David Garrett & Associates
Engineering and Geology

August 9, 2009

John A.K. Tucker, P.E.
Consulting Engineer
P.O. Box 297
Fuquay-Varina, North Carolina 27526

RE: Results of Initial Sampling Event – July 2, 2009
Rowland LCID Landfill and Processing Facility
Ground Water and Landfill Gas Evaluation

Dear John:

This document presents a summary of sampling work performed in accordance with the SWS-approved Work Plan dated April 8, 2009. A soil-gas survey for the detection of methane was conducted at 18 locations near at the facility boundary and on-site buildings (see **Figure 1**), in addition to sampling an on-site water supply well and Perry Creek. A potable water well survey was conducted in the vicinity of the landfill (see **Figure 2**). The water samples came back as "non-detect" but methane gas was found at several probe locations – some gas levels exceeded the lower explosive limit (LEL). As such, immediate action was taken in accordance with the rules pertaining to gas detection at lined landfills, NCAC 15A 13B .1646 (4) (c), whereas rule changes for LCID facilities are currently pending. The referenced rules require the following:

> Upon detection of methane exceeding the threshold values (described above), the facility management must perform the following:
>
> - Immediately take all steps required to protect human health and notify the Division
> - Within seven days place in the operating record a report of the methane gas levels (and the location of the detection), along with a description of the response to protect human health
> - Within 60 days implement a remediation plan for the methane gas release, place a copy of the plan in the Operating Record and notify the Division that the plan has been implemented – the plan shall describe the nature and extent of the problem and the proposed remedy.

In response, the Owner and the Division were contacted and advised of the situation; the Owner then notified the staff to take precautions and reinforced an existing non-smoking policy. An advisory document was prepared (by Mr. Tucker) and placed in the Operating Record, and a proposed remedy plan is in preparation – to be reviewed with the SWS upon completion.

5105 Harbour Towne Drive • Raleigh • North Carolina • 27604
919-418-4375 (Mobile) • 919-231-1818 (Office fax) • E-mail: david@davidgarrettpe.com

Topography and Surroundings

The landfill is situated amidst old industrial properties, adjacent to an asphalt batch plant. The site is physically located just south of a topographic divide (defined by Gresham Lake Road) and drained by natural drainage features, located east and west of the facility, southward toward Perry Creek, which flows to the south and east to Gresham Lake then to the Neuse River. The drainage feature to the east is dry and does not show on either the NRCS soils map (**Figure 3A**) or the USGS topo map (**Figure 3B**). The site is surrounded by the City of Raleigh and served by paved streets, although some of the adjacent properties are not in the City limits. The area is largely served by municipal water, but extant water supply wells are known (i.e., on the project premises); potable wells are in use at some of the adjacent properties (**Figure 2**). Based on the topography, none of the water wells in the area appears to be down gradient of the facility.

Occupied structures (including commercial buildings and residences) exist within 500 feet of the ***facility boundary*** in the northwest, north, northeast and east directions. Residences are located just over 500 feet from the ***landfill boundary*** to the north, across Gresham Lake Road. Utility corridors – potential gas migration conduits – are expected along the road but no large pipelines appear to cut through the property. A sanitary sewer pipe line exists near the south property line. The facility boundary does not extend to the ground water discharge feature (Perry Creek), located approximately 100 feet south of the landfill boundary, but there is no development within the low area between the landfill and the creek – the low area is owned by Rea Construction, as is the asphalt plant to the east of the facility. Miscellaneous equipment and debris have been stored in the low area, some of which may have been buried according to staff at the subject facility. No investigation of the Rea property has been undertaken or reviewed in context with this work. The City has been contacted regarding the gas detections pursuant to determining if alternate sources exist, i.e., the sanitary sewer pipeline.

Property Information

The following information came from the Wake County IMAPS web site (see **Figure 4**):

Map Coordinates	X: 2122362.3507652692
	Y: 776028.0174716837
PIN Number	1727262194 (landfill parcel)
Zoning	IND-1 (allows landfills)
Acreage	28.38 (three parcels)

Brief Project History

The Rowland landfill began in the 1980's as backfill for a quarry dating to the 1960's. The landfill was formerly operated under a permit from Wake County and has recently come under regulation by the NC DENR Division of Waste Management (DWM) Solid Waste Section (Permit #92O-LCID). At present, the Section is reviewing the old Wake County permits for consistency with current rules, requiring permit updates as needed. A ground water assessment was performed in the 1990's under the auspices of the NC DENR DWM Superfund Section.

Correspondence dated between 2001 and 2005 from the Superfund Section indicate the landfill had been assigned "No Further Action" status in the Inactive Hazardous Sites Program and recommended a discontinuation of monitoring and abandonment of the monitoring wells. Abandonment records were presented to (and acknowledged by) the Superfund Section, upon which I concluded in my letter to you dated July 15, 2008 (**Attachment 1**) that the facility appears to have complied with the regulatory requirements at the time. Based on the backup correspondence, there does not appear to be cause for further concern regarding ground water impacts, nor does the facility appear to constitute a threat to the environment or to the public.

Regulatory Concerns

During our February 24, 2009 meeting, Solid Waste Section (SWS) staff expressed a desire to confirm the aforementioned conclusions prior to renewing the Permit to Operate, scheduled for later this year. Two main concerns need to be investigated:

1) Evaluate ground water conditions to verify the findings of the earlier assessment, i.e., demonstrate that there is still no apparent impact on the ground water, by monitoring on-site streams and the on-site water supply well, and
2) Monitor for methane in accordance with Solid Waste Section rules pertaining to threshold limits for occupied structures on the site and at the property line.

Ground water monitoring is not normally required at LCID landfills, but this is a special case due to the historical operation of the landfill – the whole class of "demolition" landfills was eliminated by a 1998 rule change, and most of the existing landfills that planned to continue operating into 1998 and beyond – those regulated by the SWS at least – were required to demonstrate compliance with the post-1998 regulations, including the potential for ground water impacts and verifying that flow conditions are relatively well understood. Methane monitoring has neither been required historically at LCID landfills, but the past use of the site warrants confirmation monitoring – a portion of the site was once been fitted with gas extraction wells for methane recovery demonstration project, but this activity was discontinued.

