

Receipt Of Environmental Disclosure

By my signature below, I acknowledge receipt of the Environmental Risk Assessment report prepared by the gradient Corporation dated September 10, 2003

Witness

Buyer

Witness

Buyer

Date

To: Winding Hills Agents & Customers
From: Michael J. Greene, Managing Partner UAP
Re: Environmental Disclosure
Date: March 1, 2005

Background information:

As with much of Pennsylvania, the ground presently being developed for the Winding Hills development has an agricultural history. The Winding Hills development, in fact, is still a production orchard. Agricultural residuals are a fact of life in farmed areas. Due to the nature of orchard activities, the ground contains residual from the use of pesticides and rodenticides (rodent control chemicals) necessary in a commercial orchard. Forty plus years ago, arsenic was used as a rodenticide.

To determine if the orchard operation posed any potential adverse health effects to future residents, a comprehensive Environmental Site Assessment was completed by BL Industries in January 2002. The results of that study were subsequently forwarded to a nationally recognized environmental consulting firm; Gradient Corporation of Cambridge, Massachusetts for risk assessment. Gradient's credentials can be found at <http://www.gradientcorp.com>

Attached is a copy of the Gradient report dated September 10, 2003. With respect to both liability and marketing, it is important that you come to have a complete understanding of the risk assessment outlined in that report. The Gradient letter will be incorporated in the Planned Community documents.

To help you and prospective residents comprehend the risks associated with agricultural residuals on the Winding Hills development, Gradient compared the arsenic risk to a more common risk known as Radon. Radon is a naturally occurring gas present in both interior and exterior air throughout the USA. According to U.S. EPA, the average indoor air contains 1.2 pCi/L of Radon. At this level, EPA estimates 2 out of 1000 non-smoking people will contract lung cancer over a lifetime. That equates to 200 incidences of lung cancer per 100,000 population. See attached report found @ www.epa.gov/radon/healthrisks.html.

Most important, unlike Radon gas, which you breathe, arsenic must be ingested in order to pose a health risk. Due to the low concentration levels that exist at our site and throughout the Commonwealth, one must ingest soils (containing arsenic) on a regular basis over a long period of time for the risk to surface. According to Gradient, risk begins when the ingestion rate is 100 mg of soil per day for 250 days per year for six years in childhood AND 50 mg of soil per day for 250 days per year for 24 years of adulthood.

When ingesting soils that contain arsenic at 12 mg/kg, the estimated incremental cancer risk is one (1) person per 100,000 population. By comparison, the indoor air we breathe poses a risk that is 200 times greater than the risk from arsenic ingestion at 12 mg/kg. At 24 mg/kg, the risks rise to 2 per 100,000. At 120 mg/kg, the risks rise to 20 per 100,000. The average background level at Winding Hills is 12.6 mg/kg.

Assuming one could actually eat the requisite amount of soil for the noted time, the data indicates that less than 2 people out of a population of 100,000 would be at risk with the documented levels, 12.6 mg/kg, the Winding Hill average.

In summary, ingesting arsenic at the low concentration rates found at Winding Hills and throughout the Commonwealth poses minimal health risk. HOWEVER, disclosure is essential so each potential buyer can draw their own conclusions. You must provide a copy of this memo to all potential buyers, and refer them to me personally should they have any further concern.

cc: Jerry Duffie, Esq.
Eric Clancy



Indoor Air - Radon

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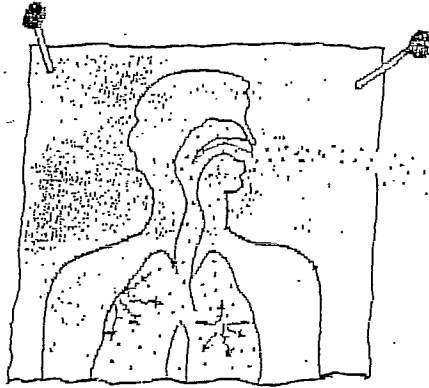
Radon Resistant New Construction (RRNC)

EPA Map of Radon Zones

Radon in Drinking Water

Health Risks

Why is radon the public health risk that it is? EPA estimates that about 20,000 lung cancer deaths each year in the U.S. are radon-related. Exposure to radon is the second leading cause of lung cancer after smoking. Radon is an odorless, tasteless and invisible gas produced by the decay of naturally occurring uranium in soil and water. Radon is a form of ionizing radiation and a proven carcinogen. Lung cancer is the only known effect on human health from exposure to radon in air. Thus far, there is no evidence that children are at greater risk of lung cancer than are adults.



