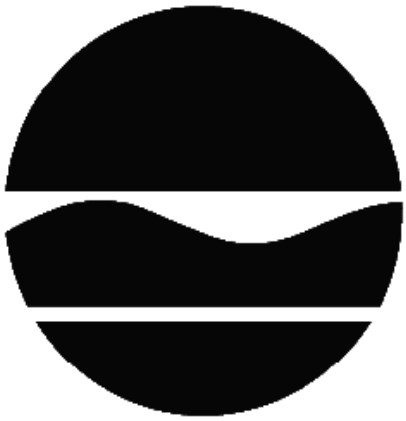
PROPOSED REMEDIAL ACTION PLAN

NYSEG - Newark MGP
Newark, Wayne County
Site No. 859021
February 2013



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Newark Public Library
Attn: Elaine Dawson
121 High St.
Newark, NY 14513
Phone: 315-331-4370

A public comment period has been set from:

February 27, 2013 to March 29,2013

A public meeting is scheduled for the following date:

Thursday, March 7,2013 at 7:00 PM

Public meeting location:

100 E. Miller St., Newark Village Court, Newark, NY

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through to:

Bernard Franklin
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
bcfrankl@gw.dec.state.ny.us

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Newark Former MGP site is located in a mixed commercial/residential area in the

central business district of Newark. The site is west of Route 88 between the New York State Barge Canal and the former railroad.

Site Features: The site is approximately one acre and the southern portion of the site is occupied by a portion of Quality Inn Hotel and parking lot. The northern portion of the site is overlain by West Shore Blvd. The nearest residence is approximately 300 feet north of the site. A commercial facility is located north of West Shore Blvd.

Current Zoning/Use(s): The site is zoned commercial and is occupied by a portion of the two-story Quality Inn Hotel.

Past Use of the Site: The MGP reportedly operated from circa 1900 into the 1920s. The Newark MGP produced gas using the coal carbonization process and later the carbureted water gas process.

Site Geology and Hydrogeology: Site geology includes a fill unit that is generally 10 to 25 feet thick and overlays a till unit that is comprised of a very dense mixture of silt and sand with varied amounts of clay and gravel. The depth to water beneath the site is generally between 11 and 15 feet below ground surface (bgs). Shallow groundwater beneath most of the site appears to flow to the north-northeast; however, there appears to be a component of flow in the direction of the canal (south) in the immediate vicinity of the canal.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

New York State Electric and Gas (NYSEG)

The Department and NYSEG entered into a multi-site Consent Order, Index Number D0-0002-

9309 on March 30, 1994. The Order obligates the responsible party to implement a full remedial program for 33 former MGP sites across the State, including the Newark MGP.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- air
- groundwater
- soil
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

COAL TAR
ACENAPHTHENE
ACENAPTHYLENE
ANTHRACENE
BENZO(A)PYRENE
BENZO(B)FLUORANTHENE
BENZO(GHI)PERYLENE
BENZO[K]FLUORANTHENE
Chrysene
DIBENZ[A,H]ANTHRACENE
FLUORANTHENE
FLUORENE
indeno(1,2,3-cd)pyrene
NAPHTHALENE
PHENANTHRENE
PYRENE
BENZENE

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Soil exceeding commercial use SCOs for polycyclic aromatic hydrocarbons (PAHs) was found only in samples collected within the footprint of the former MGP structures and immediately to the north of the site at levels above SCOs. These SCO exceedances are primarily associated with the presence of coal tar observed in the subsurface at 7 of the 48 RI boring locations. This suggests that the tar is sporadically distributed and limited in extent. The majority of tar impacts

were observed above the water table within the upper nine feet of fill, although an oil-like material was also observed in trace quantities at two locations, both below the water table to depths of about 18 feet below grade. The tar has a solidified appearance and is therefore unlikely to be mobile. The majority of the tar and oil-like material is located near former MGP structures including two holders and two tar wells. Tar was also observed in shallow soils (0.6 to 2.5 feet below grade) at three off-site locations just north of the Former MGP footprint. This tar is assumed to have been placed at the same time as the fill.