Work Plan Summary

The work plan dated April 8, 2009 is summarized below:

<u>Area Water Well Reconnaissance</u>

- Conduct a survey or identify water wells in use within 1500 feet of the facility

- Prepare a map showing ground water flow directions and identified wells

<u>Ground Water Monitoring</u>

- Conduct four quarterly samples of ground water from the on-site water supply well and from the nearest active stream – either the "east" drainage feature (preferred, if running), or from Perry Creek – locations will be selected based on ambient conditions

- Analyze the samples for Appendix I parameters and report results from each event using NC DENR Solid Waste Section reporting protocols

- Prepare a summary report after four quarters are completed with recommendations for amending the monitoring program or discontinuing the sampling, as may be appropriate

Methane Monitoring

- Finalize the methane sampling locations based on proximity and direction of occupied structures, utilities, natural barriers (i.e., topography and surface streams), and the facility boundary

- Conduct four quarterly rounds of methane sampling using conventional soil-gas detection monitoring techniques, i.e., a bar-hole punch test conducted to depths of approximately 3 feet* using a detection meter specifically calibrated to detect methane (i.e., a Gem 5000)

- Monitor on-site buildings using the Gem 5000 equipment

- Review the methane sampling results with the Solid Waste Section and evaluate data to determine if additional testing is warranted**

- Prepare a final report with findings and recommendations.

* This depth is approximately equal to most shallow utilities along a roadway shoulder, i.e., the north property boundary; driving the bar-hole punch may be assisted with a backhoe.

**A second stage of monitoring might be warranted, or perhaps a permanent monitoring program, possibly consisting of continuous gas alarms in the buildings and future gas monitoring probes (similar to ground water monitoring wells, except these do not penetrate the water table). The methane sampling locations might need to be shifted to determine the gas migration patterns and concentrations. It is not prudent to install permanent methane monitoring probes until gas has been detected and a migration pattern has been tentatively established to guide the selection of probe locations. It is highly likely that if any gas is migrating from the landfill, it has been doing so for many years – steady state conditions would have been achieved – and the gas will show up at depths reachable with the bar-hole punch test.

Departure from Work Plan

The April 8, 2009 Work Plan to date has been followed exactly, except that in consideration of the gas detections, an interim report (this document) was prepared. This information is to be discussed with Solid Waste officials and, if warranted, adjustments may be made to future sampling events. A landfill gas remediation plan is in preparation. Please refer to the **Recommendations** section of this report.

Data Presentation

Tables 1 and 2 present the results of the gas and ground water sampling, respectively. Also see **Figure 1** for the methane survey results. Upon completing four quarterly sampling events, a baseline ground water sampling report will be prepared following the SWS format protocols.

Methane Monitoring Results

The results of the soil-gas survey for the detection of methane are shown on **Figure 1**. Soil-gas was analyzed at 18 locations near at the facility boundary and within on-site buildings, using a Gem 5000 portable gas detection meter specifically calibrated for methane. It should be noted that, according to the meter supplier and manufacturer, any of the light single-chain hydrocarbons (methane, ethane, propane, butane) could potentially trigger a detection, but these are all potentially explosive gases. Those authorities are confident that the heavier, more complex petroleum-based hydrocarbons would be filtered out and not produce detection, whereas the equipment is designed to make the distinction. For future sampling events, there is another filter we that can be added to the sensor probe (see **Recommendations**).

Methane was detected at 10 of the 18 sampling locations. These locations were flagged in the field and surveyed with a hand-held GPS so they could be revisited for subsequent sampling. The pattern of the detections appears to be weighted toward the east side of the facility, i.e., along a shared property line with the asphalt plant – again, no implication of the asphalt plant is implied at this time. The history of the subject site, according to the Owner, includes a methane recovery demonstration project conducted some 25 or more years ago – a trench fill was constructed near the northwest corner of the facility within an old quarry site, i.e., the area that is now the stockpile area in the processing area (see **Figure 1**), which extended an original thickness of approximately 40 feet. There was a significant decrease in the top elevation of the demonstration pile as gas was extracted, but further details are not known at this time.

The data for this study were collected by drilling a 3-foot deep boring into the soil using an apparatus designed for drilling into concrete slabs, equipped with a 36-inch long, 1-inch diameter masonry bit. This method offered advantages over conventional drive-bar borings, e.g., the masonry bit is less prone to "refusing" on obstacles (rocks, roots, or debris), and the sidewalls of the boring do not become compacted. An instantaneous reading was taken with the Gem 5000 meter, then the boring was allowed to vent for 2 minutes and another reading was taken – both results are plotted on **Figure 1**. None of the borings encountered water. The borings stayed open for a period of at least 24 hours and could be observed in that time – a slight "rotten-egg" odor was detected at B-5 after 24 hours.

On **Figure 1**, at the front entrance on Gresham Lake Road, B-17 showed readings of 2% and 0, instantaneous and following two minutes, respectively. The numbers represent % LEL, i.e., the lower explosive limit, which is a concentration of 5% methane in standard atmospheric conditions – at 100% LEL ***in air*** a potentially explosive condition exists. This is the basis of the SWS rules, which allow a maximum concentration of 100% LEL ***in soil*** at the facility boundary and 25% LEL within an occupied structure. Progressing south toward the Receiving Office (see **Figure 1**), both readings were 0, and further south at B-9 the readings were 2% and 0. Back to the west of B-9 the readings at B-10 (within the interior of the facility, along the boundary between the LCID and the processing area) the readings were 100% instantaneous and 17% after two minutes. Further west, both readings were 0 at B-11 and at B-12 (along the west side of the facility). Further north, the readings were 8% and 2% at B-15, near the northwest corner of the facility, and 5% and 0 at B-16, located at the north boundary (along Gresham Lake Road) and near an old house on the premises used as office and/or storage space. See **Conclusions**.

The highest methane concentrations were detected to the east of the LCID, within a drainage feature believed to be in natural ground (not part of the former quarry). Instantaneous readings of 100% LEL were detected at B-5, B-6, and B-7 (see Figure 1), whereas the two-minute readings decreased to 42% LEL at B-5 and 56% LEL at B-6 but remained at 100% LEL at B-7. The very next sampling location, B-4, showed both readings as 0; the same was encountered at B-3, located along the southern footprint and close to the property line. Readings at B-2 were 11% LEL instantaneous and 2% LEL after two minutes, 0 at B-1 (both readings); at B-14 the readings were 14% LEL instantaneous and 0 after two minutes. The sanitary sewer pipeline that runs along the south facility boundary is under consideration as a possible conduit, although no readings were taken on the adjacent asphalt plant property to the east. All standing water was observed for gas bubbles, including small puddles on the sewer right-of-way, still portions of Perry Creek, and the wet drainage feature to the west of the facility – no discernable gas bubbles indicative of landfill gas migration were detected. There were no standing water bodies to the east, near the higher methane concentrations. Refer to the following **Conclusions** section.

