UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 24 2016

(b) (6) [redacted]
108 Lyon Drive
Grenada, Mississippi 38901

Re: Results of March 2016 Air Sampling at 108 Lyon Drive, Grenada, MS

Dear (b) (6) [redacted]

Thank you for providing the U.S. Environmental Protection Agency access to your property located at 108 Lyon Drive, Grenada, MS in March 2016 for air sampling. The EPA reviewed the data and, based on the sampling results collected at your property, **has determined that there is no immediate threat to your health at this time.**

The purpose of this sampling was to determine whether contaminants were present in the air inside or outside of your home that may be migrating from the former Grenada Manufacturing, LLC (the Facility) or another source into the community. The EPA became aware of the potential for contamination while overseeing a cleanup of the Facility under the Resource Conservation and Recovery Act (RCRA) program.

The sampling was necessary to evaluate whether contamination, primarily the solvent trichloroethene (TCE), may be entering your home in the form of a gas (or vapor) from contaminated groundwater beneath your home (also referred to as "vapor intrusion"). For general information about vapor intrusion, a document entitled, "What You Should Know about Vapor Intrusion" is enclosed for your reference.

Data Summary

Sub-Slab Air: There were **no contaminants detected** in the air sample collected from the sub-slab port installed in the foundation of your home above the EPA's regional screening levels. A groundwater study conducted during September/October 2015 detected TCE in groundwater in the southern portion of the Eastern Heights subdivision. At this time, your sub-slab air results do not indicate that contaminants are entering your home from a below-ground source, such as groundwater. These results are the best indication that contaminants are not entering your home from a below-ground source. It should be noted that chloroform was detected in your sub-slab air, but chloroform has not been detected in any of the groundwater samples. Therefore, it is not considered to be related to the Facility. Chloroform is used to make other chemicals and can also be formed in small amounts when chlorine is added to water.

Indoor Air: TCE was not detected in the indoor air sample collected from your home, however, there was a detection of **benzene in the indoor air sample** that exceeds the EPA's indoor air regional screening level but is below a level of concern that requires a response action.

Regional screening levels are values used by the EPA to determine if a contaminant should be considered for further evaluation. The chemical that was detected in your indoor air is not considered to be originating from an underground source because it was not detected in the sub-slab air sample.

Benzene can be present in and around homes from common household products (glues, paints, gasoline, etc.) or common activities. It is used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Other sources of benzene include emissions from forest fires, crude oil, gasoline, and cigarette smoke.

Outdoor Air: No contaminants were detected in the outdoor (or "ambient") air above the EPA's indoor air regional screening levels and, therefore, are not a concern at this time. The ambient air samples were collected at two locations within the subdivision.

Results Table

The table below is a summary of your TCE results, plus the one other chemical detected above the EPA's regional screening levels, from the indoor air sampling performed in your home. The complete laboratory data sheets are provided as an enclosure and are accompanied by a table containing the relevant screening levels for the chemicals detected.

Results **Sample location: 108 Lyon Drive** **Sample date: 3/3-4/2016**		
Chemical Name	**Indoor Air Regional Screening Levels**	**Indoor Air Sample**
Trichloroethene	0.48	ND
Benzene	0.36	**0.57**
Notes: Concentrations are in $\mu g/m^3$- micrograms per cubic meter. **Bold** – Indicates value is above the EPA regional screening level ND – Compound was not detected at or above the method detection limit.		

The EPA staff will contact you to discuss your results and/or answer any questions you may have. Maintaining frequent and meaningful engagement with residents within your community is a priority for the EPA as we continue to cleanup contamination from the former Grenada Manufacturing, LLC facility. To that end, the EPA is working closely with our partners at the Mississippi Department of Environmental Quality and the Agency for Toxic Substances and Disease Registry to share information with you through fact sheets, written correspondence, and other means. The EPA recently launched a website with detailed information regarding the agency's activities in the area that can be accessed at www.epa.gov/grenadacleanup.

