

Should Keyport Residents Have Their Property Tested for Contamination?

I have been asked repeatedly whether residents in Keyport and the surrounding area should have their properties tested because of concerns surrounding the Aeromarine site and the former Keyport Sanitary Landfill. People understandably want to know whether their yard, soil, drinking water or groundwater can be tested, whether testing can be done for free, what contaminants should be tested for, and how much private testing might cost.

The answer is that there are several ways to have a property tested. However, there is an important point to understand from the beginning:

There is no single inexpensive test that can simply tell you that your entire property is “clean” or “contaminated.”

Testing soil for one substance such as lead is relatively inexpensive. Conducting a comprehensive environmental investigation looking for heavy metals, PCBs, volatile organic compounds, petroleum-related chemicals, PFAS and other contaminants is considerably more complicated and expensive.

That is why I do not believe residents should immediately begin spending hundreds or thousands of dollars without first understanding what kind of testing is appropriate and what government agencies may already be doing.

The Free Option Should Come First

The New Jersey Department of Environmental Protection is presently investigating conditions associated with the Keyport Sanitary Landfill at the Aeromarine Industrial site.

NJDEP has stated that its immediate objective is to determine the presence and extent of contamination and to determine whether there is a pathway through which people could actually be exposed.

The State has been reviewing historical environmental information as well as newer soil, groundwater, soil-gas and surface-water information associated with the site.

NJDEP has said that, to date, it has not identified evidence of a human exposure pathway from the landfill. However, the investigation is continuing, and additional environmental data are being evaluated.

A resident who has a particular reason to be concerned about his or her property should contact NJDEP and ask a very direct question:

“Can my residential property be considered for soil or groundwater sampling as part of the Aeromarine investigation?”

Residents with environmental questions concerning the site can contact the NJDEP Division of Solid Waste Management at 609-633-1418.

There is an important distinction regarding free testing.

NJDEP does not normally provide free drinking-water testing simply because an individual homeowner asks for it. Ordinarily, a homeowner who independently wants drinking water analyzed must pay a certified laboratory.

However, that is different from environmental testing conducted as part of an official contaminated-site investigation. If NJDEP or the party legally responsible for investigating a contaminated site determines that sampling of a nearby residential property is necessary, that environmental sampling can be performed at no cost to the property owner.

In other words, residents should certainly ask whether their property should be included, but we should not tell people that NJDEP will automatically test every property for free upon request. The decision would depend upon the environmental evidence and the scientific needs of the investigation.

Keyport residents can also contact the Monmouth Regional Health Commission No. 1 at 732-493-9520 and ask for environmental-health guidance concerning residential soil or water testing.

NJDOH and the Public Health Question

The New Jersey Department of Health is also involved in the larger Keyport issue.

NJDOH has stated that it intends to review environmental sampling data and evaluate the possible public-health implications of environmental exposures.

There is also a federal avenue through the Agency for Toxic Substances and Disease Registry, or ATSDR.

Public-health assessments can be conducted when environmental agencies or local health officials request an evaluation, and community members may also petition ATSDR for an evaluation.

This is another reason why good environmental sampling data are so important. Before anyone can responsibly determine whether contamination is affecting people's health, we first have to determine what contaminants are present, where they are located, how much is present, and whether people are actually being exposed to them.

Testing Your Own Yard

A homeowner who does not want to wait for the larger investigation can certainly arrange private soil testing.

There are several levels of testing.

One of the least expensive options is available through the Rutgers Soil Testing Laboratory.

Rutgers currently offers lead screening for \$18, and if lead is the only analysis requested, there is an additional \$5 soil-processing fee, making the total approximately \$23 per sample.

That can be a useful and inexpensive first step for someone concerned about soil in a vegetable garden, children's play area, an area where questionable fill may have been placed, or another specific portion of the property.

Rutgers also offers a basic soil fertility test for approximately \$20, but residents should understand that a fertility test is primarily designed to tell you about nutrients and conditions for growing plants.

A \$20 fertility test is not an environmental pollution investigation.

Rutgers currently analyzes lead as its primary residential soil-contaminant screening service.

Rutgers itself recommends consulting a certified environmental laboratory when homeowners are concerned about other environmental contaminants.

What Should We Test For?

This is where testing becomes more complicated.

If the concern is possible contamination associated with an old industrial property or landfill, a professional may recommend looking for some combination of:

- Lead
- Arsenic
- Other heavy metals
- PCBs
- Volatile organic compounds, or VOCs
- Benzene
- Vinyl chloride
- Petroleum-related contaminants
- Semi-volatile organic compounds
- PFAS, when appropriate

That does not mean that every homeowner should automatically order every one of these tests.