Radon in air is ubiquitous. Radon is found in outdoor air and in the indoor air of buildings of all kinds. EPA recommends homes be fixed if the radon level is 4 pCi/L (pico Curies per Liter) or more. Because there is no known safe level of exposure to radon, EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L. The average radon concentration in the indoor air of America's homes is about 1.3 pCi/L. It is upon this level that EPA based its estimate of 20,000 radon-related lung cancers a year upon. It is for this simple reason that EPA recommends that Americans consider fixing their homes when the radon level is between 2 pCi/L and 4 pCi/L. The average concentration of radon in outdoor air is .4 pCi/L or 1/10th of EPA's 4 pCi/L action level.

For smokers the risk of lung cancer is significant due to the synergistic effects of radon and smoking. For this population about 62 people in a 1,000 will die of lung-cancer, compared to 7.3 people in a 1,000 for never smokers. Put another way, a person who never smoked (never smoker) who is exposed to 1.3 pCi/L has a 2 in 1,000 chance of lung cancer; while a smoker has a 20 in 1,000 chance of dying from lung cancer. Figure A compares the risks between smokers and never smokers; smokers are at a much higher risk than never smokers, e.g., at 8 pCi/L the risk to smokers is six-times the risk to never smokers.

The radon health risk is underscored by the fact that in 1988 Congress added Title III on Indoor Radon Abatement to the Toxic Substances Control Act. It codified and funded EPA's then fledgling radon program. Also that year, the Office of the U.S. Surgeon General issued a warning about radon urging Americans to test their homes and to reduce the radon level when necessary (U.S. Surgeon General).

Unfortunately, many Americans presume that because the action level is 4 pCi/L, a radon level of less than 4 pCi/L is 'safe'. This perception is altogether too common in the residential real estate market. In fact, we should be concerned with the greatest risk. For

For More Information, See Also...

[Radon Frequently Asked Questions](#)

[The Updated Radon Risk Assessment](#)

[Biological Effects of Ionizing Radiation \(BEIR\) VI Report: "The Health Effects of Exposure to Indoor Radon"](#)

[Radon Publications](#)

[Citizen's Guide to Radon](#)

[Home Buyer's and Seller's Guide to Radon](#)

[Consumer's Guide to Radon Reduction](#)

Technical Support Document to the 1992 Citizens Guide - EPA 400-R-92-011, May 1992. Copies can be ordered from IAQINFO 1-800-438-4318.



most Americans, their greatest exposure to radon is in their homes; especially in rooms that are below grade (e.g., basements), rooms that are in contact with the ground and those rooms immediately above them.

It's never too late to reduce your risk of lung cancer. Don't wait to test and fix a radon problem. If you are a smoker, stop smoking. Consider quitting. Until you can quit, smoke outside and provide your family with a smoke-free home (www.epa.gov/smokefree). Take the Smoke-free Home Pledge today!

Radon Risk If You Smoke

Radon Level	If 1,000 people who smoked were exposed to this level over a lifetime*...	The risk of cancer from radon exposure compares to**...	WHAT TO DO: Stop smoking and...
20 pCi/L	About 260 people could get lung cancer	250 times the risk of drowning	Fix your home
10 pCi/L	About 150 people could get lung cancer	200 times the risk of dying in a home fire	Fix your home
8 pCi/L	About 120 people could get lung cancer	30 times the risk of dying in a fall	Fix your home
4 pCi/L	About 62 people could get lung cancer	5 times the risk of dying in a car crash	Fix your home
2 pCi/L	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing between 2 and 4 pCi/L
1.3 pCi/L	About 20 people could get lung cancer	(Average indoor radon level)	(Reducing radon levels below 2 pCi/L is difficult.)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	

Note: If you are a former smoker, your risk may be lower.
 * Lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003).
 ** Comparison data calculated using the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Reports.

Radon Risk If You've Never Smoked

Radon Level	If 1,000 people who never smoked were exposed to this level over a lifetime*...	The risk of cancer from radon exposure compares to**...	WHAT TO DO:
20 pCi/L	About 36 people could get lung cancer	35 times the risk of drowning	Fix your home
10 pCi/L	About 18 people could get lung cancer	20 times the risk of dying in a home fire	Fix your home
8 pCi/L	About 15 people could get lung cancer	4 times the risk of dying in a fall	Fix your home
4 pCi/L	About 7 people could get lung cancer	The risk of dying in a car crash	Fix your home
2 pCi/L	About 4 person could get lung cancer	The risk of dying from poison	Consider fixing between 2 and 4 pCi/L


1.3 pCi/L	About 2 people could get lung cancer	(Average indoor radon level)	(Reducing radon levels below 2 pCi/L is difficult.)
0.4 pCi/L		(Average outdoor radon level)	

Note: If you are a former smoker, your risk may be higher.
 * Lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003).
 ** Comparison data calculated using the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Reports.