The EPA will continue to review all sampling results collected by or on behalf of the EPA within your community and will notify you immediately if response actions are necessary. If you have any questions or would like additional information, please feel free to contact Brian Bastek, RCRA Project Manager at (404) 562-8511 or bastek.brian@epa.gov, or Brian Holtzclaw, RCRA Community Engagement Coordinator at (404) 562-8684 or holtzclaw.brian@epa.gov.

Sincerely,

Michael A. Norman, Chief
RCRA Cleanup and Brownfields Branch
Resource Conservation and Restoration Division

Enclosures (2)

cc: Melissa Collier, MDEQ
Jimmy Palmer, Grenada Manufacturing, LLC
Reid Stanford, Esq.

Enclosure 1

What You Should Know about Vapor Intrusion

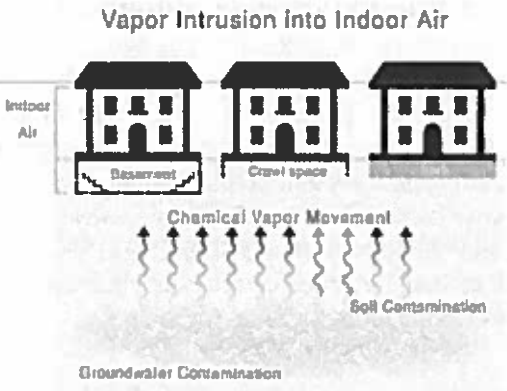
United States
Environmental Protection
Agency

What You Should Know About Vapor Intrusion

EPA has developed this fact sheet to answer some of the most commonly asked questions about an important health issue called vapor intrusion. Vapors and gases from contaminated groundwater and soil have the potential to seep into indoor spaces and cause health problems.

What is vapor intrusion?

When chemicals or petroleum products are spilled on the ground or leak from underground storage tanks, they can give off gases, or vapors that can get inside buildings. Common products that can cause vapor intrusion are gasoline or diesel fuel, dry cleaning solvents and industrial de-greasers. The vapors move through the soil and seep through cracks in basements, foundations, sewer lines and other openings. Vapor intrusion is a concern because vapors can build up to a point where the health of residents or workers in those buildings could be at risk. Some vapors such as those associated with petroleum products have a gasoline odor, others are odor-free.



Can vapors in my home come from household sources?

Common household products can be a source of indoor air problems. Vapors and gases can come from: paints; paint strippers or thinners; moth balls; new carpeting and furniture; stored fuel; air fresheners; cleaning products; dry cleaned clothing and even cigarette smoke.

What are the health concerns related to vapor intrusion?

When vapor intrusion does occur, the health risk will vary based on the type of chemicals, the levels of the chemical found, the length of exposure and the health of exposed individuals. Some people may experience eye and respiratory irritation, headaches and/or nausea. These symptoms are temporary and should go away when the vapors are addressed. Low-level chemical exposures over many years may raise the lifetime risk of cancer or chronic disease.

How is vapor intrusion discovered?

Samples of gas in the soil or groundwater are first collected near a contaminated site. If no contamination is found near a site, then vapor intrusion should not be a problem. If contamination is found, depending on the type, the search may be widened to include samples closer to or on individual properties. The next step is to take vapor samples from the soil under the home's foundation; these are called slab, or sub-slab samples. EPA does not generally recommend indoor air sampling before slab or sub-slab sampling, because indoor air quality varies widely day to day. Also, household products may interfere with sampling results.

What happens if a problem is found?

The most common solution is to install systems often used to reduce naturally occurring radon that seeps into homes in some geographic areas. These systems, called radon mitigation systems, remove soil vapors from below basements or foundations before they enter homes. Vapors are vented outside of the homes where they become dispersed and harmless. These systems use minimal electricity and do not affect heating and cooling efficiency. They also prevent radon from entering homes – an added health benefit especially in radon prone areas. Once the source of the vapors is eliminated, the systems should no longer be needed.

Vapor Intrusion: Tightly seal common household products after use and seal them in an area that is well ventilated to avoid the release of vapors

What can I do to improve indoor air quality?

