

March 26, 2014
GZA File No. 05.0043654.20-C

Mr. Joseph Martella
Rhode Island Department of Environmental Management
Office of Waste Management
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Providence, Rhode Island 02908



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Re: *Meeting Summary – March 6, 2013*
Soil Gas Data
Former Tidewater MGP and Power Plant Site
Pawtucket, Rhode Island
RIDEM Case No. 95-022

Dear Mr. Martella:

On behalf of our client, The Narragansett Electric Company d/b/a National Grid (National Grid), GZA GeoEnvironmental Inc. (GZA) is pleased to provide the attached summary of the March 6, 2014 public meeting associated with the Former Tidewater Manufactured Gas Plant (MGP) and Power Plant Site located in Pawtucket, Rhode Island (the Site). The purpose of the public meeting was to discuss soil gas data which was summarized in a fact sheet and an addendum to the SIR which were submitted to the Department on August 28, 2013 and October 1, 2013, respectively.

Should you have any questions or comments regarding the information presented herein, please do not hesitate to contact the undersigned or Michele Leone at 781-907-3651.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

A handwritten signature in blue ink, appearing to read 'Margaret S. Kilpatrick', is written over a faint, light blue circular stamp or watermark.

Margaret S. Kilpatrick, P.E.
Senior Project Manager
401-421-4140 – margaret.kilpatrick@gza.com

Attachment: Summary of Meeting

CC: Ms. Michele Leone, National Grid

Summary of Meeting
Soil Gas Data
Former Tidewater Facility
Pawtucket, Rhode Island

March 6, 2014 6:30 PM
Francis J. Varieur Elementary School
486 Pleasant Street
Pawtucket, Rhode Island

- **Meeting Introduction – Michele Leone (National Grid Representative)**
 - **Presentation of Soil Gas Data – Meg Kilpatrick, P.E. (GZA GeoEnvironmental, Inc.) and Joseph Martella (Rhode Island Department of Environmental Management, Office of Waste Management [OWM])**
 - **Question and Answer Period**
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This public meeting was held at the Francis J. Varieur Elementary School on March 6, 2014. The meeting began at 6:30 PM and ended at approximately 8:15. The purpose of this public meeting was to present the results of additional environmental testing completed by National Grid at the Tidewater Site. This testing involved the collection and analysis of samples of air beneath the ground (called “soil gas”) from locations within the Tidewater Site (interior) as well as along the western property boundary. These soil gas tests, conducted in response to community requests and under the direction of the Rhode Island Department of Environmental Management (RIDEM), measured the level of compounds present in air below the ground. The sampling was performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid between July 2013 and August 2013. GZA then prepared and submitted a complete report summarizing the results to RIDEM in October 2013. The report is available online at: <http://www.dem.ri.gov/programs/benviron/waste/tide.htm>. This information is also available on National Grid’s Tidewater website (www.tidewatersite.com). In addition, a fact sheet summarizing the testing and data is also available on the Tidewater website at: (<http://www.tidewatersite.com/wp-content/uploads/2012/08/Tidewater-Soil-Air-Factsheet-Combined.pdf>).

Meeting Introduction

Michele Leone (National Grid) opened the meeting at 6:30 PM with a brief introduction. Ms. Leone thanked everyone for taking the time to attend and described that the purpose of the meeting was to discuss the soil gas testing performed by National Grid. Ms. Leone indicated that the soil gas testing results related to the Tidewater Site would be presented by Meg Kilpatrick (GZA) and that the results indicate that Site related compounds are not migrating towards the neighboring properties. Ms. Leone further explained that Ms. Kilpatrick’s presentation will be followed by a discussion led by Joe Martella (RIDEM) pertaining to non-Tidewater Site compounds (chlorinated compounds) detected along the perimeter of the Tidewater Site.

