

Letter Health Consultation

Phase II Subsurface Investigation
ST. MICHAEL'S SENIOR HOUSING
ORLEANS PARISH, LOUISIANA

**Prepared by the
Louisiana Department of Health and Hospitals**

JUNE 17, 2010

Prepared under a Cooperative Agreement with the
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

A health consultation is a verbal or written response from ATSDR or ATSDR's Cooperative Agreement Partners to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR or ATSDR's Cooperative Agreement Partner which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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LETTER HEALTH CONSULTATION

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Bobby Jindal
GOVERNOR

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS



Alan Levine
SECRETARY

June 9, 2010

Tom Harris
Administrator, Remediation Services Division
Louisiana Department of Environmental Quality
P.O. Box 4314
Baton Rouge, LA 70821-4314

Dear Mr. Harris:

The Louisiana Department of Health and Hospitals/Office of Public Health/Section of Environmental Epidemiology and Toxicology (DHH/OPH/SEET) has evaluated soil and groundwater samples collected during the Phase II Subsurface Investigation at St. Michael's Senior Housing in Orleans Parish, Louisiana. The following letter provides the results of SEET's assessment of the activities conducted at the site during that event.

Site Description and History

St. Michael's Senior Housing is located at 3433 Tulane Avenue in New Orleans, Orleans Parish, Louisiana. The property consists of one nine-story age-restricted apartment structure constructed in 1965 and renovated in 1995. The structure contains sixty residential dwelling units and is located on approximately 2.25 acres of land [1].

During an August 2007 Phase I Site Investigation, several concerns were identified regarding neighboring properties including an adjacent dry-cleaner, which is a registered RCRA generator of hazardous waste; a former metal foundry noted as an active EPA Brownfields facility; and a former beverage factory with abandoned ammonia and gas tanks [1]. Additionally, Sanborn Fire Insurance Maps from 1951 show portions of the St. Michael's Senior Housing facility were utilized as a used automobile sales lot and an auto repair painting shop [1]. In August of 2008, a Phase II Environmental Site Assessment (ESA) was conducted to determine if the subsurface soil and/or groundwater at the site had been adversely impacted by current or past activities on site and at the adjacent properties [2].

Data Evaluation

On August 20, 2008, as part of the Phase II ESA, four geoprobe soil borings were drilled on site at a maximum depth of fifteen feet below ground surface (bgs). Soil samples were collected at varying depths depending on the location of the boring. Soil sample B1 was located on the northeast corner of the site and sampled at three feet bgs; soil sample B2 was located on the southeast corner of the site and sampled at fourteen feet bgs; soil sample B3 was located on the southwest corner of the site and sampled at eight feet bgs; and soil sample B4 was located on the northwest corner of the site and sampled at five feet bgs [Appendix A, figure 1]. All soil samples were analyzed for volatile organic compounds (VOCs); and one additional sample extracted from boring B4 was analyzed for Synthetic Precipitation Leaching Procedure (SPLP) acetone. Analytical results revealed that all soil samples

were below the quantitation limit (BQL) of detection for VOCs with the exception of benzene and toluene at boring B1 and carbon disulfide at boring B4. However, each of the benzene, toluene and carbon disulfide concentrations were well below the Agency for Toxic Substances and Disease Registry (ATSDR) health based comparison values. A detailed explanation of the ATSDR/SEET evaluation process can be accessed in Appendix A.

The four geoprobe soil borings were converted to temporary wells for groundwater extraction (WB1-WB4). In advance of sampling, it was known that utilizing temporary piezometers allows for very fine silt and clay to pass through the piezometer screen, resulting in a turbid water sample that could lead to laboratory interferences [3]. Therefore, part of the sample was filtered in order to determine the dissolved metal content; while the other portion of the sample remained unfiltered and preserved for shipping according to the laboratory analytical methodology [3]. Each of the groundwater samples were analyzed for filtered (dissolved) and unfiltered Resource Conservation and Recovery Act (RCRA) Metals. Analytical results revealed that all filtered (dissolved) metals were detected below the quantitation limit and/or corresponding health comparison values. The unfiltered samples confirm a laboratory sampling error due to the large amounts of suspended sediment in the samples [2].

Upon completion of the sampling activities, all bore holes were filled with cement and bentonite to the ground surface and hydrated to prevent any physical hazards [2].

Exposure Pathways

Residents at the St. Michael's Senior Housing facility utilize publicly supplied drinking water and sewer service [1]. Each of the soil sample concentrations were either below the quantitation limit of detection or health based comparison values. There are no exposure pathways present between the soil and/or the groundwater samples collected during these events and the residents of St. Michaels.