Ground Water Sampling Results

One of two on-site water wells (located in the north east corner of the facility (see **Figure 1**) and a still pool in Perry Creek just south of the LCID were sampled and analyzed for Appendix I parameters. The well sample was pulled from an outdoor tap – this well was selected because of its frequent use for dust control and possibly drinking. The samples were preserved and shipped to SGS Environmental Services in Wilmington, North Carolina, using appropriate chain-of-custody protocols. The laboratory sample report is attached as **Attachment 2**. The on-site well sample was analyzed for 50 organic constituents; all were below detection limits except tetrachloroethene, detected at 0.210 micrograms/liter, which is below the Solid Waste Section Limit of 1.0 micrograms/liter. The sample from Perry Creek was also non-detect on all 50 constituents except toluene, detected at 0.120 micrograms/liter, which is below the Solid Waste Section Limit of 1.0 micrograms/liter. The results at the well sample could have been a result of the historic landfill gas extraction demonstration project; the sample from Perry Creek is possibly due to the nearby interstate highway or a number of potential upstream sources. These results suggest no ground water impact exceeding either the 2L standards or the Solid Waste Section Limits that can be attributed to the former demolition landfill operation – consistent with the “no further action” status assigned by the Division of Waste Management in 2001.

Conclusions

- Methane detected at several soil-gas borings approaches or exceeds the maximum of 100% LEL (lower explosive limit) mandated by the Solid Waste rules.

- The lower explosive limit for methane is 5% methane in air; the readings taken indicate methane concentrations in the soil – concentrations in air are expected to be lower due to diffusion of methane into the atmosphere.

- Higher detected methane levels are on the east side of the facility, along a shared property line with an asphalt plant, with a sanitary sewer located nearby.

- Methane is heavier than air and tends to concentrate in low places – the shared property line occurs along a deep drainage ravine, where the gas could concentrate in the air.

- The methane values were well below the LEL in soil-gas borings located near the Receiving Office and another on-site building that is used either for storage or offices.

- The presence of methane is likely a chronic condition that has existed for years – based on experience it would take years for concentrations to build up to the LEL in the soils.

- The source has not been defined – purposeful activities that generated methane were conducted years ago, but the decomposition of older "demolition" wastes or more recent LCID wastes may be the source of methane; potential off-site sources exist, as well.

- The Owner and staff for the LCID facility were duly notified and appropriate documentation has been placed into the Operating Record; a methane mitigation plan is under development.

- The risk of a potential fire or explosion is small (but real); the facility staff was advised not to smoke in the facility, to avoid open fires, and not to enter the drainage feature unnecessarily.

- There does not appear to be any immediate risk to the staff or the general public, as long as proper precautions are taken, but conditions are such that further investigation and, perhaps, corrective action, is warranted.

- The ground water and stream sampling data support earlier conclusions by the Division of Waste Management that the facility is not causing a ground water impact that exceeds the 2L standards or the Solid Waste Section Limits.

- Ground water at the facility flows toward Perry Creek, i.e., the regional discharge feature; area wells are up gradient of the LCID and there is little potential for water well development between the facility boundary and the discharge feature.

- No expansion of the ground water monitoring is warranted; consideration should be given to discontinuing the ground water sampling in favor of more detailed methane evaluation.

Recommendations

- The next round of soil-gas monitoring should expand the investigation to include the adjacent asphalt plant property and the sanitary sewer easement to determine if off-site gas migration is occurring – this could help identify potential other sources of the gas.

- A map of the sanitary sewer alignments (and other underground utilities) in the vicinity should be procured and these alignments should be investigated via the same soil-gas surveying techniques – trenches along pipe lines could be conduits to local buildings.

- The City and the adjacent property owner should be notified about the potential for landfill gas migration and to secure permission to access those properties.

- Future gas surveys might include additional filters and/or gas sampling and laboratory analysis to help determine the source of the gas – sewer gas and landfill gas have slightly different compositions, both different from vapors generated by petroleum or other compounds that may have been introduced to the subsurface either on-site or off-site.

- The landfill Owner and staff should be vigilant about enforcing the "No Smoking" policy and restricting access to the drainage ravine except as necessary.

- The staff should look for signs of distress on the landfill slopes, e.g., cracks, sloughs, steaming or smoking vents, dark stains or dead vegetation that might indicate a fire in progress or landfill gas migration toward the surface.

- Permanent explosive gas detectors with alarms should be placed in the occupied buildings – these are available at most hardware stores at a relatively low cost.

- Based on the ground water sampling results, further ground water sampling and analysis is not warranted and the ground water sampling component of this evaluation should be discontinued.

- A revised soil-gas sampling plan should be developed and reviewed with the Division of Waste Management, in conjunction with one or more remedial action plans, prior to the next quarterly sampling event.

Closing

This work will continue with the next sampling event in early October 2009, unless an amendment is made as a result of our review of these data with the Division of Waste Management. Any future changes to the Work Plan will be documented.

Please contact me if you have any questions or if I can be of further assistance.