- Don't buy more chemicals than you need.
- Store unused chemicals in appropriate tightly-sealed containers.
- Don't make your home too air tight. Fresh air helps prevent chemical build-up and mold growth.
- Fix all leaks promptly, as well as other moisture problems that encourage mold.
- Check all appliances and fireplaces annually.
- Test your home for radon. Test kits are available at hardware and home improvement stores or you can call the Radon Hotline at 800-458-1158 in New York State, or 800-648-0394 in New Jersey.
- Install carbon monoxide detectors in your home. They are available at hardware and home improvement stores.

Sub-slab mitigation system: This system draws radon and other vapors out of the soil and vents them outside

For more information:

- For health related questions regarding vapor intrusion, contact your local health department or the federal Agency for Toxic Substances and Disease Registry at: 1-888-422-8737 or visit their Web site at www.atdsr.cdc.gov

- For more detailed information on EPA's vapor intrusion sampling, visit the EPA's Web site at: www.epa.gov/correctiveaction/eis/vapor/guidance.pdf

- For more information on indoor air quality, visit EPA's Web site at: www.epa.gov/air/topics/comoria.html or call the indoor air Quality Information hotline at 1-800-438-4318

Enclosure 2

Summary Table of Screening Levels for Chemicals Detected and Laboratory Data Sheets

Enclosure #2

Summary Table of Screening Levels for Chemicals Detected in Indoor Air and Sub-slab air samples

Residential Air Screening Table for the Grenada Manufacturing Facility		
Contaminants	**RSL(ug/m^3)***	**Sub-slab(ug/m^3)***
Benzene	0.36	12
Chloroform**	10	330
1,2-Dichloroethane	0.11	3.6
1,2-Dichloroethene***	7.3	243
Ethylbenzene	1.1	37
Toluene	5200	170,000
Tetrachloroethene	11	360
Trichloroethene****	0.48	16
Xylene	100	3500
NOTES:		
RSL - EPA's Regional Screening Level for residential air		
Sub-slab - RSLs adjusted for attenuation thru a concrete slab.		
*Screening levels are based on HI=1 or 1x10e-6, unless otherwise noted.		
**Based on HI=0.1 because of chloroform being a threshold carcinogen.		
***Based on non-cancer toxicity of 1,2-DCA.		
****Also known as trichloroethylene		
All Screening Levels are reported in micrograms per cubic meter, ug/m^3		

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Client Sample ID: 6-IA (030216)

Lab ID#: 1603172-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e031512**	**Date of Collection:**	**3/3/16 10:31:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**3/15/16 02:36 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.46	Not Detected	1.6	Not Detected
1,2,4-Trimethylbenzene	0.23	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	111	70-130

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Client Sample ID: 6-IA (030216)

Lab ID#: 1603172-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	e031512sim	Date of Collection:	3/3/16 10:31:00 AM
Dil. Factor:	2.29	Date of Analysis:	3/15/16 02:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.023	Not Detected	0.058	Not Detected
1,1-Dichloroethene	0.023	Not Detected	0.091	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
cis-1,2-Dichloroethene	0.046	Not Detected	0.18	Not Detected
Chloroform	0.046	Not Detected	0.22	Not Detected
Benzene	0.11	0.18	0.36	0.57
1,2-Dichloroethane	0.046	Not Detected	0.18	Not Detected
Trichloroethene	0.046	Not Detected	0.25	Not Detected
Toluene	0.046	1.1	0.17	4.0
1,1,2-Trichloroethane	0.046	Not Detected	0.25	Not Detected
Tetrachloroethene	0.046	Not Detected	0.31	Not Detected
Ethyl Benzene	0.046	Not Detected	0.20	Not Detected
m,p-Xylene	0.092	0.11	0.40	0.47
o-Xylene	0.046	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: 6-SS (030316)

Lab ID#: 1603177-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3031822**	**Date of Collection:**	**3/3/16 10:48:00 AM**
Dil. Factor:	**2.41**	**Date of Analysis:**	**3/18/16 10:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Chloroform	1.2	7.8	5.9	38
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	100	70-130