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Last updated on Wednesday, February 2nd, 2005
 URL: <http://www.epa.gov/radon/healthrisks.html>



September 10, 2003

Mr. Eric Clancy
Orchard Development Group LLC
Ste. 200, 2000 Technology Parkway
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Re: Glaize Orchard Site arsenic risks

Dear Mr. Clancy:

This letter summarizes arsenic concentrations in soil collected from the Glaize Orchards Site in Upper Allen Township, Cumberland County Pennsylvania, and compares these concentrations to expected natural background levels and to Pennsylvania risk criteria for residential settings. It is my conclusion that arsenic concentrations in soil currently observed at the site are approximately equivalent to natural background levels found in Pennsylvania soils, and that the risks posed by these soils are both acceptable by Pennsylvania risk-based criteria and differ insignificantly from risks posed by any other Pennsylvania soils with average background levels of arsenic.

Summary of Arsenic Concentrations

Arsenic concentrations summarized here are taken from BL Companies (January, 2002) "Site Characterization" and BL Companies (December, 2002) "Remedial Pilot Study". The Site Characterization Report gave arsenic concentrations in 228 samples from 105 locations on the approximately 383 acre property. Samples were taken from several depths, including surface (top six inches), and one foot intervals to six feet. The Remedial Pilot Study gave arsenic concentrations in 27 samples at 27 locations within a 2.5 acre subset of the property. The depth of these samples ranged from 0.3 to 2.4 feet. Arsenic concentrations in the combined data set of 255 samples ranged from 3.7 to 114 mg/kg, with an average of 12.6 mg/kg.

Summary of Arsenic Background Concentrations

Arsenic is a naturally occurring element, found in the Periodic Table of Elements, and is present in all soils. The range of arsenic concentrations in soils varies widely, and is related to

variable soil characteristics. Background concentrations of arsenic in U.S. soils have been reported by Shacklette and Boerngen (1984) and Boerngen and Shacklette (1981), who analyzed soils nationwide that they judged not to have been influenced by human activities. They found that arsenic concentrations in soil ranged from less than 1 to 97 mg/kg with an average of approximately 7.2 mg/kg in the conterminous 48 states. The data set included 1257 samples analyzed for arsenic, of which 16 samples were from Pennsylvania soils. The Pennsylvania soil samples ranged from 3.8 to 31 mg/kg, with an average of 12.9 mg/kg.

Summary of Pennsylvania Act 2 Risk Standard for Arsenic

In 1995, Pennsylvania passed Act 2, the Land Recycling and Environmental Remediation Standards Act. This Act authorized the Environmental Quality Board to establish statewide health standards for soil referred to as "Medium-Specific Concentrations" (MSC). The residential MSC for arsenic is 12 mg/kg, and is derived from a direct contact assumption that an individual ingests 100 mg of soil per day for 250 days of the year for six years of childhood, and 50 mg of soil per day for 250 days of the year for 24 years of adulthood. Ingesting soil that contains arsenic in a concentration of 12 mg/kg over this period of time would result in an estimated cancer risk of one incremental cancer for every 100,000 exposed individuals, or 1×10^{-5} . Residential MSCs apply to soil from the surface to a depth of 15 feet.

Under the Act 2 regulations, attainment of an MSC can be shown using the 75%/10x rule, which states that 75% of soil samples must be below the MSC, and no one sample can be more than 10 times the MSC, or 120 mg/kg for arsenic. Additionally, it should be noted that the Act 2 regulations allow for the establishment of site-specific standards for protection of human health so long as the standard achieves an excess lifetime cancer risk of 1 in 10,000 or 1×10^{-4} . In other words, a site-specific standard could be ten times the MSC.

Comparison of Site Concentrations with Background and Risk Standards

The table below summarizes arsenic concentrations in Site samples and Pennsylvania background samples.