Cordially, yours,

G. David Garrett, P.G., P.E.

cc: Sylvia Rowland – Owner

Figure 1 – Methane Sampling Results, not to scale

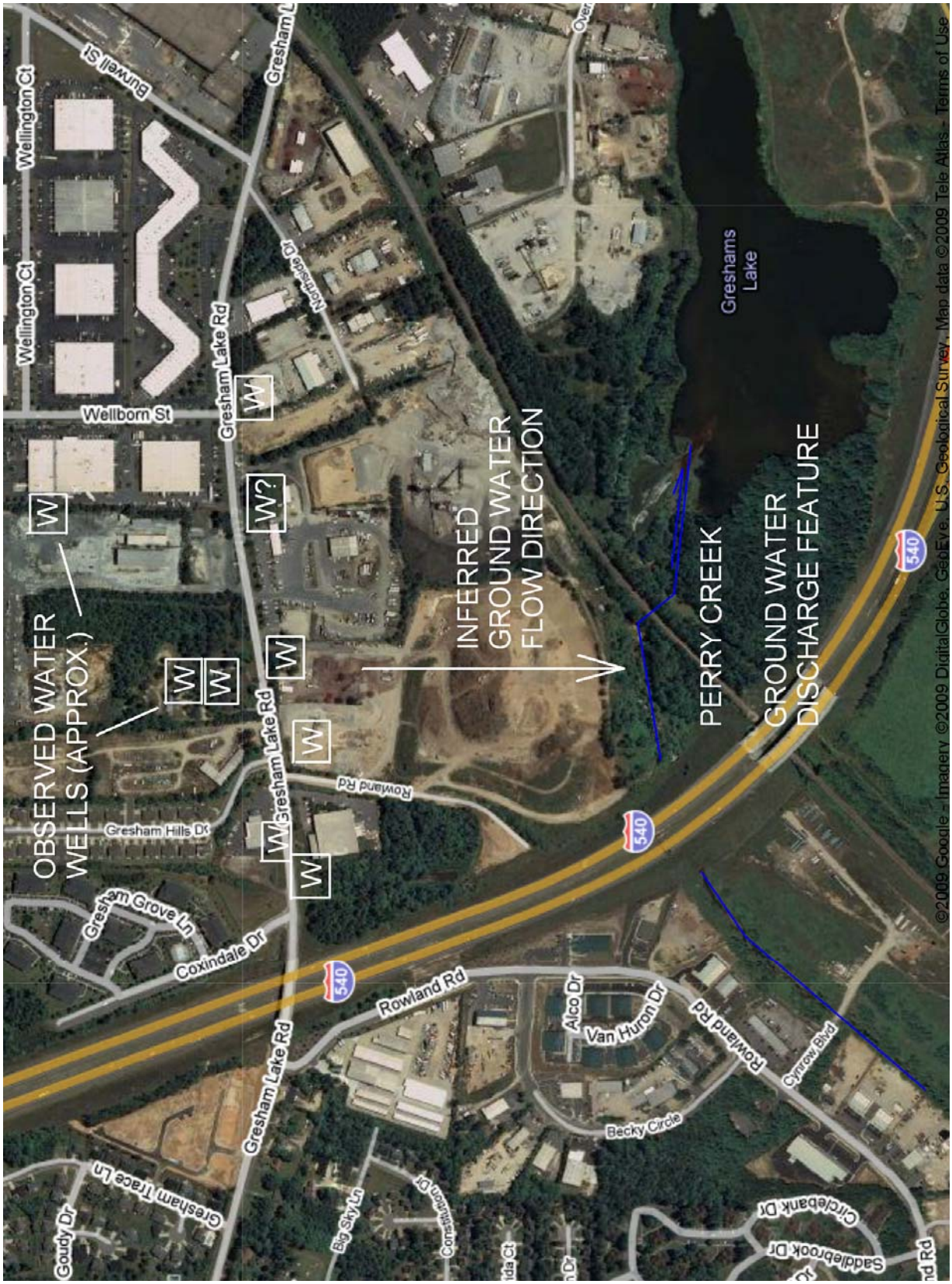

Figure 2 – Vicinity Water Well Survey and Ground Water Flow Direction

Figure 3A – NRCS Soils Map, from Wake County GIS, not to scale

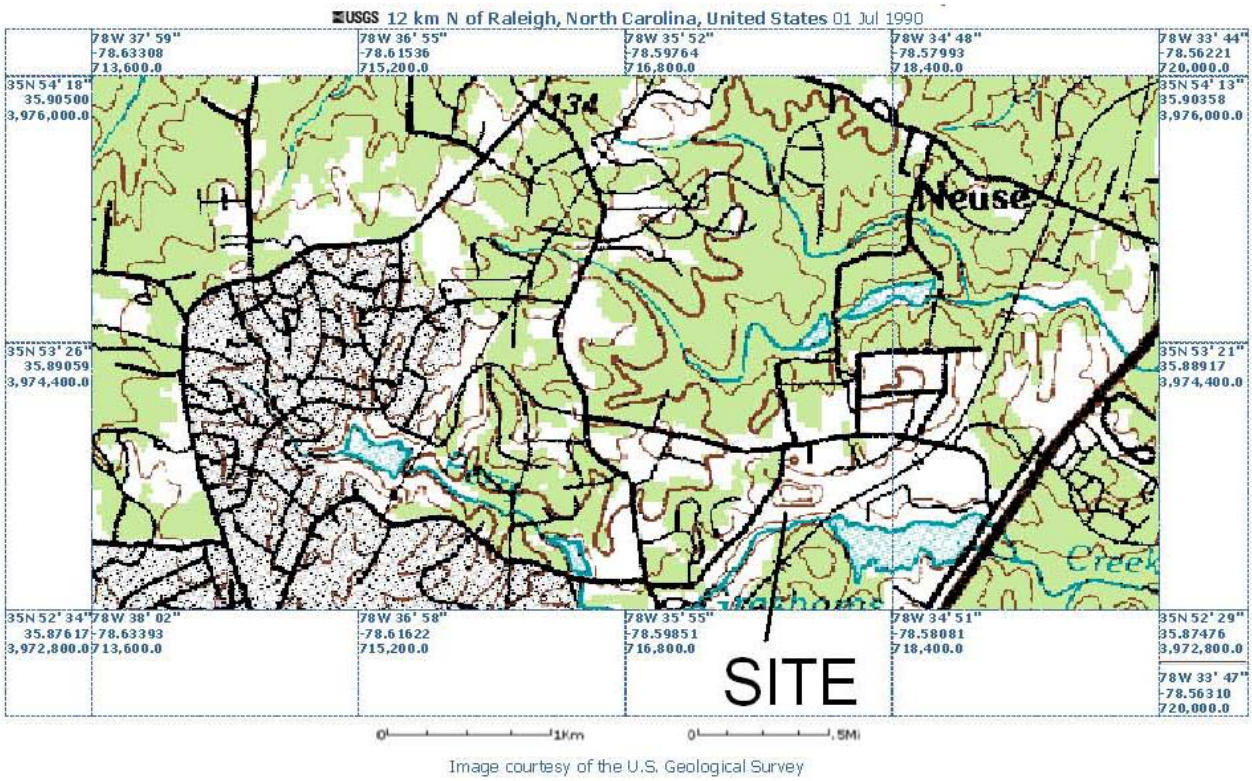

Figure 3B – USGS Topo Map, from Terraserver (date unknown)

Attachment 1

Letter from David Garrett, P.G., P.E., dated July 15, 2008

and backup correspondence from the

Inactive Hazardous Sites Program manager,
NC DENR Division of Waste Management, Superfund Section

David Garrett & Associates
Engineering and Geology

July 15, 2008

John A.K. Tucker, P.E.
Consulting Engineer
P.O. Box 297
Fuquay-Varina, North Carolina 27526

RE: Ground Water File Review for Rowland Landfill

Dear John:

On June 23, 2008 you and I visited the offices of Rowland Landfill located on Gresham Lake Road in Raleigh, NC, and reviewed several documents pertaining to a prior ground water investigation at the site. That investigation, ended ca. 2004, was apparently in conjunction with an investigation of the adjacent Rea Construction asphalt plant, although no documents for the asphalt plant were present, nor have any documents pertaining to the asphalt been reviewed by me. I understand that the status of the ground water investigation came into question regarding a permit renewal application (Permit #92O-LCID), which you previously submitted to NCDENR Division of Waste Management, Solid Waste Section, Permitting Branch.

The documents I reviewed consist of the following (attached, in chronological order):

1. December 5, 2001 – No Further Action (NFA) request from Keith Snavely of the NCDENR Division of Waste Management, Superfund Section, Inactive Sites Branch, pertaining to the need for remedial action based on the July 21, 2001 sampling results for monitoring wells MW-1 through MW-7 and surface water sampling location SS-1. All detections were noted below the State's 2L ground water protection standards, except chloroform detected above the 2L standard (but below the US-EPA maximum contaminant level for drinking water) at MW-1, which the letter stated was suspected to be a laboratory contaminant. The letter stated that the Rowland Landfill site had been assigned "No Further Action" status in the Inactive Hazardous Sites Program.