Low levels of benzene in groundwater were detected during one sampling round at MW-10-01 (1.1 ppb) and MW-10-02 (2.1 ppb) at levels slightly above the Class GA standard of 1.0 ppb. Both of these wells are located near former holders. No other detected contaminants of concern (COCs) exceeded Class GA standards or guidance values in any wells.

Sub-slab, indoor, and outdoor air samples were collected at the on-site building to assess the potential for soil vapor intrusion from MGP related compounds. The results were compared to the NYSDOH study of VOCs in indoor air of fuel oil heated homes and were found to be generally within background levels. Non-MGP related chlorinated solvents were also detected, but were not found at levels that warrant actions to address exposures.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

People are not expected to come into direct contact with site-related contaminants in the soil because buildings and pavement cover most of the site. People may come into direct contact with site-related contaminants if they dig below the surface on-site or contact uncovered soils just north of the site. People are not drinking contaminated groundwater associated with the site because the area is served by a public water supply that obtains its water from a different source not affected by this contamination.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking

water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

SECTION 7: SUMMARY OF THE PROPOSED REMEDY

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the FS report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's proposed remedy is set forth at Exhibit D.

The proposed remedy is referred to as the Deep Soil Removal and Cover remedy.

The estimated present worth cost to implement the remedy is $5,000,000. The cost to construct the remedy is estimated to be $4,400,000 and the estimated average annual cost is $35,000.

The elements of the proposed remedy are as follows:

1) A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- reducing direct and indirect greenhouse gases and other emissions;
- increasing energy efficiency and minimizing use of non-renewable energy;
- conserving and efficiently managing resources and materials;
- reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- maximizing habitat value and creating habitat when possible;
- fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2) Excavation and off-site disposal of contaminant source areas on-site and immediately off-site to the north, including:

- Grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u); and
- Soil containing SVOCs exceeding 500 ppm.

Approximately 6,000 cubic yards of contaminated material will be removed from the site and treated prior to disposal using low temperature thermal desorption (LTTD), if necessary. The depth, lateral extent, and need for excavation in the eastern and western holder areas will be determined through a pre-design investigation during the design of the remedy. On-site soil which does not exceed the SCOs for commercial use may be used to backfill the on-site excavation to below the cover system described in remedy element 3. Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. The on-site backfill material will meet the SCOs for commercial use and groundwater protection, and the off-site backfill material will meet the SCOs for residential use and groundwater protection. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3. Soil derived from the re-grading reuse criteria may be used to backfill the excavation.

3) A site cover currently exists and must be retained to allow for commercial use of the site. Any site redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where an additional soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4) Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

5) A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 4 above.

Engineering Controls: The soil cover discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for further investigation to refine the nature and extent of contamination in the following areas where access was previously hindered: the eastern holder and the western holder under part of the Quality Inn building if and when the building is demolished
- provisions in the environmental easement limiting any land use to commercial usage and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and Inorganics. For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 6.1.1 are also presented.

Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting groundwater and soil.

Wastes are defined in 6 NYCRR Part 375-1.2(aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375(au). Source areas are areas of concern at a site were substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. Wastes and source areas identified at the site include coal tar that was observed in the subsurface at only 7 of the 48 RI boring locations. This suggests that the tar is sporadically distributed and limited in extent. The majority of tar impacts were observed above the water table within the upper nine feet of fill although an oil-like material was also observed in trace quantities at two locations both below the water table to depths of about 18 feet below grade. The tar has a solidified appearance and is therefore likely to be immobile. The majority of the tar and oil-like material is located near former MGP structures including two holders and two tar wells. However, tar was observed in shallow soils at three locations just north of the former MGP footprint as shown on Figure 3. This tar was assumed to be placed at the same time as the fill. In general, the soils that contain the solidified tar and oil-like material also contain polycyclic aromatic hydrocarbons (PAHs) that exceed applicable NYSDEC Soil Cleanup Objectives (SCOs). Lower levels of PAHs detected in other soil samples are likely attributable to abundance of urban fill observed on and around the site.