Conclusions:

Contaminant concentrations detected in soil and groundwater at the St. Michael's site are below comparison values and will not harm people's health.

Recommendations:

There are no recommendations at this time.

If there are any questions regarding this health consultation, please contact Darcie Olexia (504) 219-4579.

Sincerely,

Darcie Olexia, MSPH
Environmental Health Scientist

Louisiana Office of Public Health
Section of Environmental Epidemiology & Toxicology

References

1. DG3 Dominion Due Diligence Group. Limited Phase II Environmental Site Assessment. St. Michael's Senior Housing. December 20, 2007.
2. Environmental Auditors of America, Inc. Phase II Subsurface Investigation. St. Michael's Senior Housing. August 27, 2008.
3. Environmental Auditors of America, Inc. Response to Notice of Deficiencies (NODs) and Proposed Sampling Plan. St. Michael's Senior Housing. July 23, 2008.

Appendix A: Screening Process

Health based comparison values (CVs) were used to determine which samples needed further evaluation. CVs are not used to predict health effects or to set clean-up levels. Contaminants with media concentrations above a health based comparison value do not necessarily represent a health threat, but are selected for further evaluation. Contaminants with media concentrations below a health based comparison value are unlikely to be associated with illness and are not evaluated further.

The Agency for Toxic Substances and Disease Registry's (ATSDR) child Environmental Media Evaluation Guide (EMEG) and child Reference Dose Media Evaluation Guide (RMEG) were used as CVs in this evaluation. EMEGs are estimated contaminant concentrations that are unlikely to cause adverse non-carcinogenic health effects. EMEGs are calculated by using ATSDR's Minimal Risk Level (MRL), which is also an estimate of daily exposure to contaminants that are unlikely to cause adverse non-cancer health effects. Like EMEGs, RMEGs represent concentrations of substances in water to which humans may be exposed without experiencing adverse health effects. RMEGs are calculated using EPA's reference dose (RfD), an estimate of daily exposure to contaminants unlikely to elicit a non-cancer health effect.

EPA's Maximum Contaminant Level (MCL) was also used as a CV in this evaluation. An MCL is an enforceable drinking water regulation that is the maximum permissible level of contaminant in water that is delivered to the free-flowing outlet of the ultimate user of a public water system.

Detected Soil Contaminants, August 20, 2008

Sample ID	Benzene	Toluene	Carbon Disulfide
Screening Values	Child EMEG ¹ 30 mg/kg ²	Child EMEG 1000 mg/kg	Child RMEG ³ 5000 mg/kg
B1	0.021	0.020	BQL ⁴
B4	BQL	BQL	0.024