2. November 22, 2004 – No Further Action (NFA) request from Keith Snavely of the NCDENR Division of Waste Management, Superfund Section, Inactive Sites Branch, pertaining to the discontinuation of monitoring based on the September 2, 2004 sampling results for monitoring well MW-4 (*sic*). All detections were noted below the State's 2L ground water protection standards. The letter stated that the site would remain in the "No Further Action" category in the Inactive Hazardous Sites Program. The letter advised Natural Power, Inc. (Rowland Landfill) to abandon all wells in accordance with North Carolina regulations and to notify NCDENR with documentation when the well abandonment is completed.

5105 Harbour Towne Drive • Raleigh • North Carolina • 27604
919-418-4375 (Mobile) • 919-231-1818 (Office fax) • E-mail: david@davidgarrettpe.com

3. May 23, 2005 – Report of Groundwater Monitoring Well Abandonment at Rowland Landfill, with abandonment records and a map showing locations for six monitoring wells (MW-2 through MW-7) on the landfill premises. No record was reviewed for the abandonment of MW-1, located close to Gresham Lake Road on what appears to be an adjacent land parcel.

4. October 13, 2005 – No Further Action (NFA) request from Keith Snavely of the NCDENR Division of Waste Management, Superfund Section, Inactive Sites Branch, acknowledging the abandonment of the monitoring wells. The letter confirmed that the site would remain in the "No Further Action" category in the Inactive Hazardous Sites Program.

Based on the foregoing information, the records indicate that the site poses no concern for local ground water supplies or surface water quality. The Owners of Rowland Landfill have complied with all NCDENR requirements and brought the ground water investigation to a positive conclusion. The "No Further Action" status signifies that the Division of Waste Management does not consider this site to constitute a threat to the environment or the public at large.

Based on my site visit, I conclude that the current waste operations are orderly and appear to be compliant with NCDENR regulations regarding waste acceptance, placement and coverage. The site appears to be well managed and is proceeding toward a near-future completion of the current phase, which will alleviate aesthetic concerns visible to the public from I-540.

I concur with the Division's evaluation regarding the ground water and, given the nature of the permitted waste disposal activities, i.e., Land Clearing Inert Debris, I foresee no reason that the permit should not be renewed or that the site should require future ground water monitoring.

Please contact me if you have any questions or if I can be of further assistance.

Cordially, yours,

G. David Garrett, P.G., P.E.

Attachments 1 – 4, reviewed documents

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

MICHAEL F. EASLEY, GOVERNOR
WILLIAM G. ROSS, JR., SECRETARY
DEXTER R. MATTHEWS, INTERIM DIRECTOR

NCDENR

COPY

December 5, 2001

Ms. Cynthia R. McCoy, Vice President
Natural Power, Inc.
2730 Rowland Road, Suite 106
Raleigh, North Carolina 27615

RE: No Further Action Request
Rowland Landfill
Raleigh, Wake County

Dear Ms. McCoy:

I reviewed the November 13, 2001 Monitoring Well Test Results report for the July 21, 2001 groundwater and surface water sampling event. The groundwater samples from all monitoring wells (MW-1 through MW-7) are below 15A NCAC 2L groundwater standards for volatiles, semi-volatiles, and metals with the exception of chloroform detected in MW-1. In addition, surface water sample (SS-1) is below laboratory detection for these constituents in regards to surface water standards. Chloroform was detected in water supply well MW-1 at a concentration of 4.3 parts per billion (ppb) which exceeds the 2L groundwater standard of 0.19 ppb. However, this concentration is below the maximum contaminant level of 100 ppb for drinking water, and has not been present in any past groundwater sampling events. Therefore, it is suspected to be a lab contaminant and not a concern.

Since the groundwater samples from the monitoring wells and surface water sample from Perry Creek are either below the NCAC 2L groundwater standard or surface water standards for volatiles, semi-volatiles, and metals the site is being assigned "No Further Action" status in the Inactive Hazardous Sites Program. No further remedial action will be required at the Site unless the Department later determines, based on new information or information not previously provided to the Department, that the site has not been remediated to current standards or that the Department was provided with false or incomplete information.

If you have any further questions, I can be reached at (919) 733-2801, ext 282.

Sincerely,

Keith Snavely

Keith Snavely, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

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North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

RECEIVED 11/26/04

November 22, 2004

Ms. Cynthia R. McCoy, Vice President
Natural Power, Inc.
2730 Rowland Road, Suite 106
Raleigh, North Carolina 27615

RE: No Further Action Request
Follow-up groundwater sampling
Rowland Landfill, Raleigh, Wake County

Dear Ms. McCoy:

I have reviewed the Groundwater Characterization Report (Report) for the subject site received in our office on November 12, 2004. Based on the Report's September 2, 2004 sampling event, the groundwater from monitoring well MW-4 was analyzed for volatile organic and semi-volatile organic compounds, metals, and total suspended solids. All of these constituents were found to be either below laboratory detection limits or below the 15A NCAC 2L Groundwater Standards.

Since this Report indicates that the groundwater constituents in MW-4 are below the groundwater standards, the subject site remains a No Further Action in the Inactive Hazardous Sites Inventory as it was assigned on December 5, 2001.

Now that all monitoring wells at the subject site are below the 2L groundwater standards and the site is a no further action, Natural Power, Inc. should abandon all monitoring wells at the subject site in accordance 15A NCAC 2C Well Construction Standards and notify us by letter when that the abandonment procedure has been completed. A copy of well abandonment documentation should be attached.

If you have any further questions about this site, please contact me at (919) 733-2801, ext. 282.

Sincerely,

Keith Snavely

Keith Snavely, Hydrogeologist
Inactive hazardous Sites Branch
Superfund Section

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NCDENR

North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

October 13, 2005

Ms. Cynthia R. Mc Coy, Vice President
Natural Power, Inc.
2730 Rowland Road, Suite 106
Raleigh, North Carolina 27615

RE: No Further Action Request
Follow-up groundwater sampling
Rowland Landfill, Raleigh, Wake County

Dear Ms. McCoy:

On November 22, 2004, I sent you a letter requesting that Rowland Landfill abandon all monitoring wells at the subject site in accordance with 15A NCAC 2C well construction standards and notify us by letter when the abandonment procedure has been completed. On May 23, 2005, Tierra, Inc. sent us copies of the well abandonment records following the abandonment procedures of the monitoring wells conducted on May 9, 2005.