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Presentation of Soil Gas Data – Meg Kilpatrick, P.E. (GZA GeoEnvironmental, Inc.) and Joseph Martella (Rhode Island Department of Environmental Management)

Ms. Meg Kilpatrick (GZA) presented a prepared slide show related to the soil gas testing performed and the results of Tidewater Site related compounds (petroleum hydrocarbons). A copy of the slide show has been posted on the National Grid Tidewater website (www.tidewatersite.com). Ms. Kilpatrick provided pertinent background information followed by a description of soil gas testing locations, installation and sampling procedures and results. This slide show included visual presentations (via Site plans) of the Tidewater Site related compounds detected in soil gas. Ms. Kilpatrick described how these results indicate that soil gas from the Tidewater Site is not migrating towards the neighboring schools or properties. She concluded by presenting an overview of planned limited soil and groundwater investigation activities within the natural gas regulator station at the Site and described ways for interested members of the community to find more information about the Tidewater Site.

Following Ms. Kilpatrick's presentation, Mr. Joe Martella (RIDEM, OWM) discussed information regarding chlorinated compounds that were detected in soil gas samples collected along the Tidewater Site western property line (the property line closest to the neighborhood). Mr. Martella summarized the detections of chlorinated compounds along the National Grid property line and explained that these chlorinated compounds are unlikely to be coming from the Tidewater Site. He explained that these chlorinated compounds have not been detected during the extensive soil and groundwater testing performed by National Grid at the Tidewater Site and that chlorinated compounds are not typically associated with former manufactured gas plants or power plants.

Mr. Martella described RIDEM's plans for additional testing at the Francis Varieur Elementary School property. He explained that RIDEM plans on performing investigation activities to characterize soil, groundwater and soil gas at the Varieur Elementary School property. The purpose of the investigation is to (1) evaluate subsurface conditions at the Varieur School property; and (2) further evaluate the likely source(s) of the chlorinated compounds that were detected in soil gas. Mr. Martella indicated that this sampling will likely be performed in late June 2014, after the school year is over. He also explained the process RIDEM must follow in selecting a contractor to perform this work and the timeframe associated with this process. Mr. Martella also mentioned that EPA, trying to assist the City of Pawtucket, attempted to perform a sub-slab investigation of the Varieur School last year, but the lack of utility plans for the school building precluded this work from being performed. Because plans could not be located, it was determined to be unsafe to drill into the floor of the building and the approach RIDEM will take involves sampling of soil gas, soil, and groundwater in exterior areas to assess the appropriate next steps.

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Questions and Answer Period: *(Responses provided in italics)*

Representatives of National Grid, RIDEM, the City of Pawtucket, and the Rhode Island Department of Health were present at the meeting to answer questions from the public. The following is a summary of the questions asked and the responses.

1. Audience member inquired whether RIDEM will be investigating all the locations along the National Grid property line perimeter that contained exceedances of the most stringent state screening level or criteria, rather than only investigating around the Varieur School.

Mr. Martella (RIDEM, OWM) stated that they only have money to investigate Varieur Elementary School at this time. Mr. Martella stated that they are planning on a phased investigation approach to locate the source of the chlorinated hydrocarbons. Mr. Martella stated the extent of the investigation depends on what it is found.

2. Audience member inquired why RIDEM is waiting until school is out to begin their investigation work.

Mr. Martella (RIDEM, OWM) stated that it is because of coordination issues. The school will then be an active investigation site and there will be a lot of traffic associated with the investigation.

3. Audience member stated that RIDEM should remember that sometimes there are a lot of school programs in the summer.

Mr. Martella (RIDEM, OWM) stated that this is a good point and that they are working with the City of Pawtucket to schedule the work.

4. Audience member stated that the EPA had said that the schools could get funding to do work near the International Charter School / Blackstone Academy Charter School (ICS/BACS). The audience member stated that she was worried about the concentrations that were detected near there.

Mr. Martella (RIDEM, OWM) stated that unfortunately the EPA could not attend tonight. Mr. Martella stated that the investigation will be performed in phases. Depending on what is observed, and available resources, the investigations may be extended. . ICS/BACS personnel stated that the EPA did forward a copy of their grant application to them.