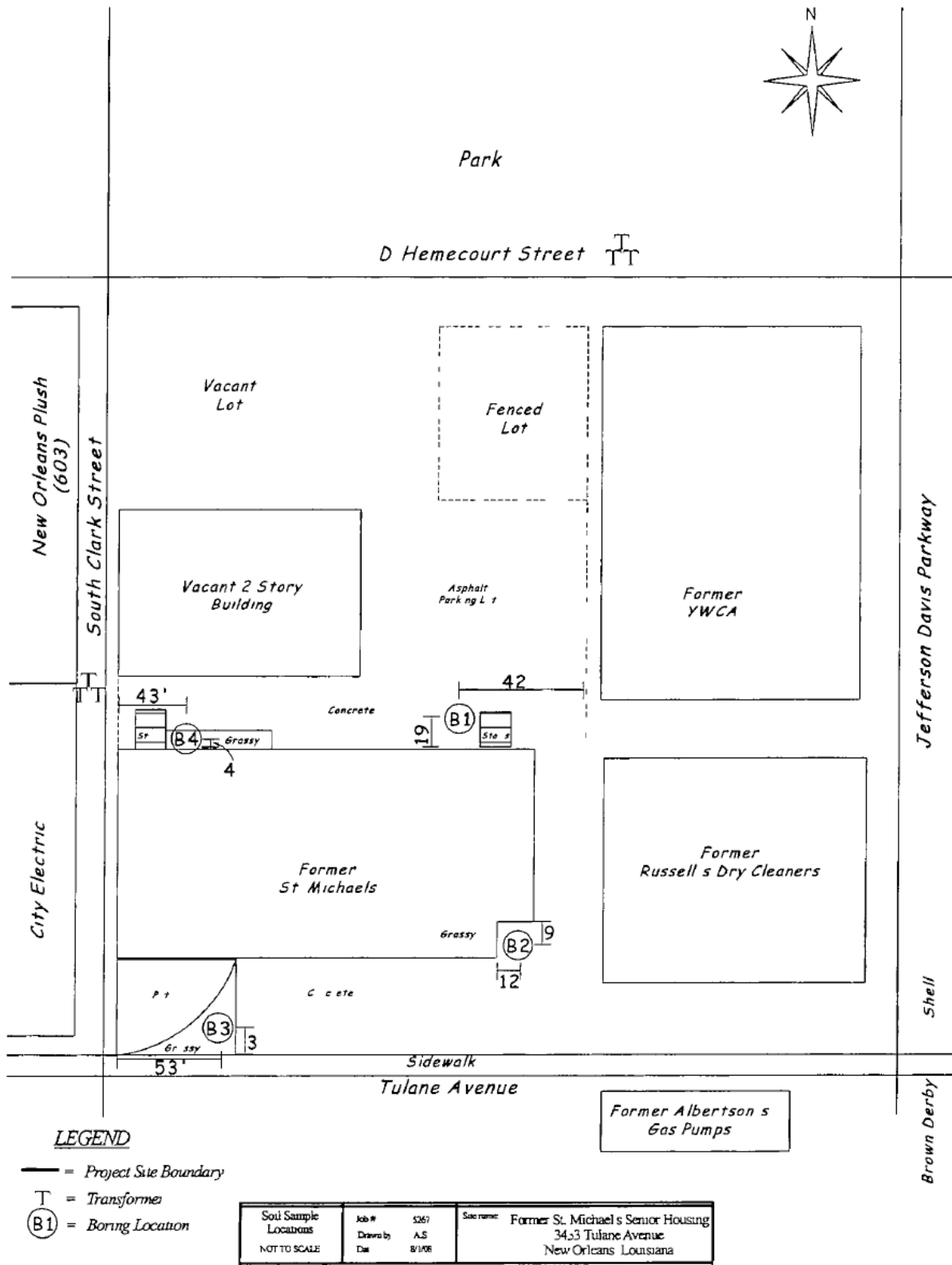
¹ EMEG- Environmental Media Evaluation Guide; ² mg/kg- milligrams per kilogram; ³ RMEG- Reference Dose Media Evaluation Guide; ⁴ BQL- below quantitation limit for benzene (0.010 mg/kg) and toluene (0.010 mg/kg)

Detected Groundwater Contaminants, August 20, 2008

Sample ID	WB1	WB2	WB3	WB4	Screening Values (mg/L) ¹
Metals (mg/L)					
Dissolved Arsenic	BQL ²	BQL	BQL	BQL	0.003 EMEG ³
Arsenic	0.0697	0.0421	BQL	0.0189	
Dissolved Barium	0.389	0.391	0.207	0.363	2.0 EMEG
Barium	1.18	1.30	0.419	0.529	
Dissolved Chromium	BQL	BQL	BQL	BQL	0.1 MCL ⁴
Chromium	0.107	0.113	0.0324	0.018	
Dissolved Lead	0.0075	0.00991	0.00989	0.0113	0.015 MCL
Lead	0.102	0.152	0.111	0.0208	
Dissolved Mercury	BQL	BQL	BQL	BQL	0.02 EMEG*
Mercury	BQL	0.000299	BQL	BQL	

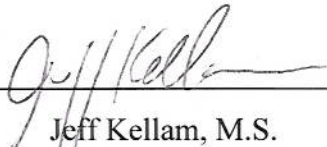
¹ mg/L- milligrams per liter; ² BQL- below quantitation limit for arsenic (0.010 mg/L), chromium (0.010 mg/L) and mercury (0.0002 mg/L); ³ EMEG- Environmental Media Evaluation Guide; ⁴ MCL- Maximum Contaminant Level; * Mercuric Chloride EMEG

Figure 1: Soil and groundwater boring locations [2].



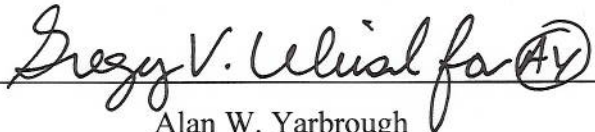
Certification

The Louisiana Department of Health and Hospitals prepared this letter health consultation for St. Michaels Senior Housing, New Orleans, LA under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It was completed in accordance with approved methodology and procedure existing at the time the health consultation was initiated. Editorial review was completed by the cooperative agreement partner.



Jeff Kellam, M.S.
Technical Project Officer
Division of Health Assessment and Consultation (DHAC)
ATSDR

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation and concurs with its findings.



Alan W. Yarbrough
Cooperative Agreement Team Leader, DHAC, ATSDR