The waste/source areas identified will be addressed in the remedy selection process.

Groundwater

Low levels of benzene were detected during one sampling round at MW-10-01 (1.1 ppb) and MW-10-02 (2.1 ppb) at levels slightly above Class GA standard for benzene. Both of these wells are located near former holders. No other detected COCs exceeded Class GA standards or guidance values in any wells. See Figure 2.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Benzene	ND – 2.1	1	2/9
Ethyl benzene	ND	5	0/9
Toluene	ND – 0.55	5	0/9
Xylenes	ND	5	0/9

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

The primary groundwater contaminants are benzene, and toluene and they are associated with the operation of the former MGP.

Based on the findings of the RI, the presence of benzene has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are: benzene and toluene. Groundwater remediation will not be necessary based on the site investigation findings.

Soil

Surface, near surface and subsurface soil samples were collected at the site during the RI. Surface soil samples were collected from depths of 0-2 inches to assess direct human exposure. Near surface soil samples were collected from depths of 2 inches to 2 feet to assess ecological resources. Subsurface soil samples were collected from depths of 2 to 20 feet bgs to assess soil contamination impacts to groundwater. The results indicate that soils at the site exceed the unrestricted SCG for VOCs and SVOCs. See Figure 3.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use Commercial SCG[c] (ppm)	Frequency Exceeding Restricted SCG
VOCs					
Benzene	ND - 30	0.06	3/70	0.06[d]	3/70
Ethylbenzene	ND - 8.8	1	2/70	1[d]	2/70
Toluene	ND - 28	0.7	3/70	0.7[d]	3/70
Xylenes	ND - 56	0.26	3/70	1.6[d]	3/70
Total BTEX	**ND - 120**	NA	NA	**10**	**1/70**
SVOCs					
Acenaphthene	ND - 850	20	4/80	98[d]	3/80
Acenapthylene	ND - 2600	100	3/80	107[d]	3/80
Anthracene	ND - 3100	100	4/80	500	2/80

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use Commercial SCG[c] (ppm)	Frequency Exceeding Restricted SCG
Benz(a)anthracene	ND - 3500	1	28/80	1[d]	28/80
Benzo(a)pyrene	ND - 3800	1	28/80	1	28/80
Benzo(b)fluoranthene	ND - 3500	1	30/80	1.7[d]	27/80
Benzo(g,h,i)perylene	ND - 3000	100	3/80	500	2/80
Benzo(k)fluoranthene	ND - 1200	0.8	26/80	1.7[d]	22/80
Chrysene	ND - 3100	1	28/80	1[d]	28/80
Dibenz(a,h)anthracene	ND - 430	0.33	17/80	0.56	13/80
Fluoranthene	ND - 10000	100	4/80	500	3/80
Fluorene	ND - 2300	30	4/80	386[d]	2/80
Indeno(1,2,3-cd)pyrene	ND - 2200	0.5	27/80	5.6	7/80
Naphthalene	ND - 4700	12	5/80	12[d]	5/80
Phenanthrene	ND - 13000	100	4/80	500	4/80
Pyrene	ND-9800	100	4/80	500	3/80
Total PAH	**ND-68000**	NA	NA	**500**	**5/80**
Inorganics					
Arsenic	1-69.7	13	7/34	16	7/34

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.
d - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.

The primary soil contaminants are polycyclic aromatic hydrocarbons (PAHs) and BTEX associated with residues from the operation of the former MGP. As noted on Figure 3, the primary soil contamination is associated with the former MGP structures including the gas holders and tar wells. Metals are commonly found in urban fill and are not MGP-related. The arsenic sampling results that exceeded the arsenic SCO were located on the north side of West Shore Blvd., which is north of the former MGP footprint.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are, BTEX and PAHs.