The contaminants that should be analyzed depend upon the history of the site, known contaminants, possible migration pathways, the location of the property and what question the homeowner is trying to answer.

This is why I recommend speaking with an environmental professional or laboratory before ordering an expensive package of tests.

For a serious investigation, a homeowner may also wish to consult a Licensed Site Remediation Professional, commonly called an LSRP, or another qualified environmental consultant familiar with New Jersey contamination standards.

Use a Certified Environmental Laboratory

When testing for environmental contamination, residents should use a laboratory certified by the State of New Jersey for the particular type of analysis being performed.

NJDEP maintains a current searchable directory of laboratories certified for such things as drinking water, soil and hazardous-waste analysis, PFAS and other environmental contaminants.

Anyone considering private testing can search online for:

NJDEP Certified Environmental Laboratories

When speaking with a laboratory, I would tell them something like this:

“I am a homeowner in Keyport concerned about possible environmental contamination associated with the Aeromarine/Keyport landfill investigation. I would like to know what soil or water testing would be appropriate for my property and what it would cost.”

Ask for a written estimate before ordering the testing.

How Much Can Environmental Testing Cost?

Costs can vary enormously.

The difference between analyzing one soil sample for lead and conducting a comprehensive environmental investigation of an entire residential property can amount to thousands of dollars.

As a general guide:

Type of Testing	Approximate Cost
Rutgers soil lead screening	About \$23 per sample
Rutgers basic soil fertility test	About \$20 — not a pollution test
A limited drinking-water analysis for an individual contaminant	Often tens of dollars, depending on the contaminant
PFAS drinking-water analysis	Approximately \$300 per sample has been estimated by NJDEP
Several groups of environmental contaminants in soil	Potentially several hundred dollars per sample
Multiple locations around a yard with broad laboratory analysis	\$1,000 or more is quite possible
Comprehensive testing of a private well under New Jersey's Private Well Testing Act	NJDEP currently estimates an average of roughly \$1,200–\$1,500
Installation and sampling of groundwater monitoring wells	Potentially thousands of dollars

These figures should be considered general estimates rather than quotes.

The actual price depends upon the laboratory, number of samples, contaminants analyzed, sampling method, whether an environmental consultant is involved, and whether formal **chain-of-custody procedures** are necessary.

This is precisely why I would not suggest that 100 Keyport homeowners independently spend \$1,000 apiece without first determining whether a coordinated investigation would give us better information.

Where You Take the Soil Sample Matters

Another important issue is where the sample is collected.

You cannot necessarily take one scoop of dirt from the middle of your lawn and assume that the result represents your entire property.

A sample collected next to the house could produce a completely different result from one collected near a drainage area, creek, garden, low-lying section of the property or an area where fill was historically deposited.

Depth matters as well.

A sample of the upper couple of inches of soil answers a different environmental question from a sample collected several feet below the surface.

For example, Rutgers' residential lead guidance recommends shallow sampling when evaluating ordinary surface-soil lead exposure because the concern is contact with soil at the surface.

But if we are investigating whether contamination migrated underground from another location, subsurface sampling may be necessary.

That is why a serious environmental investigation uses a sampling plan rather than simply choosing locations randomly.

What About Keyport's Drinking Water?

This is a particularly important distinction.

Most Keyport residents receive public drinking water.

NJDEP has stated that the public drinking-water wells serving the Borough of Keyport are not located in the vicinity of the landfill. Those wells are located in confined aquifers, which NJDEP says would not be readily susceptible to shallow surface contamination associated with a landfill.

Keyport also purchases additional water from New Jersey American Water.

Public drinking water is routinely monitored under state and federal safe-drinking-water requirements.

That is reassuring information.

Nevertheless, a homeowner certainly has the right to independently test the water coming from his or her own faucet.

That can be useful because testing at the faucet can identify certain problems that might arise inside an individual home, including lead associated with plumbing materials.

Public-water-system testing provides a picture of the overall water system. It cannot necessarily tell you what is happening at every individual faucet in every individual house.

Tap Water Is Not the Same as Groundwater

This distinction is extremely important.

Testing water from your kitchen faucet does not tell you whether shallow groundwater beneath your backyard is contaminated.

They are two completely different questions.

Your faucet may be supplied by a regulated public water system drawing from a deep confined aquifer or another water source.

