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August 11, 2004

Mr. Jeffrey Crawford
Principal Environmental Scientist
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

RE: Evaluation of Environmental Investigations and Supplemental Site Investigation Work Plans
Bay Street Suspected Fill Area
Tiverton, Rhode Island

Dear Mr. Crawford:

The purpose of this letter is to provide you with comments regarding the environmental investigation the New England Gas Company (NEGC) is conducting at the Bay Street neighborhood in Tiverton, Rhode Island (the site). Fuss & O'Neill, Inc. (Fuss & O'Neill) prepared this letter on behalf of the Environmental Neighborhood Awareness Committee of Tiverton (ENACT), pursuant to our review of available reports and the July 19, 2004 Supplemental Site Investigation and Phase II Site Investigation Work Plans (SSIWPs) submitted to the Rhode Island Department of Environmental Management (RIDEM) by Vanasse Hangen Brustlin, Inc. (VHB), on behalf of NEGC.

As documented in several reports completed to date, fill containing manufactured gas plant (MGP) waste and associated contaminants has been identified at many properties within the Bay Street neighborhood. This contamination poses extremely complex public health and financial consequences for residents and property owners of the neighborhood. ENACT, as the representative of the residents and property owners, has a primary interest in mitigating these consequences through a process that is as transparent and accessible to residents as possible. ENACT is also committed to working in a cooperative manner with RIDEM and NEGC to achieve a comprehensive, cost-effective and expeditious approach to achieve that result. To that end, Fuss & O'Neill has met with ENACT, reviewed available records regarding completed and proposed response actions, and generated comments regarding the proposed and required response actions. We hope that by providing these comments

to you, NEGC will be able to effectively address the concerns of ENACT, and consequently of the residents of the Bay Street neighborhood, in the most comprehensive, cost effective, and expeditious manner in the proposed forthcoming investigations.

The following sections detail our understanding of the release of MGP waste at the site, the investigations and assessments that have been completed to date, the supplemental investigations that NEGC has proposed, as well as ENACT's concerns related to the status of the investigation and the proposed investigations and subsequent response actions. ENACT requests that the key points, discussed herein and summarized below, be addressed and incorporated into any investigation conducted at the site. These key points include:

- The investigation should be conducted in a comprehensive and expedient fashion to minimize health risks and financial burden on residents, to the extent possible.
- The investigation should identify and confirm the full nature and extent of the release and the resulting contamination, including full horizontal and vertical delineation of the source area (e.g. the site).
- The investigation should not be limited to the previously identified "study area", but should include all areas of the site where MGP waste or the associated contaminants may exist.
- The investigation should include the implementation of a grid sampling approach to ensure appropriate sample distribution, location, and frequency.
- The investigation should include the sampling and analysis of environmental media for the full list of MGP waste related contaminants of concern, especially in areas where no previous investigations have been completed.
- Any conceptual remedial strategies under evaluation by NEGC should be identified to RIDEM in writing, and utilized in the development of the proposed work scope.
- The investigation should be designed to collect discrete samples of environmental media that most accurately reflect the actual risk associated with any highly contaminated material.
- The investigation should be conducted in a transparent and forthright manner. This should include the communication of information in real time between ENACT and those conducting the testing on their properties.

1.0 RELEASE SCENARIO

The evaluations conducted by Fuss & O'Neill are based on our conceptual understanding of the release mechanism at the site. Many properties in the vicinity of Bay Street in Tiverton were historically filled over an extended period of time. Some of the materials used in the filling operations contained MGP waste. The resulting area of filling can generally be characterized as multiple discrete volumes of fill containing MGP waste surrounded by other natural and/or anthropogenic fill materials that do not contain MGP waste.

The dumping of MGP waste into the environment is a "release" pursuant to both state (e.g. Appendix A of the RIDEM Remediation Regulations) and federal (e.g. 42 U.S.C. 103.9601(22)) definitions. In accordance with those definitions, each discrete volume of soil containing MGP waste can be considered a separate release. However, Fuss & O'Neill believes that, in order to attain a comprehensive and protective assessment at the site, all discrete volumes of soil containing MGP waste in the vicinity of the Bay Street neighborhood should be considered as the relevant "release". The resulting "site" should therefore be a relatively large area, irrespective of property boundaries, that includes all discrete volumes of soil containing MGP wastes or associated contamination. Our subsequent references to "site" and "release" herein refer to this latter interpretation.