Since these records indicate all wells have been abandoned at the site as requested, the Inactive Hazardous Sites Branch confirms that this site remains a No Further Action in the Inactive Hazardous Sites Inventory as it was assigned on December 5, 2001. If you have any further questions about this site, I can be reached at 919-508-8479.

Sincerely,

Keith Snavely

Keith Snavely, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

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Attachment 2

Laboratory analytical data for samples acquired in July 2009
from the on-site well and Perry Creek

Mr. David Garrett
Environmental Field Management
5105 Harbour Towne Dr.
Raleigh NC 27604

Report Number: G1081-1

Client Project: Rowland LF

Dear Mr. Garrett:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.

Lori Lockamy 14 July 2009

Project Manager Date
Lori Lockamy

Case Narrative
Environmental Field Management
SGS Project: **G1081-1**
Project Name: **Rowland LF**

SGS Environmental Services Inc.

July 14, 2009

- Two water samples were accepted into the laboratory on July 2nd; 2009 at 1000 for analyses as indicated on the chain of custody. The samples were received in good condition, at a temperature range of 2.7°C. This addendum contains the 625 data with the full compound list reported as per client request.
- All extractions and analyses were completed within holding time limits, with the following quality control exceptions.

8260 Analysis

- The associated **Trip Blank**, although not listed on the enclosed COC, was analyzed and Methylene Chloride was detected below the reporting limit (RL), but above the method detection limit (MDL). Methylene Chloride was also detected in both samples at similar concentration levels and have been 'J' flagged. These detections may be attributed to the background concentration found in the **Trip Blank**.

Craig R Tronzo Date 7/14/09
Craig R Tronzo
Data Review

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are 10% < %R < LCL; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:
1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.021808.4

SGS North America, Inc.

Results for Volatiles
by GCMS 8260 Appendix I

Client Sample ID: Perry Creek-070109
Client Project ID: Rowland LF
Lab Sample ID: G1081-1-1A
Lab Project ID: G1081-1

Analyzed By: MJC
Date Collected: 7/1/2009 14:55
Date Received: 7/2/2009
Matrix: Water
Sample Amount: 5 mL

Compound	Result UG/L	SWSL Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	100	2.18	1	7/12/2009	
Acetonitrile	BQL	55.0	2.58	1	7/12/2009	
Acrylonitrile	BQL	200	2.93	1	7/12/2009	
Benzene	BQL	1.00	0.0650	1	7/12/2009	
Bromochloromethane	BQL	3.00	0.101	1	7/12/2009	
Bromodichloromethane	BQL	1.00	0.0760	1	7/12/2009	
Bromoform	BQL	3.00	0.120	1	7/12/2009	
Bromomethane	BQL	10.0	0.133	1	7/12/2009	
2-butanone	BQL	100	0.544	1	7/12/2009	
Carbon disulfide	BQL	100	0.0690	1	7/12/2009	
Carbon tetrachloride	BQL	1.00	0.0870	1	7/12/2009	
Chlorobenzene	BQL	3.00	0.0820	1	7/12/2009	
Chloroethane	BQL	10.0	0.106	1	7/12/2009	
Chloroform	BQL	5.00	0.0790	1	7/12/2009	
Chloromethane	BQL	1.00	0.146	1	7/12/2009	
Dibromochloromethane	BQL	3.00	0.0900	1	7/12/2009	
1,2-Dibromo-3-chloropropane	BQL	13.0	1.21	1	7/12/2009	
Dibromomethane	BQL	10.0	0.113	1	7/12/2009	
1,2-Dibromoethane	BQL	1.00	0.124	1	7/12/2009	
1,2-Dichlorobenzene	BQL	5.00	0.127	1	7/12/2009	
1,3-Dichlorobenzene	BQL	5.00	0.0810	1	7/12/2009	
1,4-Dichlorobenzene	BQL	5.00	0.0790	1	7/12/2009	
t-1,4-Dichloro-2-butene	BQL	50.5	0.630	1	7/12/2009	
1,1-Dichloroethane	BQL	5.00	0.0740	1	7/12/2009	
1,1-Dichloroethene	BQL	5.00	0.0890	1	7/12/2009	
1,2-Dichloroethane	BQL	1.00	0.0790	1	7/12/2009	
cis-1,2-Dichloroethene	BQL	5.00	0.0650	1	7/12/2009	
t-1,2-dichloroethene	BQL	5.00	0.0890	1	7/12/2009	
1,2-Dichloropropane	BQL	1.00	0.0940	1	7/12/2009	
1,1-Dichloropropene	BQL	5.00	0.0720	1	7/12/2009	
cis-1,3-Dichloropropene	BQL	1.00	0.0760	1	7/12/2009	
t-1,3-Dichloropropene	BQL	1.00	0.0760	1	7/12/2009	
Ethylbenzene	BQL	1.00	0.0770	1	7/12/2009	
2-hexanone	BQL	50.0	0.720	1	7/12/2009	
Iodomethane	BQL	10.0	0.0420	1	7/12/2009	
Methylene chloride	BQL	1.00	0.0980	1	7/12/2009	
4-methyl-2-pentanone	BQL	100	0.550	1	7/12/2009	
Styrene	BQL	1.00	0.0850	1	7/12/2009	
1,1,1,2-Tetrachloroethane	BQL	5.00	0.0900	1	7/12/2009	
1,1,2,2-Tetrachloroethane	BQL	3.00	0.115	1	7/12/2009	
Tetrachloroethene	BQL	1.00	0.0690	1	7/12/2009	
Toluene	**0.120**	1.00	0.0760	1	7/12/2009	J
Trichloroethene	BQL	1.00	0.0540	1	7/12/2009	
1,1,1-Trichloroethane	BQL	1.00	0.0540	1	7/12/2009	
1,1,2-Trichloroethane	BQL	1.00	0.182	1	7/12/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260 Appendix I

Client Sample ID: Perry Creek-070109
Client Project ID: Rowland LF
Lab Sample ID: G1081-1-1A
Lab Project ID: G1081-1

Analyzed By: MJC
Date Collected: 7/1/2009 14:55
Date Received: 7/2/2009
Matrix: Water
Sample Amount: 5 mL

Compound	Result UG/L	SWSL Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Trichlorofluoromethane	BQL	1.00	0.111	1	7/12/2009	
1,2,3-Trichloropropane	BQL	1.00	0.120	1	7/12/2009	
Vinyl acetate	BQL	50.0	0.100	1	7/12/2009	
Vinyl chloride	BQL	1.00	0.149	1	7/12/2009	
Total Xylene	BQL	5.00	0.0650	1	7/12/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	10	10	100
Toluene-d8	10	10.2	102
4-Bromofluorobenzene	10	9.64	96

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Analyst: _____

Reviewed By: _____

SGS North America, Inc.