The groundwater beneath the surface of your backyard may be part of an entirely different shallow groundwater system.

If the question is:

“Is the water beneath my property contaminated?”

then a scientist may need to install or sample a properly located groundwater monitoring well.

That is considerably more complicated than filling a bottle from a kitchen faucet.

The same caution applies to water from a puddle, sump pump, drainage ditch or creek. Such samples can sometimes provide useful environmental information, but they are not automatically representative of groundwater beneath a property.

What If You Have a Private Well?

Anyone in the area who actually obtains drinking water from a private well is in a different situation from someone receiving Keyport public water.

Private-well water should be tested by an NJDEP-certified drinking-water laboratory.

New Jersey's Private Well Testing Act requires testing of potable private wells when covered properties are sold. Landlords of properties supplied by private wells are also subject to periodic testing requirements.

The State's required private-well testing program examines numerous parameters, and New Jersey now requires testing for three PFAS compounds — PFOA, PFOS and PFNA — for private wells subject to the Private Well Testing Act.

The required test is of the untreated well water, even when a treatment system has already been installed.

NJDEP currently estimates that the complete testing required under the Private Well Testing Act averages approximately \$1,200 to \$1,500, although actual laboratory prices vary.

A homeowner who has a private well does not have to wait until a property is being sold to have the water tested. Someone concerned about PFAS or other contaminants in private-well water can voluntarily arrange testing through a certified laboratory.

If a resident has a private drinking-water well near an area of suspected environmental contamination, I would make sure the laboratory understands where the property is located and why the testing is being requested.

Don't Simply Scoop Up Dirt and Send It Somewhere

There is a temptation when people become concerned about pollution to grab a handful of dirt, put it in a bag and send it to the first laboratory they find.

That may produce a laboratory number, but it may not answer the environmental question we are trying to answer.

Proper environmental sampling considers:

Where was the sample taken? How deep was it? What was the history of that location? What contaminants are we looking for? Was the correct container used? Was the sample properly preserved? How quickly did it reach the laboratory? Was proper chain of custody maintained?

These things become particularly important if the results are ever going to be used by regulators, attorneys, property buyers or environmental professionals.

What I Believe We Should Do in Keyport

My preference would be to avoid having dozens or hundreds of homeowners independently spend large amounts of money on scattered testing that may ultimately be difficult to compare.

I believe we should ask for something better:

A coordinated, professionally designed, government-funded residential sampling program if the environmental evidence indicates that residential sampling is warranted.

Properties could be selected scientifically at varying distances and directions from Aeromarine.

Some locations could be close to the landfill. Others could be farther away and used for comparison.

Properties near waterways, drainage routes, low-lying areas, locations that historically flooded, or other scientifically significant areas could also be considered.

Samples could then be collected according to the same procedures, analyzed using the same laboratory methods, and tested for the same agreed-upon contaminants.

Where scientifically justified, shallow groundwater could also be investigated.

That would produce something much more meaningful than 50 homeowners producing 50 unrelated laboratory reports.

It could eventually allow investigators to create a geographic picture showing whether a particular contaminant is present and whether concentrations increase, decrease or disappear as we move away from the Aeromarine site.

That is the kind of science that can help answer the questions residents are asking.

What Should Homeowners Do Today?

For someone who simply wants an inexpensive first look at the soil around a home, the approximately \$23 Rutgers lead screening is a reasonable option.

If there is concern about multiple industrial or landfill-related contaminants, I would not blindly order tests. Contact an NJDEP-certified environmental laboratory or qualified environmental professional, explain the situation, and ask exactly what testing they recommend.

If you are concerned about your drinking water, determine first whether you receive Keyport public water or water from a private well. The appropriate testing is different.

If you are specifically concerned that contamination from Aeromarine may have migrated onto your property, contact NJDEP before spending substantial amounts of money and ask whether your property should be evaluated as part of the ongoing investigation.

And I believe we as a community have every right to continue asking a larger question:

Why should individual Keyport residents have to spend thousands of dollars proving whether contamination from a regulated landfill did — or did not — reach their homes?

If scientific evidence indicates that residential properties need to be investigated, then I believe that investigation should be professionally designed, consistently performed and paid for as part of the environmental investigation — not left to individual residents to figure out on their own.

People deserve reliable answers based upon good science.

They should know what was tested, where it was tested, what was found, whether it presents an exposure pathway, and what should be done about it.

That is ultimately what we should be working toward.

John R. Schneider