2.0 OBJECTIVE

At this point, the primary objective of ENACT is to ensure that a comprehensive site investigation is performed that identifies and confirms the full nature and extent of the contamination present in the Bay Street neighborhood, in a timely fashion. A comprehensive Site Investigation is essential to gather data of sufficient quality and quantity to facilitate an effective evaluation of actual and potential risks posed by the contamination to human health and the environment, and to evaluate and design appropriate remedial actions.

Section 7.01 of RIDEM's Remediation Regulations "require(s) a performing party for any contaminated site to conduct, in a specified amount of time, an investigation of the contaminated site" which "must determine the nature and extent of the contaminated site and the actual and potential impacts of the release." Additionally, as specified in Section 3.11 of the Remediation Regulations a "Contaminated Site" is identified as 1.) any "source area" or series of "source areas" that have not reached final resolution under the Remediation Regulations, 2.) may include unimpacted land between multiple "source areas" in close proximity to one another, and 3.) considered to be independent of property lines. The Remediation Regulations

further specify the need for the delineation of contamination in Section 3.62 where the term "source area" is defined as "the horizontal and vertical extent of natural or man-made media impacted by a Release of Hazardous Materials".

Although significant, the investigations completed and proposed by NEGC to date have not addressed the full nature and extent of contamination at the site to a level consistent with that required in the Remediation Regulations, and needed to thoroughly evaluate potential risks to residents. Therefore, to meet the requirements of a Site Investigation, as detailed in the Remediation Regulations, the nature and extent of the contaminated site must be determined, including the full vertical and horizontal distribution of contaminants, irrespective of property boundaries.

A vital aspect of the forthcoming project phase is the assurance that the comprehensive investigation discussed above and the subsequent remedial actions at the site are conducted in a timely manner. Two overriding factors exist that propel the timely implementation of investigation and remedial responses at the site to the forefront: 1) the health risks associated with the prolonged and continuous exposure of residents to contaminated media on their properties and 2) the financial burden and stress placed upon innocent land owners of properties containing MGP wastes.

Currently, residents and visitors to properties located within and in the vicinity of the Bay Street neighborhood are routinely exposed to MGP wastes containing concentrations of contaminants in excess of industry-accepted human health risk-based regulatory criteria. Although an excavation moratorium has been implemented within the Bay Street neighborhood and the surrounding area by the Town, MGP wastes are present throughout the neighborhood at and above the surface of the ground. Therefore, property owners and visitors, most notably children playing outside, are potentially exposed to these materials and the associated contaminants on a daily basis.

Additionally, since the full lateral extent of contamination at the site has not been delineated, other residents, not currently included in the previously identified "study area" (as identified by NEGC in the SSIWPs) may unknowingly be exposed to unacceptable concentrations of contaminants at their properties on a routine basis. The only way to confirm whether residents in the vicinity of the Bay Street area are at risk is to complete a comprehensive Site Investigation that confirms the actual extent of MGP wastes and associated contaminants at and near the Bay Street neighborhood.

A second primary factor that justifies the need for an expedient approach to comprehensive site characterization and remediation is the financial stress imposed

upon property owners within the Bay Street neighborhood. The Bay Street area consists of middle class neighborhoods, primarily populated by working-class residents. As with most middle class property owners, these residents have a significant portion of their financial worth tied up in their homes and properties. Since the discovery and publication of the contamination at the site, property owners' financial assets have been frozen by the Town-imposed excavation and building moratorium, as well as the stigma of owning a contaminated property. These factors have reduced the overall marketability and worth of these properties and, as such, have precluded the potential for owners to liquefy their assets through sale or refinance. Consequently, property owner assets have been frozen by the actual and perceived risks associated with the contamination.

For these reasons, the protracted, iterative approach to investigation used and proposed by NEGC to date is highly problematic for residents. The longer it takes to complete the process, the longer residents will be forced to endure the direct exposure risks and financial burdens placed on them by the presence of MGP waste on their properties. Conversely, a comprehensive and expeditious approach to identifying and characterizing the contamination present at the site and mitigating the risks associated with that contamination to a level consistent with the Remediation Regulations, is imperative.

