Report online by visiting:  
**BoeingAuburn.participate.online**

Ecology wants your feedback about the completeness of the site investigation.



## Boeing Donated Property to YMCA and Junior Achievements

In 2003, Boeing donated a portion of their property on the north end of the Facility to the YMCA and Junior Achievement. As a part of the property transfer, a separate soil gas study was performed to determine if there was potential for impacts to indoor air from contaminated groundwater. Ecology determined that VOC concentrations in the groundwater would not lead to concentrations in air above health-based action levels. From 2004 to 2006, Boeing worked with Ecology to conduct an Interim Remedial Action to clean up residual TCE from the source location of the TCE south of the YMCA and Junior Achievement property.

## Testing On and Off Boeing Property Indicate Air Quality Is Not Affected

The overall results from the air quality investigations of groundwater, soil gas and indoor air concluded the air is safe to breathe, even in areas where TCE was detected. The table below provides more detail into these investigations.

	Groundwater Testing Tier 1	Soil Gas Testing Tier 1	Indoor Air Testing Tier 2	Details
On Boeing Property	Building 17-07	●	▲	Soil gas samples exceeded screening levels in several areas at this building. Follow-up indoor air sampling did not detect TCE or VC.
	Building 17-12	●	●	Soil gas samples did not show TCE or VC in concentrations above health-based screening levels.
	Building 17-70	●	■	TCE and VC were not detected in indoor air or in soil gas.
Off Boeing Property	Outlet Collection	●	●	Traces of TCE and VC were detected in groundwater and soil samples. Follow-up indoor air sampling concluded that the concentrations found do not pose a health risk.
	Prologis	●	●	TCE and VC were not detected in indoor air.
	Fana West	●	●	TCE and VC were not detected in indoor air.
	YMCA	●	●	TCE and VC were detected in indoor air, but they were below health-based screening levels.
	Junior Achievement	●	●	TCE and VC were not detected in indoor air.

- Detections of TCE and/or VC were determined, but are below health-based screening levels.
- ▲ Detections of TCE and/or VC were determined and are above health-based screening levels.
- No detections of TCE and/or VC were determined.
- ◆ No data was collected - groundwater and soil gas concentrations were below health-based screening levels.

Якщо ви хочете отримати інформацію про забруднення ґрунтових вод у Алгоні та Оберні українською мовою, будь ласка, зателефонуйте (425) 649-7181, щоб поговорити зі співробітником Департаменту Екології та перекладачем.

ਅਲਗੋਨਾ (Algona) ਅਤੇ ਔਬਰਨ (Auburn) ਵੱਲੋਂ ਭੂਮੀਗਤ ਪਾਣੀ ਦੇ ਦੂਸ਼ਣ ਬਾਰੇ ਪੰਜਾਬੀ ਵੱਲੋਂ ਹੋਰ ਜਾਣਕਾਰੀ ਲਈ, ਕਰਿਪਾ ਕਰਕੇ ਚੰਗਾਰਿਦਾ ਵਰਿਗਿਅਨ (Ecology) ਦੇ ਸਟਾਫ ਮੈਂਬਰ ਅਤੇ ਇੱਕ ਦੁਭਾਸ਼ੀਏ ਨਾਲ ਗੱਲ ਕਰਨ ਲਈ (425) 649-7181 ਤੇ ਫੋਨ ਕਰੋ।

Para sa higit pang impormasyon tungkol sa pagkakontamina ng groundwater sa Algona at Auburn na nasa wikang Tagalog, mangyaring tumawag sa (425) 649-7181 upang makipag-usap sa isang miyembro ng kawani ng Ecology at sa isang interpreter.

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at (425) 649-7000 or visit [www.ecy.wa.gov/accessibility.html](http://www.ecy.wa.gov/accessibility.html). Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at (877) 833-6341.

**This fact sheet should be accompanied by the Remedial Investigation Folio and is one of four fact sheets relating information about the investigation's findings.**

## Key Terms

### Facility

The Boeing Auburn Fabrication Facility, also known as the Boeing property.

### Feasibility Study (FS)

A detailed study identifying and evaluating cleanup alternatives.

### Model Toxics Control Act (MTCA)

Washington's pollution cleanup law for contaminated sites.

### Plume

The area covered by the spread of contaminated groundwater.

### Remedial Investigation (RI)

An investigation of a site's contamination.

### Screening Level

Concentration levels of contaminants used early on in an investigation when knowledge about the contaminants and impacts is low (e.g. routes of exposure are unknown, number of contaminants are unknown). If screening levels are exceeded, then a more detailed and focused investigation is made.

### Site

The Boeing property, plume and all affected areas.

### Soil Gas

The air between soil particles.

### Tier I Investigation

An investigation that evaluates whether chemicals in groundwater or soil gas occur at concentrations that could pose a vapor intrusion threat to indoor air quality. If they do pose a threat, a Tier II assessment is done.

### Tier II Investigation

An investigation that evaluates specific buildings to determine if chemicals are present in indoor air above state of Washington cleanup levels.

### Trichloroethene (TCE)

An industrial degreaser and volatile organic compound.

### Vapor Intrusion

Occurs when vapor forming chemicals (VOCs) migrate from a subsurface source (groundwater) into an overlying building through cracks or other openings in building foundations.

### Vinyl Chloride (VC)

A breakdown product of TCE.

### Volatile Organic Compound (VOCs)

Compounds that easily evaporate from water into air at normal air temperatures. Examples of household products that contain these compounds include gasoline, dry cleaning fluid, solvents and paint thinners.