Results for Volatiles
by GCMS 8260 Appendix I

Client Sample ID: Supply Well-070109
Client Project ID: Rowland LF
Lab Sample ID: G1081-1-2A
Lab Project ID: G1081-1

Analyzed By: MJC
Date Collected: 7/1/2009 16:00
Date Received: 7/2/2009
Matrix: Water
Sample Amount: 5 mL

Compound	Result UG/L	SWSL Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	100	2.18	1	7/12/2009	
Acetonitrile	BQL	55.0	2.58	1	7/12/2009	
Acrylonitrile	BQL	200	2.93	1	7/12/2009	
Benzene	BQL	1.00	0.0650	1	7/12/2009	
Bromochloromethane	BQL	3.00	0.101	1	7/12/2009	
Bromodichloromethane	BQL	1.00	0.0760	1	7/12/2009	
Bromoform	BQL	3.00	0.120	1	7/12/2009	
Bromomethane	BQL	10.0	0.133	1	7/12/2009	
2-butanone	BQL	100	0.544	1	7/12/2009	
Carbon disulfide	BQL	100	0.0690	1	7/12/2009	
Carbon tetrachloride	BQL	1.00	0.0870	1	7/12/2009	
Chlorobenzene	BQL	3.00	0.0820	1	7/12/2009	
Chloroethane	BQL	10.0	0.106	1	7/12/2009	
Chloroform	BQL	5.00	0.0790	1	7/12/2009	
Chloromethane	BQL	1.00	0.146	1	7/12/2009	
Dibromochloromethane	BQL	3.00	0.0900	1	7/12/2009	
1,2-Dibromo-3-chloropropane	BQL	13.0	1.21	1	7/12/2009	
Dibromomethane	BQL	10.0	0.113	1	7/12/2009	
1,2-Dibromoethane	BQL	1.00	0.124	1	7/12/2009	
1,2-Dichlorobenzene	BQL	5.00	0.127	1	7/12/2009	
1,3-Dichlorobenzene	BQL	5.00	0.0810	1	7/12/2009	
1,4-Dichlorobenzene	BQL	5.00	0.0790	1	7/12/2009	
t-1,4-Dichloro-2-butene	BQL	50.5	0.630	1	7/12/2009	
1,1-Dichloroethane	BQL	5.00	0.0740	1	7/12/2009	
1,1-Dichloroethene	BQL	5.00	0.0890	1	7/12/2009	
1,2-Dichloroethane	BQL	1.00	0.0790	1	7/12/2009	
cis-1,2-Dichloroethene	BQL	5.00	0.0650	1	7/12/2009	
t-1,2-dichloroethene	BQL	5.00	0.0890	1	7/12/2009	
1,2-Dichloropropane	BQL	1.00	0.0940	1	7/12/2009	
1,1-Dichloropropene	BQL	5.00	0.0720	1	7/12/2009	
cis-1,3-Dichloropropene	BQL	1.00	0.0760	1	7/12/2009	
t-1,3-Dichloropropene	BQL	1.00	0.0760	1	7/12/2009	
Ethylbenzene	BQL	1.00	0.0770	1	7/12/2009	
2-hexanone	BQL	50.0	0.720	1	7/12/2009	
Iodomethane	BQL	10.0	0.0420	1	7/12/2009	
Methylene chloride	BQL	1.00	0.0980	1	7/12/2009	
4-methyl-2-pentanone	BQL	100	0.550	1	7/12/2009	
Styrene	BQL	1.00	0.0850	1	7/12/2009	
1,1,1,2-Tetrachloroethane	BQL	5.00	0.0900	1	7/12/2009	
1,1,2,2-Tetrachloroethane	BQL	3.00	0.115	1	7/12/2009	
Tetrachloroethene	**0.210**	1.00	0.0690	1	7/12/2009	J
Toluene	BQL	1.00	0.0760	1	7/12/2009	
Trichloroethene	BQL	1.00	0.0540	1	7/12/2009	
1,1,1-Trichloroethane	BQL	1.00	0.0540	1	7/12/2009	
1,1,2-Trichloroethane	BQL	1.00	0.182	1	7/12/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260 Appendix I

Client Sample ID: Supply Well-070109
Client Project ID: Rowland LF
Lab Sample ID: G1081-1-2A
Lab Project ID: G1081-1

Analyzed By: MJC
Date Collected: 7/1/2009 16:00
Date Received: 7/2/2009
Matrix: Water
Sample Amount: 5 mL

Compound	Result UG/L	SWSL Limit UG/L	MDL UG/L	Dilution Factor	Date Analyzed	Flag
Trichlorofluoromethane	BQL	1.00	0.111	1	7/12/2009	
1,2,3-Trichloropropane	BQL	1.00	0.120	1	7/12/2009	
Vinyl acetate	BQL	50.0	0.100	1	7/12/2009	
Vinyl chloride	BQL	1.00	0.149	1	7/12/2009	
Total Xylene	BQL	5.00	0.0650	1	7/12/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	10	9.82	98
Toluene-d8	10	10.1	101
4-Bromofluorobenzene	10	9.73	97

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Analyst: _____

Reviewed By: _____

Results for Metals

Client Sample ID:	Perry Creek-070109	Analyzed By:	PSW
Client Project ID:	Rowland LF	Date Collected:	7/1/2009 14:55
Lab Sample ID:	G1081-1-1	Date Received:	7/2/2009
Lab Project ID:	G1081-1	Matrix:	WATER
ICP InitWt/Vol:	50 mL Final Vol: 50 mL		
Hg InitWt/Vol:	40 mL Final Vol: 57 mL		
Prep Batch:	14589 14592		

Metals	Result	SWSL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	0.00600	0.00295	1	MG/L	6010B	7/8/2009	
Arsenic	BQL	0.0100	0.00491	1	MG/L	6010B	7/8/2009	
Barium	**0.0724**	0.100	0.00206	1	MG/L	6010B	7/8/2009	JB
Beryllium	BQL	0.00100	0.000442	10	MG/L	6020	7/10/2009	
Cadmium	BQL	0.00100	0.000158	10	MG/L	6020	7/10/2009	
Chromium	**0.00258**	0.0100	0.00146	1	MG/L	6010B	7/8/2009	JB
Cobalt	BQL	0.0100	0.00172	1	MG/L	6010B	7/8/2009	
Copper	**0.00535**	0.0100	0.00129	1	MG/L	6010B	7/8/2009	JB
Iron	**3.97**	0.100	0.0200	1	MG/L	6010B	7/8/2009	
Lead	BQL	0.0100	0.00679	1	MG/L	6010B	7/8/2009	
Manganese	**0.536**	0.0100	0.000640	1	MG/L	6010B	7/8/2009	B
Mercury	BQL	0.000285	0.000024	1	MG/L	7470	7/8/2009	
Nickel	**0.00408**	0.0500	0.00236	1	MG/L	6010B	7/8/2009	J
Selenium	BQL	0.0100	0.00278	1	MG/L	6010B	7/8/2009	
Silver	**0.00184**	0.0100	0.000656	1	MG/L	6010B	7/8/2009	JB
Thallium	BQL	0.00550	0.000198	10	MG/L	6020	7/10/2009	
Vanadium	BQL	0.00250	0.000586	10	MG/L	6020	7/10/2009	
Zinc	**0.00398**	0.0100	0.00129	1	MG/L	6010B	7/8/2009	J