3.0 RECOMMENDED CONCEPTUAL APPROACH

In order to address the full extent of contamination at the site, as required by the RIDEM Remediation Regulations, Fuss & O'Neill and ENACT recommend an overall project approach to comprehensively address the full extent of the release at the site. The approach should include:

Step 1 – Determine the full potential lateral extent of the site by identifying all areas of filling in the vicinity of the Bay Street neighborhood. Initially, these areas could be identified via review of historical records and maps and augmented by test pits, soil borings, or other means to directly confirm the presence of anthropogenic fill. Available data, including the observation of fill at the study area boundary and anecdotal evidence of MGP waste on abutting properties, suggest that the overall extent of the filling may be larger than the previously identified study area.

Step 2 – Confirm the outermost site boundaries by demonstrating that outside the site boundary, the fill or native materials present do not contain MGP wastes or the associated contaminants. Collection of subsurface soil samples from fill or native soil located outside the site boundary should be conducted to verify MGP wastes are not present outside the newly identified site boundary.

Previous investigations have identified MGP wastes and associated contaminants in the subsurface directly adjacent to the previously identified limits of the study area (i.e. at property boundaries and beneath roadways). However, investigations conducted to date have not included borings or sampling outside of the pre-determined study area limits to confirm that the full extent of the waste has been delineated.

Step 3 – Ensure input from all property owners, residents, and other interested parties at the site. The input from these individuals, especially property owners and residents, will be necessary for risk characterization and remediation implementation so incorporation of their input will be paramount in completing assessment and remediation at the site. Without the cooperation of the owners and residents at the site, the site assessment will lack complete information and the range of remedial approaches will be extremely limited.

Step 4 – Develop and implement a grid sampling plan for targeted investigations within the site boundary to support compliance with the RIDEM Remediation Regulations, including Site Investigation, risk characterization, and/or remediation requirements. This step should include the vertical and horizontal delineation of MGP waste and associated contaminants exceeding applicable criteria on a scale sufficient to support the selected remedial strategy for clean-up of all areas of the site.

Fuss & O'Neill recognizes that a variety of overall investigation and characterization approaches may be utilized at the site. However, approaches that do not delineate the full lateral and vertical extent of the site and associated release will not meet the requirements of the Remediation Regulations or the residents. Furthermore, site-wide risk characterization and remediation decisions can not be technically supported, nor approved by RIDEM, unless the delineation of the site boundaries is adequately completed, and the characterization and distribution of contaminants present within the site are understood, documented, and presented to stakeholders in a transparent manner.

ENACT is extremely concerned about the identification and mitigation of potential health risks posed to the neighborhood by the MGP waste release at the site. At this point in the assessment process, we believe the best way to reduce these substantial risks is to proceed with a comprehensive assessment plan that addresses the full extent of the site in an expeditious manner so as to limit the duration of any currently unknown exposure risks to the extent practicable. We also believe that addressing the entirety of the site proactively will be the best way to minimize the overall costs

of assessment and remediation at the site by accelerating the schedule and limiting costly efforts to perform unnecessary assessment iterations to define the extent of the site or generating incomplete remediation and risk assessment plans which address only a portion of the site.

4.0 SPECIFIC INVESTIGATION WORK SCOPE COMMENTS

The following sections identify specific comments related to the July 19th Supplemental Site Investigation and Phase II Site Investigation Work Plans (SSIWPs) submitted to RIDEM, on behalf of NEGC.

4.1 Comprehensive Delineation of the Horizontal and Vertical Extent of the Site

As discussed previously, the investigations completed to date and proposed in the SSIWPs have not adequately addressed the overall horizontal and vertical delineation of contamination at the site. Consequently, if the proposed scope of work detailed in the SSIWPs is completed, the investigation will still require additional subsequent iterations to complete the delineation of contaminants.

Generally, the completed and proposed investigations have focused on specific properties, and the extent of sampling activities has been restricted and defined by property boundaries. While the evaluation of each individual property may be a critical phase in the remediation and risk assessment process, the determination of the overall extent of the entire affected area is paramount in comprehending the full magnitude and character of the release. Indeed, in its January 27, 2004 letter to NEGC, RIDEM specifically requested that NEGC's second phase investigation "look more thoroughly (horizontal and vertical extent) at all of the properties", noting also that "the Department's definition of 'Site' does not recognize property boundaries."

