

VOLUNTARY CLEANUP PROGRAM DRAFT DECISION DOCUMENT

KeySpan/National Grid - Former BayShore/Brightwaters MGP Site Manufactured Gas Plant Site Operable Unit 2: MGP Off-site Plume BayShore (V), Suffolk County, New York Site No. 1-52-172

May 2008

Statement of Purpose and Basis

This Draft Decision Document presents a proposed remedy by the New York State Department of Environmental Conservation (the Department) for Operable Unit 2 (OU-2) of the Former BayShore/Brightwaters Manufactured Gas Plant (MGP) Site. The proposed remedial program is consistent with the 1999 Order on Consent, Index No. D1-0001-98-11 between the Department and KeySpan.

Description of the Site

The Former Bay Shore/Brightwaters Manufactured Gas Plant (MGP) Site is located in Bay Shore and the Incorporated Village of Brightwaters, Suffolk County, New York. The site is the location of a former MGP whose operation resulted in soil and groundwater contamination. For ease of site management, the site has been divided into four separate operable units (OU) as follows:

- OU-1 Main Site, West Parcel and Adjacent off-site areas
- OU-2 Bay Shore Groundwater Plume
- OU-3 Brightwaters Yard and Brightwaters Groundwater Plume
- OU-4 Watchogue Creek including former Cesspool and Pond areas

Contaminated groundwater from the MGP site has migrated south to southeast in the direction of natural groundwater flow. This groundwater plume is designated OU-2 and is the subject of this document. The OU- 2 plume is approximately 500 feet wide and about 3,400 feet long. The OU-2 groundwater plume discharges to Lawrence Creek, a tidally influenced surface water body located south of Montauk Highway (see Figure 1).

Nature and Extent of Contamination

The gas manufacturing process produced a dark, oily liquid waste known as coal tar. Over the years, coal tar leaked from the former holders and other structures located at the main site resulting in the contamination of soil and groundwater. The contaminated groundwater from the site flows south to southeast beneath a largely residential area toward Lawrence Creek, resulting in the OU- 2 plume. In general, the contaminants of concern in the groundwater are the volatile compounds benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and the polycyclic aromatic hydrocarbon (PAH) compounds including naphthalene.

The OU2 plume has not impacted groundwater wells. Two active public water supply wells are located within a half-mile radius of the site. However, these wells are not located in the OU-2 groundwater plume, and obtain their water from the deeper Magothy aquifer at depths ranging from 595 feet to 800 feet below ground surface. There is no evidence based on site investigation that the public water supply wells have been impacted by the site or will be impacted in the future. Four private wells were identified in the area based on the results of a well survey conducted at the site. The private wells have since being closed.

In most areas within the OU-2 plume, the water table is within a few feet of the ground surface. Although contaminated water is present near the ground surface, no direct exposures to this shallow groundwater have been identified. In air and soil vapor intrusion samples has been evaluated at over 25 buildings within and adjacent to the OU2 plume with no adverse impacts identified to date.

Oxygen injection system has been in service since December 2005 in the lower portions of the OU-2 plume. The system introduces oxygen into the groundwater, which increases the ability of native soil bacteria to consume the dissolved contaminants in the groundwater plume. Recent groundwater monitoring results indicates that the injection system appears to be effective at reducing groundwater contaminant concentrations down gradient of the injection lines. A third line was added recently at the upper end of the plume. However, the middle portion of the OU-2 plume does not currently have any active remediation systems in place. Due to the slow movement of groundwater through the plume, additional remedial efforts would be required in order to accomplish the cleanup of the middle portion of the plume in a reasonable length of time.

Description of Selected Remedy

Groundwater contamination identified during the Remedial Investigation of this site represents a potential threat to human health and the environment, requiring a remedial program as identified below. The Alternatives Analysis (AA) prepared by KeySpan examined 5 different alternatives to clean up the OU-2 groundwater plume. Based on the evaluation, additional oxygen injection is the preferred remedial technology to address the OU-2 groundwater plume. The components of this remedy include the following:

1. Installation of additional oxygen injection lines within the OU-2 groundwater plume. The injection lines will be spaced as evenly as possible throughout the plume, based on property access.
2. Extensive monitoring to assess groundwater and soil vapor conditions within the area of injection prior to and during the operation of the system. Multi-level monitoring at the end of each injection line will also be required. The locations of monitoring points and frequency of monitoring will be determined during the design phase of the project. If monitoring results indicate possible soil vapor intrusion as a result of the operation of the oxygen injection system, appropriate actions would be employed to address this concern. These actions, which could include modifying the systems or temporarily suspending operation, would be detailed in the design document to be submitted by KeySpan/National Grid.
3. System performance monitoring for groundwater will include, at a minimum, the following parameters: volatile organic compounds (including BTEX compounds), PAHs,

nitrate/nitrogen, ammonia, iron, manganese, and sulfate, dissolved oxygen, carbon dioxide, pH, oxygen-reduction potential, temperature, and conductivity. This will be necessary in order to monitor the effectiveness of the bioremediation and assess the need for additional injections. The sampling frequency will be outlined in the system design document and included in the site management plan. Soil vapor will be monitored for volatile organic compounds and PAHs.