Comments

BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
METALS.XLS

Results for Metals

Client Sample ID:	Supply Well-070109	Analyzed By:	PSW
Client Project ID:	Rowland LF	Date Collected:	7/1/2009 16:00
Lab Sample ID:	G1081-1-2	Date Received:	7/2/2009
Lab Project ID:	G1081-1	Matrix:	WATER
ICP InitWt/Vol:	50 mL Final Vol: 50 mL		
Hg InitWt/Vol:	40 mL Final Vol: 57 mL		
Prep Batch:	14589 14592		

Metals	Result	SWSL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	0.00600	0.00295	1	MG/L	6010B	7/8/2009	
Arsenic	BQL	0.0100	0.00491	1	MG/L	6010B	7/8/2009	
Barium	**0.0334**	0.100	0.00206	1	MG/L	6010B	7/8/2009	JB
Beryllium	BQL	0.00100	0.000442	10	MG/L	6020	7/10/2009	
Cadmium	BQL	0.00100	0.000158	10	MG/L	6020	7/10/2009	
Chromium	**0.00298**	0.0100	0.00146	1	MG/L	6010B	7/8/2009	JB
Cobalt	BQL	0.0100	0.00172	1	MG/L	6010B	7/8/2009	
Copper	**0.00785**	0.0100	0.00129	1	MG/L	6010B	7/8/2009	JB
Iron	BQL	0.100	0.0200	1	MG/L	6010B	7/8/2009	
Lead	BQL	0.0100	0.00679	1	MG/L	6010B	7/8/2009	
Manganese	**0.00215**	0.0100	0.000640	1	MG/L	6010B	7/8/2009	JB
Mercury	BQL	0.000285	0.000024	1	MG/L	7470	7/8/2009	
Nickel	BQL	0.0500	0.00236	1	MG/L	6010B	7/8/2009	
Selenium	BQL	0.0100	0.00278	1	MG/L	6010B	7/8/2009	
Silver	**0.00132**	0.0100	0.000656	1	MG/L	6010B	7/8/2009	JB
Thallium	BQL	0.00550	0.000198	10	MG/L	6020	7/10/2009	
Vanadium	**0.00242**	0.00250	0.000586	10	MG/L	6020	7/10/2009	J
Zinc	**0.132**	0.0100	0.00129	1	MG/L	6010B	7/8/2009	

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
METALS.XLS

Results for Anions
by IC 300.0

Client Sample ID:	Perry Creek-070109	Analyzed By:	PSW
Client Project ID:	Rowland LF	Date Collected:	7/1/2009 14:55
Lab Sample ID:	G1081-1-1E	Date Received:	7/2/2009
Lab Project ID:	G1081-1	Matrix:	Water

Analyte	Result mg/L	RL mg/L	MDL mg/L	Dilution Factor	Date Analyzed	Flags
Chloride	**9.19**	3.00	0.107	10	7/7/2009	
Sulfate	**3.14**	0.300	0.0563	1	7/8/2009	

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: _____
IC_WA.XLS

Results for Anions
by IC 300.0

Client Sample ID:	Supply Well-070109	Analyzed By:	PSW
Client Project ID:	Rowland LF	Date Collected:	7/1/2009 16:00
Lab Sample ID:	G1081-1-2E	Date Received:	7/2/2009
Lab Project ID:	G1081-1	Matrix:	Water

Analyte	Result mg/L	RL mg/L	MDL mg/L	Dilution Factor	Date Analyzed	Flags
Chloride	**4.69**	3.00	0.107	10	7/7/2009	
Sulfate	**1.15**	0.300	0.0563	1	7/8/2009	

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: _____
IC_WA.XLS

SGS North America, Inc.

Analytical Results

Client Sample ID:	Perry Creek-070109	Date Collected:	2009-07-01 14:55:00
Client Project ID:	Rowland LF	Date Received:	2009-07-02 10:00:00
Lab Sample ID:	G1081-1-1	Matrix:	Water
Lab Project ID:	G1081-1		

Analyte	Result	RL	Units	Method	Date Analyzed	Analyst
Alkalinity	**104**	1.0	mg/L	SM 2320B	07/08/09	element 1
TDS	**170**	1.0	mg/L	SM 2540C	07/03/09	element 1

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
RL = Report Limit

Reviewed By: _____
subout.xls

SGS North America, Inc.

Analytical Results

Client Sample ID:	Supply Well-070109	Date Collected:	2009-07-01 16:00:00
Client Project ID:	Rowland LF	Date Received:	2009-07-02 10:00:00
Lab Sample ID:	G1081-1-2	Matrix:	Water
Lab Project ID:	G1081-1		

Analyte	Result	RL	Units	Method	Date Analyzed	Analyst
Alkalinity	**45.0**	1.0	mg/L	SM 2320B	07/08/09	element 1
TDS	**122**	1.0	mg/L	SM 2540C	07/03/09	element 1

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
RL = Report Limit

Reviewed By:

SGS

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- New Jersey
- North Carolina
- Maryland
- New York
- Ohio

www.us.sgs.com

098759

SGS Reference: G1081-1

PAGE 1 OF 1

(1)

CLIENT: David Garrett & Assoc.

CONTACT: Aaron Hill PHONE NO:(919)524-6128

PROJECT: Rowland LF SITE/PWSID# :

REPORTS TO: David Garrett
5105 Harbour Towne Dr.
Raleigh, NC 27604 FAX NO.:( )

INVOICE TO: Aaron Hill/EFM
495 Beaumont Lane
Pittsboro, NC 27312 QUOTE #: 050509

P.O. NUMBER:

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	(3) Analysis Required: AppI VOCs	AppI metals + Hg, Mn, Fe	Chloride, sulfate	Alkalinity	TDS					REMARKS
	Perry Creek-070109	7/1/9	1455	SW	7	G	3	1	1	1	1					
	Supply Well-070109	7/1/9	1600	GW	7	G	3	1	1	1	1					
~~All~~	~~TRIP Blank~~	—	—	~~DI~~	~~2~~											

Preservatives Used: HCl, HNO3, None, None, None

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	7/1/9	1700	FedEx
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 7/2/09	Time 10:00	Received By: [signature]

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES / NO

Temperature°C: 2.7

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☐ STD

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America, Inc.

N.C. Certification #481