Reportedly, historical and topographic research has been conducted to develop a conceptual understanding of where MGP waste and anthropogenic fill may have been deposited in the Bay Street neighborhood. While this type of research is an important step in developing a conceptual site model, it is critical that field and analytical investigations be performed to test and consequently prove or disprove the hypothesis of the conceptual model. Based upon the completed research, NEGC has developed a site model that depicts MGP wastes and associated contaminants to be contained within the previously identified study area. However, sufficient field investigations have not been performed to test and confirm this hypothesis. Consequently, the concentrations of the contaminants of concern in soil in areas outside of the suspected site boundary should be evaluated.

Additionally, the results of research related to the regional topographic changes, and the disposal, sale, or depositional history of MGP waste and fill material within the Bay Street neighborhood has not been documented or published. These assessments should be documented and available for public review and comment.

4.2 Proposed Sample Distribution

In accordance with the conceptual release scenario discussed in Section 1.0, the contaminants of concern were deposited at the site by filling and grading operations, and are therefore distributed randomly throughout the subsurface at the site. Consequently, the distribution of contaminants can not be characterized through a typical point source release investigation scope.

The most comprehensive, effective, defensible, and potentially cost-effective approach to investigate and characterize a release of this nature is through the implementation of a sample grid approach. The implementation of a statistically valid sample grid approach, would result in an analytical data set that would incorporate the required level of characterization, distribution, and confidence required to make informed decisions regarding risk evaluation and remedial requirements.

To date, a significant amount of valid, valuable data has been collected at the site. NEGC has proposed to supplement this existing data with additional sample points at selected properties within the site. However, the rationale for selecting the locations and distribution of the additional sampling points is not identified or explained in the SSIWPs.

To alleviate the uncertainty and potential unintentional biases related to the distribution of proposed sampling locations, a consistent sampling grid pattern should be implemented across the site. This method would ensure that the resulting investigation findings will be statistically defensible, and meet the requests of RIDEM, ENACT, and other stakeholders.

As discussed further in Section 4.3 and Section 4.6, below, NEGC has not identified the conceptual remedial strategies currently under evaluation for the site. Consequently, the development of an appropriate grid spacing interval must be quantified based upon the assessment of risks posed to residents by the existing contamination. Due to the relatively random distribution of MGP waste and associated contaminants at the site, discrete pockets of waste containing elevated concentrations of the contaminants of concern have been identified. As documented

by previous investigations and response actions at the site, these discrete pockets of elevated contamination can be relatively small in area.

The completed Short Term Response Action Report prepared by NEGC for the property located at Plat 8-6 Block 3 Lot 4, clearly illustrates the potential for small discrete pockets of waste to contain concentrations of contaminants that pose significant risk to human health. At this location NEGC identified an area measuring less than twenty feet in diameter that contained concentrations of arsenic at levels considered to be an imminent hazard (up to 131 mg/kg).

Due to the inconsistent and irregular selection of sample location and spacing implemented and proposed at the site to date, NEGC can not disclaim, with any level of confidence or statistical certainty, that other hotspots similar to that referenced above, are present at other areas of the site. Consequently, the proposed grid to be implemented at the site during the next phase of the investigation needs to be sufficiently tight to yield data that will result in a significant level of confidence that other potential imminent hazards have been identified. Based upon the nature of the disposal mechanism at the site, and underscored by the previous chance identification of a number of small discrete hotspots, the grid spacing between samples across the site should be less than twenty feet.

The grid should be implemented across the entire site. This includes all areas where MGP wastes or the associated contaminants may have come to be located. Consequently, the grid must extend beyond the area formerly identified as the study area, and beyond the area currently proposed for further investigation.

We understand that NEGC has used this type of grid sampling approach successfully at other sites with similar release mechanisms, including the Allen's Avenue site in downtown Providence, to achieve a rapid and comprehensive understanding of the distribution and delineation of contaminants.

4.3 Contaminants of Concern

The recent SSIWPs propose to limit analytical testing on soil samples. The investigations proposed in the Supplemental Site Investigation Work Plan include the collection of soil samples at properties included in previous investigations and analysis of those samples for a variable and inconsistent list of contaminants limited to one or more of the following: arsenic, lead, cyanide, PAH, and TPH. In the Phase 2 Site Investigation Work Plan, the proposed investigations include the collection of soil samples from properties not included in previous investigations, and analysis of those soil samples for arsenic, lead, cyanide, PAH, and TPH.