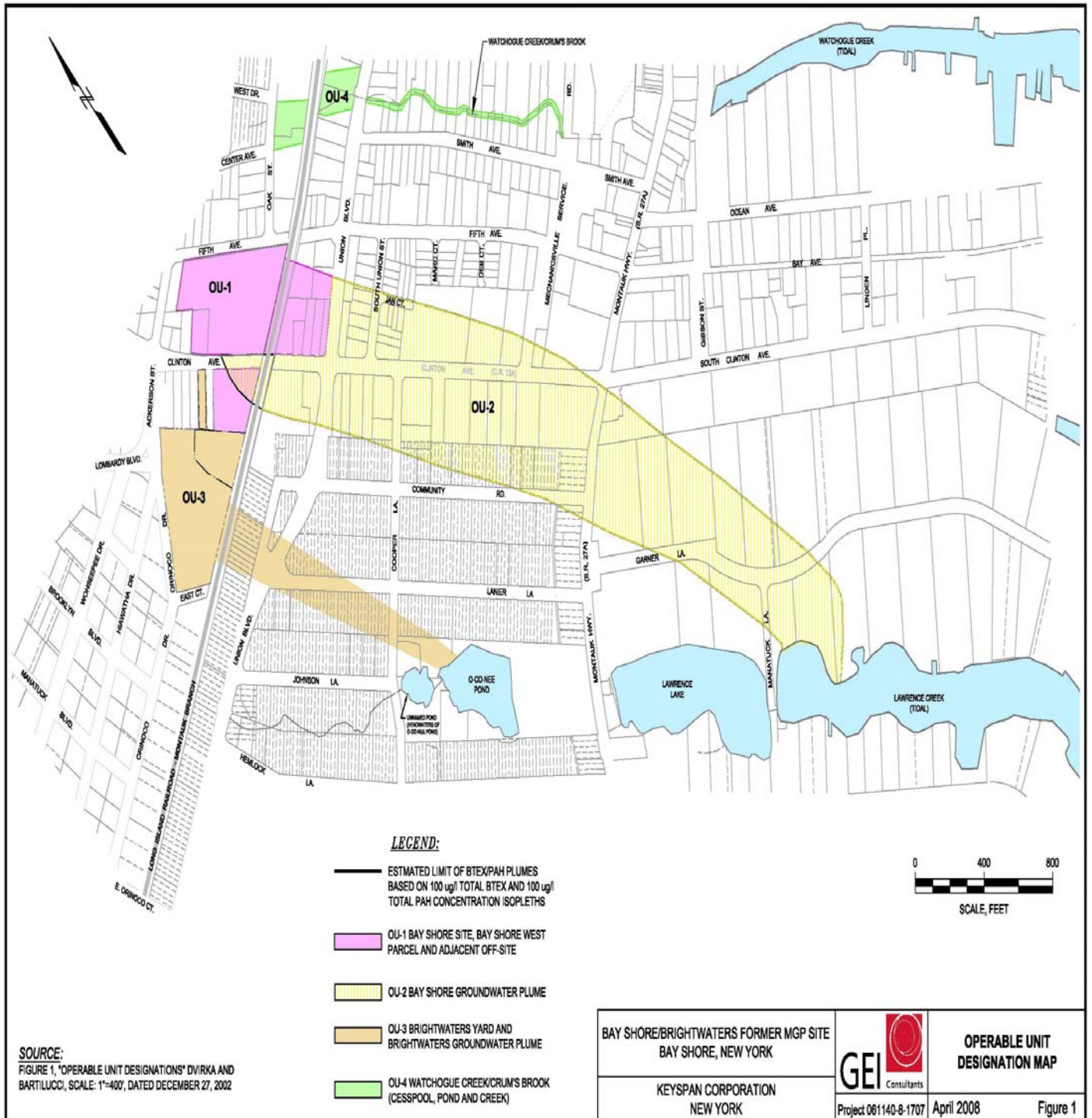
4. Monitoring of some targeted occupied structures in the vicinity of the injection will be required on a predetermined schedule. Specific locations targeted for monitoring will be determined during the design phase of the project.
5. Injection system monitoring to include periodic system checks, monthly system operations and maintenance visits, and annual system maintenance.
6. A site management plan (SMP) covering all the operable units (one through four) would be developed and implemented. The SMP would identify the institutional controls and engineering controls (IC/ECs) required for the remedial action plan (RAP) and other interim measures and detail their implementation. The SMP would include, specifically to this operable unit:
 - (a) an IC/EC control plan to establish the controls and procedures necessary for KeySpan/National Grid to operate, maintain and monitor the injection systems and require KeySpan/National Grid to provide the Department an IC/EC certification on a periodic basis;
 - (b) a monitoring plan to monitor the effectiveness of the system as specified in 2-5 above, as well as the trend of contaminants concentrations in the groundwater; and
 - (c) an operation and maintenance plan to provide the detailed procedures necessary to operate and maintain the remedy. The operation of the components of the remedy would continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

Public Review and Comment

This Draft Decision Document and the Alternative Analysis are provided to the interested public for review and comment for a 30 day period which closes on May xx, 2008. Comments should be sent to the project manager as follows:

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The Draft Decision Document is available on line at the KeySpan/National Grid Bayshore MGP website at www.bayshoreworksmgp.com and is also available along with the Remedial Alternative Analysis and all other site related documents at the document repositories established for the site.



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