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- Audience member stated that she is really happy that RIDEM and USEPA are doing the investigation at the Varieur School. The audience member inquired why National Grid was not doing the investigation.

Mr. Martella (RIDEM, OWM) stated that chlorinated compounds were detected in soil gas along the perimeter of the Tidewater Site and that chlorinated compounds have not been detected at the Tidewater Site in either the soil or groundwater samples. Mr. Martella further explained that the source of the chlorinated compounds is unknown and the data indicates that the Tidewater Site is not the source. Therefore, National Grid is not responsible for further investigations related to the chlorinated compounds.

- Audience member inquired why National Grid doesn't have to clean up these compounds.

Mr. Martella (RIDEM, OWM) stated that the Department would be using the money they received from Southern Union Company during the recent settlement to investigate the chlorinated compounds. Mr. Martella reiterated that chlorinated compounds were detected in soil gas along the perimeter of the Tidewater Site but have not been detected at the Tidewater Site in either the soil or groundwater samples. The source of these impacts are unknown but the data indicates they do not originate from the Tidewater Site and therefore National Grid is not responsible for investigation and remediation activities related to these chlorinated compounds.

- Audience member inquired what would happen if the chlorinated compounds were found at Varieur School or at the ICS/BACS property, who would be cleaning it up.

Mr. Martella (RIDEM, OWM) stated that typically it goes the other way. Typically, RIDEM directs a responsible party to investigate/remediate. Soil gas samples are usually only taken when there is evidence of soil and groundwater exceedances at a property and the property use dictates the need for collection of soil gas samples. Typically, an investigation starts with the collection and analysis of soil and groundwater and moves towards soil gas and indoor air sampling only if necessary.

Ms. Leone (National Grid) added that the soil gas data suggests that the chlorinated compounds appear to be migrating towards their property and not away from it.

- Audience member stated that she has read the New York State Vapor Intrusion Guidance Document and it says that the soil gas vapors don't necessary move with groundwater. Can't these compounds be from the Tidewater Site?

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Mr. Martella (RIDEM, OWM) stated that chlorinated compounds have not been detected at the Tidewater Site in either the soil or groundwater samples. Typically, if these chlorinated compounds were detected in soil gas on another property, we would ask the property owner to sample their soil and groundwater. National Grid has already done this as part of their Site Investigation activities and did not detect chlorinated compounds.

Mr. Martella stated that they don't know the source of these compounds. RIDEM has a concern about the concentrations detected in the soil gas near Varieur School and the planned investigations should help identify potential sources.

9. The City of Pawtucket asked if the RIDEM investigation process is similar to a process of elimination.

Mr. Martella (RIDEM, OWM) stated that phasing the investigation assists with this process.

10. Audience member asked if we don't know where the source is, shouldn't National Grid just investigate to find the source.

Mr. Martella (RIDEM, OWM) stated the RIDEM cannot ask National Grid to find the source as National Grid has done extensive soil and groundwater testing of chlorinated compounds at their Site and the data they collected indicates that they don't have a problem at the Tidewater Site with chlorinated compounds. National Grid cannot spend money on investigations that are not related to their historical operations. National Grid has to account for the money they spend to the Rhode Island Public Utilities Commission (RIPUC).

11. Audience member asked whether the sewer is a possible source.

Mr. Martella (RIDEM, OWM) stated that it might be the source and added that there isn't currently enough information to identify a source and that is one of the reasons for the planned investigations.

12. Audience member inquired whether the drinking water at Varieur School had been tested.

Mr. Martella (RIDEM, OWM) and Mr. Barney Heath (City of Pawtucket) responded that the drinking water at Varieur School comes from the Pawtucket Water Supply Board and originates from Cumberland, RI. The drinking water is routinely tested at the plant. Mr. Martella and Mr. Heath responded that the water comes into the school from pressurized pipe and that if it did leak, it would leak out into the soil, and not let anything into the pipe.

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13. Audience member inquired whether you can test the indoor air. Several other audience members added that indoor air is their big concern.