Based upon extensive research on the subject of contaminants present at former manufactured gas plant sites, many published references list typical contaminants expected to be found at most MGP sites. One example of these lists, compiled by the Gas Research Institute is included below, and summarizes the contaminants that are most likely to be associated with MGP wastes. This list was developed based upon an evaluation of thirty-three case studies of MGP sites, including MGP sites in Massachusetts.

Chemicals of Interest at MGP Sites

INORGANICS	METALS	VOLATILE AROMATICS (BTEX)	PHENOLICS	PAHs
Ammonia	Aluminum	Benzene	Phenol	Acenapthene
Cyanide	Antimony	Ethylbenzene	2-Methylphenol	Acenapthalene
Nitrate	Arsenic	Toluene	4-Methylphenol	Anthracene
Sulfate	Barium	Xylenes	2,4-Dimethylphenol	Benzo(a)anthracene
Sulfide	*Beryllium			Benzo(a)pyrene
Thiocyanates	Cadmium			Benzo(b)fluoranthene
	Chromium			Benzo(g,h,i)perylene
	Copper			Benzo(k)fluoranthene
	Iron			Chrysene
	Lead			Dibenzo(a,h)anthracene
	Manganese			Dibenzofuran
	Mercury			Fluoranthene
	Nickel			Fluorene
	Selenium			Indeno(1,2,3 cd)pyrene
	Silver			Napthalene
	Vanadium			Phenanthrene
	Zinc			Pyrene
				2-Methylnapthalene

Reference: Table 2-1: Wastes and Chemicals of Interest at MGP Sites: Gas Research Institute, 1996, Management of Manufactured Gas Plant Sites; The Gas Research Institute's Two-Volume Practical Reference Guide, Volume 1.

** Although beryllium is not specifically listed in Table 2-1 of the above listed reference, beryllium is included in Appendix B of the reference, which "provides environmental and toxicological profiles for chemicals of interest at MGP sites", and states "beryllium in the environment largely results from coal combustion".*

Many of the contaminants included in the table above have been detected at the Bay Street site. Additionally, many of the contaminants listed above have not been included in testing completed to date. Some of these potential contaminants, including ammonia, nitrate, sulfate, sulfide, thiocyanates, aluminum, barium, and vanadium, may be present at the site. In its January 27, 2004 letter to NEGC,

RIDEM specifically requested that NEGC use the referenced discussed above "in scoping the SIR to search for all contaminants of potential concern."

Fuss & O'Neill and ENACT concur that, depending upon the selected remedial strategy for site clean up, it may be feasible to some extent, to utilize a limited set of indicator parameters to cost-effectively characterize a release to facilitate remedial planning. For example, if the selected remedial strategy for the site were to be excavation and off-site disposal of MGP wastes and contaminated soil, it may be an effective strategy to characterize the release area through analysis of a limited list of indicator parameters. The impacted material could then be excavated and disposed of off-site, and confirmation samples would then be collected from the excavation grave and analyzed for the full suite of site-specific contaminants of concern.

However, to date, NEGC has not identified what remedial strategies are being evaluated to remediate the site. Consequently, since the remedial strategy has not been identified, the application of the remedial strategy requiring the most comprehensive and highest level of confidence must be assumed for the site, so that the resulting analytical data from the investigation will be of sufficient quantity and quality to be used to evaluate all potential remedial strategies. Therefore, to address the site-specific contaminants of concern and the associated risks to residents, a consistent and comprehensive list of contaminants should be tested for in all samples collected during the next phase of the investigation at the site. This list of contaminants should include the following: the full list of Semi-Volatile Organic Compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), BTEX compounds, PP13 metals plus aluminum, barium, and vanadium, and cyanide.

It is our understanding that the previously conducted Human Health Risk Assessment (HHRA), prepared by ENVIRON Health Services Institute (Environ) will be revised to meet RIDEM requests as well as to incorporate new data collected at the site. Additionally, NEGC may propose to rely upon the results of the revised HHRA to evaluate risk associated with contamination at the site. Since many of the risks associated with the contaminants present at the site are cumulative, elimination of contaminants from the proposed assessments due to the assumed source, background concentration, or regulatory criteria is not warranted, and will ultimately underestimate the actual risk to individuals at the site.