	<i>WINDING HILLS</i> Site Concentrations (mg/kg)	<i>PENNS.</i> Background Concentrations (mg/kg)
Average	12.6	12.9
Minimum	3.7	3.8
Maximum	114	31
75 th percentile	13.2	15.9
Estimated Cancer Risk Based on Average	1.05×10^{-5}	1.08×10^{-5}

This table shows that the average arsenic concentration on the Site is approximately the same as the average arsenic concentration in soils statewide. The averages of both data sets slightly exceed the MSC of 12 mg/kg. The 75th percentiles of the Site and background data sets are also similar, although the background data set has a somewhat higher value. Both exceed the MSC by a small margin. The maximum concentration observed in the Site data set is higher than that observed in the background data set, but this is not unexpected given the larger number of samples in the Site data set. Neither maximum exceeds 10 times the MSC, one of the requirements for attainment. Human health cancer risks are calculated by scaling the average concentrations to the MSC of 12 mg/kg, which was derived for a 10^{-5} risk. Cancer risks are typically estimated based on average concentrations over a geographic area where exposure may occur. The risks calculated here, of 1.05×10^{-5} for Site soils and 1.08×10^{-5} for Pennsylvania background soils, are negligibly different from the state standard of 1×10^{-5} .

Comparison to Radon Risks

One way to provide context for an environmental risk such as posed by arsenic in soil is to consider other, better known or more widely discussed risks. Radon risks fall in this category. Radon is the second leading cause of lung cancer in the U.S. The U.S. EPA has established an action guideline for radon gas of 4 pCi/L (picocuries per liter). This corresponds to a risk of approximately 2 incidences of lung cancer for every 1000 non-smoking individuals with a lifetime exposure to radon at this level (risks are higher for smokers). The Pennsylvania Department of Environmental Protection estimates that 40% of Pennsylvania homes have radon

gas exceeding this level¹. In contrast, exposure to arsenic in soil at the Pennsylvania Act 2 MSC corresponds to 1 cancer incidence for every 100,000 individuals, as described above.

Conclusions

Arsenic concentrations in soil at the Glaise Orchard Site do not pose an unacceptable risk to human health based on comparison to the Pennsylvania Act 2 MSC for residential soil. Although slight exceedances of the MSC are observed, the distribution of concentrations is consistent with expected natural background conditions both state- and nation-wide. Glaise Orchard soils pose no incremental risk to human health over that posed by background conditions.

Sincerely,

GRADIENT CORPORATION

Teresa S. Bowers, Ph.D.

Principal

cc: John Carroll, Pepper Hamilton

¹ http://www.dep.state.pa.us/dep/deputate/airwaste/rp/radon_division/General_Radon_Info.htm

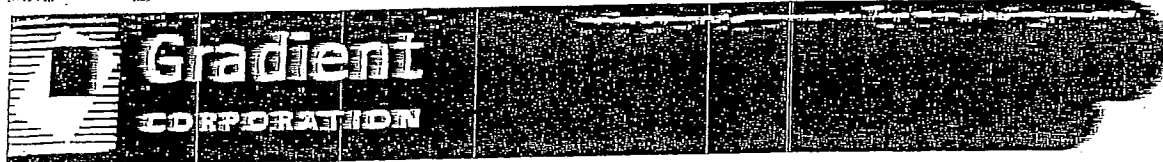
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BL Companies, 2002. Site Characterization, Glaize Orchards Site, January 4.

BL Companies, 2002. Remedial Pilot Study, Glaize Orchards Site, December 20.

Boerngen, J.G. and Shacklette, H.T. 1981. Chemical analysis of soils and other surficial materials of the conterminous United States (Report and diskette data). U.S. Geological Survey, USGS Open-File Report 81-197. 143 p.

Shacklette, H.T. and J.G. Boerngen, 1984. Element concentrations in soil and other surficial materials of the conterminous United States. U.S. Geological Survey Professional Paper 1270.



Teresa S. Bowers, *Ph.D.*
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Dr. Bowers has nearly 20 years of experience in exposure modeling, mathematical and geochemical modeling, and the application of this information to risk-based environmental strategies and development of site-specific cleanup levels. She is the author of more than 30 journal articles on these and other topics. Her areas of expertise include modeling of blood lead and urine arsenic levels resulting from exposure to environmental sources of lead and arsenic. She is the author of an adult blood lead model now being used by EPA, and she has developed unique statistical approaches to calculating soil cleanup levels on average. She is frequently invited to speak on these topics by both industry and government groups. Prior to joining Gradient, Dr. Bowers held research and visiting faculty positions at the Massachusetts Institute of Technology and Harvard University, where she taught courses in resource geology and applied thermodynamics. Dr. Bowers holds a Ph.D. in Geochemistry from the University of California, Berkeley, and undergraduate degrees in Mathematics and Geology from Purdue University.

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