Mr. Martella (RIDEM, OWM) stated that they would prefer to perform their planned investigation of the Varieur School property to determine whether indoor air sampling is warranted. Indoor air testing can pick up household chemicals and other things unrelated to the subsurface conditions.

14. Audience member stated that he would want the City of Pawtucket to do the indoor air testing.

Ms. Barbara Morin (RIDEM, Office of Air Resources [OAR]) stated that they can help the City of Pawtucket do this if requested. However, Ms. Morin also stated that they do not recommend collecting indoor air samples without having tested the soil gas first. Ms. Morin cited an example of a school in Providence that found chlorinated compounds in their indoor air. These compounds were also found in the soil gas and in the soil and groundwater on Site. However, in this case, the chlorinated compounds detected in indoor air were found to be coming from cleaning chemicals that were being used inside the building. In the Varieur School case, it is not yet known whether the soil gas is impacted, therefore, if indoor air samples were collected and chlorinated compounds were detected, it wouldn't be clear where they were coming from.

The Environmental Justice League of RI added that at the school in Providence they were able to pinpoint the cleaning chemicals as the source of indoor air concentrations and remove them from the school.

Ms. Morin said that, while that is true, the reason that they were able to identify the source is that they had subslab data that showed that vapor intrusion was not the source of the indoor levels. She added that if you did indoor air sampling in every school and house in an urban area, you would probably find something. That is why they recommend starting with soil and groundwater data, then soil gas and then indoor air if warranted.

15. Audience member inquired about when the concentrations detected are too high. If the levels of TCE were spectacularly high at the Varieur School, do we know that?

Mr. Robert Vanderslice (Rhode Island Department of Health (RIDOH)) stated that both the data that was collected in 1996 and the soil gas data collected in 2013 by National Grid did not indicate that the levels were excessive but that more testing is warranted near the Varieur School.

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16. Audience member inquired whether RIDEM actually knew the concentrations detected in the indoor air and soil gas samples collected in 1996.

Mr. Martella (RIDEM, OWM) stated there were low level detections in two of the soil gas samples collected in 1996. Five indoor air samples were collected for TCE analysis. These samples were non-detect for TCE at a higher detection limit. Mr. Martella explained a detection limit means that the compound was not detected above that limit (i.e. that the concentration could be zero or the concentration could be just below the detection limit).

17. Audience member asked what the data means. Where should the community be concerned over the data?

Mr. Martella (RIDEM, OWM) stated that the highest soil gas concentrations were detected along the perimeter of the National Grid property adjacent to the Varieur School. Ms. Kilpatrick (GZA) noted that the petroleum hydrocarbon data indicates that soil gas does not appear to be migrating from the Tidewater Site towards the neighboring community.

18. Audience member inquired whether the chloroform that was detected in the soil gas near the ICS/BACS property is a serious concern.

Mr. Martella (RIDEM, OWM) stated that they are not sure of the source of these compounds. Mr. Martella stated that an objective of the proposed investigation is to find the source of these compounds.

19. Audience member stated that she spoke with a technical consultant in New Jersey about vapor intrusion and the consultant had said that everything within 100 feet needs to be evaluated for vapor intrusion. Can we just put in those venting radon systems in the buildings near the Site?

Mr. Martella (RIDEM, OWM) stated that at other sites, parties responsible for contamination have installed these types of systems. Mr. Martella further explained that an objective of their planned investigation at the Varieur School is to help evaluate potential sources for these chlorinated compounds.

20. Audience member inquired about when you are going to be doing this. Her child is in school here. She feels like it is a very long time since last summer when RIDEM got the soil gas data. She inquired why it was taking such a long time.

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Mr. Martella (RIDEM, OWM) agreed that the process takes time because they are using state money to conduct the investigation. Mr. Martella re-iterated that EPA tried to collect sub-slab samples of the soil gas within the Varieur School last fall, but the lack of utility plans held up the investigation.

21. Ms. Cathy Suriani (City of Pawtucket School Board) and Mr. Dylan Zelazo (City of Pawtucket Mayor's Office) expressed interest in collecting indoor air samples.