The concerns related to the contaminants of concern are even more of an issue in properties discussed in the Phase 2 Site Investigation Work Plan, as well as other areas of the site (outside of the previously identified study area) that have not been characterized to date. At these locations, no subsurface investigations or analytical testing have been completed, and therefore, the types of wastes present have not been

characterized. Since no information related to the types of waste streams present on these properties is available, no justification for minimizing the proposed contaminant list for samples collected on these properties exists. Consequently, all samples collected from these properties should be analyzed for the full suite of site-specific contaminants of concern discussed above.

4.4 Evaluation of Arsenic and Beryllium as Background

While arsenic and beryllium are commonly occurring compounds in soil in Rhode Island, it has not been documented that the presence of these compounds at the site is solely attributable to naturally occurring or regional anthropogenic background conditions. According to Section 3.05 of the RIDEM Remediation Regulations, background is identified as "…the ambient concentrations of hazardous substances present in the environment that have not been influenced by human activities, or the ambient concentrations of hazardous substances consistently present in the environment in the vicinity of the contaminated site which are the result of human activities unrelated to releases at the contaminated site".

Since the identified contamination source at the site includes anthropogenic fill, including MGP wastes, the chemical composition of that material has been influenced by human activities. Additionally, the deposition of this material at the site is consistent with a release, as defined by RIDEM and the USEPA. Furthermore, even native soil located within the boundaries of the site may have been impacted by contaminants present in the anthropogenic fill deposited at the site, and therefore, also influenced by human activity.

Before identifying arsenic and beryllium as consistent with background conditions, sampling of soil from outside the boundaries of the site must be conducted to evaluate the distribution contaminants in soil that has not been impacted by the identified release. To date, all soil sampling activities have been conducted within the boundaries of the site. Prior to excluding any potential contaminant of concern from further evaluation, a more detailed background study would be warranted. Furthermore, even if a portion of the arsenic and/or beryllium present at the site is attributable to background conditions, the risks posed by those contaminants must be considered when evaluating the actual cumulative risk of all contaminants present at the site during any risk assessment phase of the project.

Additionally, arsenic has been detected at several locations across the site at concentrations that are inconsistent with typical background concentrations in Rhode Island. It is not likely that these concentrations of arsenic (up to 131 mg/kg) can be attributed to background on a technical or regulatory basis.

The recently promulgated RIDEM regulations regarding special requirements for arsenic in soil (Section 12.0 of the Remediation Regulations) were specifically designed to address sites at which arsenic is the sole contaminant and is present due to naturally occurring or regional anthropogenic background sources. Since it appears that the arsenic present at the Bay Street site does not meet any of these three criteria, it is our understanding that the revised arsenic regulations would not be applicable at the site. Therefore, all areas of the site containing arsenic will require further assessment and/or remediation. This very point was made to NEGC in RIDEM's letter of January 27, 2004.

Consequently, ENACT recommends that arsenic and beryllium remain as identified contaminants of concern at the site, and an investigation to identify the full extent and magnitude of arsenic and beryllium contamination is included in the next phase of the investigation.

4.5 Timely Completion of Investigation and Subsequent Response Actions

As discussed in detail in the objective section (Section 2.0) of this correspondence, one of the primary objectives of ENACT is to ensure that a comprehensive investigation and the subsequent remedial actions at the site are conducted in a timely manner. The two critical factors that require an expedient solution to the contamination include the health risks associated with the prolonged and continuous exposure of residents to contaminated media and the financial burden and stress placed upon innocent land owners of properties containing MGP waste. To resolve these issues, it is imperative for NEGC to complete a comprehensive investigation, evaluation, and clean-up of all potentially impacted properties in an expeditious fashion in order to be protective of human health and the environment.

One specific example of the potential consequences of conducting the investigation through a limited and time consuming iterative approach is the potential for overlooking potential receptors outside of the focused study area. This consequence was realized recently, when a resident located just outside the previously identified study area was found to be using an on-site well for drinking water. Since this resident had not been included in previous investigations, the presence of the drinking water well had not been discovered. Likewise, since the lateral extent of MGP waste and associated contaminants has not been confirmed, additional residents may be similarly exposed to contaminated media at or near their properties on a routine basis, unknowingly.

4.6 Identification of the Conceptual Remedial Strategy

NEGC has not identified what remedial strategies are being evaluated to mitigate risks associated with contamination at the site. The development of an effective Site Investigation work scope must be integrated with the anticipated remedial goals for the site, so that analytical data of sufficient quantity and quality can be collected to support forthcoming remedial decisions.

Fuss & O'Neill and ENACT concur that until the full nature and extent of the contamination is identified, a definitive decision can not be made regarding the specifics and design specifications of a proposed remedy. However, it is essential to have a conceptual remedial strategy in mind while designing and implementing a Site Investigation, so that the appropriate data can be targeted and collected. Additionally, it is essential to convey that information to stakeholders of the site during the process, as well as include an evaluation of remedial alternatives (per Section 7.04 of the Remediation Regulations) in the resulting Site Investigation Report.

4.7 Assessment of Risk

The primary driving force behind the completion of the required environmental investigations at the site is the identification, characterization, and evaluation of risk to residents. Therefore, the proposed sampling plan should be designed to generate data that can be used to comprehensively evaluate the actual acute and chronic risks to receptors.

To accomplish this, analytical samples should be collected from the site in accordance with the proposed sample distribution model discussed previously. Additionally, at locations selected for sampling, discrete analytical samples should be collected from the most impacted environmental media at that location in order to accurately assess the actual exposure risks associated with that material. Composite samples should not be utilized to evaluate risk, as composite samples do not provide valuable data related to the actual exposure risk to potentially highly contaminated soil at, or beneath, the surface of the site.

One important requirement to accurately assess potential risk associated with MGP waste at the site is to ensure that well-qualified and experienced field personnel are utilized to oversee and direct the completion of subsurface explorations and the collection of samples of environmental media. Because of the depositional nature of the MGP waste at the site, it is crucial for the field technician to be able to identify the presence of small discrete pockets of potentially contaminated material, and have

the flexibility and authority to modify the work plan to include the collection of samples of the most highly impacted material. The collection and analysis of samples of the most highly impacted media from the site is critical to evaluating the actual risks posed by that material to residents and the environment.

4.8 Cooperative Oversight and Resident Representation

In an effort to establish the transparency of the proposed scope of work and the implementation of the supplemental investigations at the site, ENACT requests that the field personnel conducting the on-site investigations and sampling to discuss the ongoing investigations with ENACT and it's representatives. By allowing an ENACT representative to observe and briefly discuss the ongoing investigations in real time with the individual performing the investigations, NEGC will effectively be reassuring the residents that the investigation is being conducted in a cooperative, forthright, and transparent nature. Consequently, the result of these brief discussions will be an elevated level of resident confidence and trust that their interests are being served. This resulting level of confidence will serve both the residents, as well as NEGC by producing a cooperative working relationship between the parties that will facilitate the efficient completion of the project to meet the parties' mutual objectives.

ENACT will ensure that the ENACT representative will not interfere, or otherwise impede the progress of the investigation. When warranted, questions and discussions with NEGC field personnel will be kept extremely brief (i.e. five minutes). The brief time expended by NEGC field personnel to discuss the investigation with an ENACT representative will be invaluable in establishing the residents' confidence in the investigation, and ultimately their confidence in the results or conclusions of any risk evaluation or analysis that may result from data collected during the investigation.

4.9 Public Perception and Transparency

One major component of any highly publicized, environmental situation involving contamination at residential properties is the public's perception of responsive actions taken by the responsible party. The discovery of contamination at the residential properties in question has drastically affected the daily lives of all of the residents involved, and consequently, the affected residents have a strong financial and emotional stake in all aspects of the project. Additionally, the highly public nature of this situation and the significant media coverage has elicited involvement from local, state, and federal agencies, interest groups, representatives, and lawmakers, as well as concerned residents of the Bay Street neighborhood and from across Rhode Island and Massachusetts. For these reasons, public perception of the

responsible party is an integral aspect of ensuring the success of the project to meet mutually agreed upon project objectives, as is transparency of the process by which investigation and remediation decisions are reached.