Mr. Martella (RIDEM, OWM) stated the investigation plan is to start outside with the soil gas near the building and then depending on what is seen in the soil gas, move inside the building. Mr. Martella stated that if they saw elevated concentrations in the soil gas, then they would take indoor air samples.

22. Audience member inquired about how expensive the air testing is. Could they just collect samples at each building?

Ms. Morin (RIDEM, OAR) stated that they could help out with the indoor air sampling on a limited basis, but stressed that they believe it would be prudent to collect the soil gas data prior to collection of indoor air samples. RIDEM did agree to do indoor air sampling now in residences that are near the spots where elevated chlorinated solvent soil gas levels were detected and have since met with one resident to begin that process.

Mr. Vanderslice (RIDOH) reiterated that if RIDEM feels that it is a problem, they will follow up on the problem. If remedial action needs to take place, it will take place.

23. Audience member asked why RIDEM didn't follow up in 1996 when they found that the detection limits were too high. Why is there all of a sudden a concern over the detection limits?

Mr. Martella (RIDEM, OWM) stated that there is a different awareness of soil gas and vapor intrusion now when compared to 1996. To put things in perspective, the Rhode Island Remediation Regulations were first put to law in 1996. Things have changed since 1996. Analytical methods are better. RIDEM knows better what to look for.

24. Audience member asked whether RIDEM does any regular testing in schools in Pawtucket.

Mr. Martella and Ms. Morin (RIDEM) responded that they do not.

25. Audience member stated that they are concerned about their kids and felt that RIDEM should be doing indoor air testing and radon testing at the schools in Pawtucket.

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Mr. Vanderslice (RIDOH) stated that just doing indoor air testing does not give the State much information on the overall "health" of the building. Analytical testing provides a very small, one time look at a specific listing of compounds. Without also evaluating other environmental factors such as building maintenance, chemical storage, water infiltration, etc., analytical data from an indoor air test doesn't have much value. Mr. Martella (RIDEM) stated that the RIDEM Office of Waste Management's jurisdiction is limited. We're responding to known contamination associated with the Tidewater Site and it has diverged from that. We are now responding to these chlorinated compounds in the soil gas.

26. Audience member stated that it sounds like RIDEM is saying that if we want indoor air testing, we will need to go to the City of Pawtucket and the superintendent of schools.

Mr. Martella (RIDEM, OWM) stated that they will decide whether they need to do indoor air testing or not, depending on what is observed during the investigation. We are doing this investigation in a phased approach. We don't want to get in a situation where we have indoor air data but nothing (soil gas, soil and/or groundwater data) to tie it back to.

27. Audience member inquired about the schedule. Is your schedule to have the bids in by March with drilling in July? When will you have the data back?

Mr. Martella and Ms. Morin (RIDEM) stated that they are not sure yet. The consultants will propose a schedule to us in their bid process. The plan is to have information/data back before school starts.

Mr. Vanderslice (RIDOH) stated that we are in "gray zone" in regards to the soil gas concentrations that have been detected. If we find levels that are not acceptable, the State would shut down the school. Right now, we are in a "gray zone" where compounds have been detected but the levels aren't indicative of any acute or immediate danger. Mr. Vanderslice further stated that based on the current data, they are in agreement with RIDEM's planned approach.

28. Audience member inquired about the chemicals TCE and PCE and their health effects. Would it be apparent over a six year period?

Mr. Martella and Ms. Morin (RIDEM) and Mr. Vanderslice (RIDOH) stated that it is extraordinarily uncertain. Many of our household chemicals and things we are exposed to daily have health impacts.

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29. Audience member inquired about the low bid process. If there is a bad bid, but it is the lowest, do you have to accept that bid?

Mr. Martella (RIDEM, OWM) stated that they do not have to approve the lowest bid if is unacceptable. They will award the contract to the lowest acceptable bid.

30. Mr. Zelazo (the City of Pawtucket Mayor's Office) thanked everyone for coming.

Meeting ended at 8:15 PM.