The rapid implementation of a comprehensive site investigation conducted in a transparent fashion would reaffirm that NEGC's intentions are consistent with the objectives of the residents, RIDEM, and other stakeholders. The implementation of the investigation in such a manner will also alleviate a great deal of the anxiety associated with the uncertainties related to the residents' health and financial risks.

Additionally, as discussed in Section 4.8 above, keeping the residents informed as to the progress and findings of the investigation in real time will aid in the residents' confidence in the results of the investigation and the development of a cooperative working relationship between the interested parties.

4.10 Release Notification

As stated previously, it is the view of ENACT that the potential for MGP wastes to be present on properties outside of the previously identified study area is high. Therefore, the investigation discussed herein should not be limited to the study area, but should be expanded to evaluate the site as a whole, and include all areas where MGP waste and the associated contaminants may have been deposited. Therefore, any property or area in the vicinity of the Bay Street neighborhood identified as containing evidence of the deposition of MGP waste or associated contaminants should be included in the scope of the comprehensive investigation.

As MGP waste is likely to be present at the surface, or at shallow depths at these previously uninvestigated properties, these wastes may be identified visually by ENACT, property owners, or residents in the future. If evidence of MGP waste is observed at these properties, the presence of the material would constitute evidence of a release, and that property should then be automatically included in the investigation. Any evidence of waste at previously unidentified properties or areas of the site will be documented in a Notification of Release and submitted to RIDEM to initiate the incorporation of those areas into the Site Investigation.

4.11 Implementation of Ancillary Investigations

It has come to the attention of ENACT that some residents within the Bay Street neighborhood may be involved in, or may be contemplating the implementation of limited site investigations at their own properties, conducted independently of the on-going NEGC investigation. These limited investigations, as proposed by

Woodard & Curran to residents located on the outside perimeter of the Town moratorium area, are intended to evaluate those properties for the presence of "fill material". One example of a proposed limited investigations entailed the advancement of approximately three soil borings, and the laboratory analysis of one soil sample for PAH, metals, and cyanide.

Although these properties may be located outside of the Town moratorium area or the previously identified study area, NEGC has not confirmed, through appropriate delineation of the site, whether or not MGP waste or the associated contaminants extend onto these properties. As the responsible party, it is the responsibility of NEGC to conduct a comprehensive Site Investigation, including the horizontal and vertical delineation of MGP waste and the associated contaminants, at no further expense to the residents of the Bay Street neighborhood.

If property owners do decide to privately conduct investigations at their own properties, the results of these investigations should be submitted to RIDEM, to be incorporated into the dataset for the entire site. Additionally, if any characterization, delineation, or regulatory decisions are based on the results of investigations conducted at any area of the site, a comprehensive level of investigation sufficient to make any such decisions or judgments, consistent with all other areas of the site, will be required.

5.0 CONCLUSIONS

We believe that through a cooperative discourse between all of the involved parties, a comprehensive project approach can be implemented to adequately serve the interests of all involved. The completion of response actions through a mutually agreed upon approach will limit costly follow-up investigations and demonstrate the commitment of NEGC, ENACT, and RIDEM to the health and well being of the residents of Tiverton. Consequently, ENACT requests that RIDEM and NEGC incorporate the recommendations and concerns of ENACT, as discussed herein, into the forthcoming investigations to be completed at the site. We believe that if the concerns of ENACT detailed herein are addressed, the proposed investigation and subsequent response actions can be conducted in a comprehensive and expeditious manner and will identify and characterize all contamination present at the site as well as the risks associated with that contamination to a level consistent with the scope and intent of the RIDEM Remediation Regulations.

The requests and comments documented herein are consistent with the requirements of a Site Investigation conducted in accordance with the RIDEM Remediation Regulations, as well as RIDEM's previous comments to NEGC dated January 27,

2004. The approach and scope of the proposed investigation and subsequent clean-up must, at a minimum, meet the requirements and intent of the Remediation Regulations as well as the generally accepted industry standards governing the investigation and the mitigation of risk at contaminated sites.

We look forward to discussing these issues with you in more detail in the coming days. If you have any questions or comments regarding this letter please do not hesitate to call.

Sincerely,

Patrick J. Dowling
Hydrogeologist

John A. Chambers, LPG, LSP
Associate Hydrogeologist

cc: Ms. Gail Corvello, ENACT
Mr. Timothy O'Connor, VHB
Mr. Allan Fish, Southern Union, Inc.