Surface Water

No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of, sub-slab soil vapor under structures, and indoor

air. At this site due to the presence of buildings in the impacted area a full suite of samples were collected to evaluate whether actions were needed to address exposures related to soil vapor intrusion.

A soil vapor intrusion evaluation was conducted in the on-site hotel in April 2008 to evaluate the potential presence or migration of MGP-related vapor phase compounds beneath or inside the hotel building. Results of the evaluation showed numerous VOCs to be present in ambient air, indoor air and sub-slab soil vapor samples. The indoor and outdoor air results were found to be generally within typical background levels. A database does not exist to compare subslab sample results for petroleum compounds. No actions are necessary to address exposures to soil vapor intrusion on or off the site.

The soil vapor intrusion sampling results found chlorinated compounds PCE and TCE in subslab and/or indoor and outdoor air sample results. These non MGP-related compounds were not found in other media except for one subsurface soil sample that found PCE at a trace amount.

The chlorinated compounds were compared to the appropriate matrices and determined to be at levels where no actions are necessary to address the potential for exposures to occupants of the onsite building.

Since PCE and TCE are not associated with MGP sites, the presence of these compounds are not related to this MGP site.

Based on the concentration detected, and in comparison with the New York State's Soil Vapor Intrusion Guidance (NYSDOH, October 2006) and in conjunction with the other sampling results and the conceptual site model, it was determined that no additional actions were necessary to address the potential for exposures related to soil vapor intrusion. Therefore, no remedial alternatives need to be evaluated for soil vapor.

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Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment. The No Action alternative does not include long-term monitoring and therefore has no cost associated with it.

Alternative 2: Groundwater Monitoring and Institutional Controls

This alternative will include:

- Institutional controls, in the form of an environmental easement that restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- Development of a site management plan necessary to protect public health and the environment from any contamination identified at the site; and
- Annual groundwater monitoring to determine the trend of dissolved phase contamination in groundwater.

The cost to implement Alternative 3 is estimated as follows:

Present Worth:.....*$700,000*
Capital Cost:.....*$96,000*
Annual Costs:.....*$35,000*

Alternative 3: Targeted Soil Removal, Cover, Groundwater Monitoring and Institutional Controls

This alternative will include:

- Excavation and off-site disposal of approximately 1,200 cubic yards of contaminated material located above the water table to depths of 9 to 11 feet below ground surface (bgs);
- Backfilling the excavated areas with certified clean soil meeting the requirements of 6 NYCRR Part 375-6.7 (d); from an off-site location. A one foot soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer.
- Institutional controls in the form of environmental easement that restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH ;
- Development of a site management plan to include institutional controls to address the remaining contaminated soil and groundwater impacts on public health and the environment; and
- Implementation of a long-term groundwater monitoring to determine the effectiveness of the remedy.

The cost to implement Alternative 3 is estimated as follows:

Present Worth: *$1,800,000*
Capital Cost: *$1,200,000*
Annual Costs: *$35,000*

Alternative 4: Deep Soil Removal, Cover, Groundwater Monitoring and Institutional Controls

This alternative will include:

- Excavation of approximately 6,000 cubic yards of MGP-related source material, including structures (tar well north of the building) and foundation to varied depths as shown on Figure 4. The actual depth and lateral extent of removal in the eastern and western holder areas will be determined through a pre-design investigation during the design of the remedy. The excavated material will be treated off-site using low temperature thermal desorption (LTTD), if necessary prior to disposal in a permitted facility;
- Backfilling the excavated areas with certified clean soil meeting the requirements of 6 NYCRR Part 375-6.7 (d); from an off-site location. A one foot soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer;
- Implementation of a long-term groundwater monitoring to determine the effectiveness of the remedy;
- Establishment of institutional control in the form of environmental easement that restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- Development of a site management plan to include institutional controls to address the remaining contaminated soil and groundwater impacts on public health and the environment.

The cost to implement Alternative 4 is estimated as follows:

Present Worth: *$5,000,000*
Capital Cost: *$4,400,000*
Annual Costs: *$35,000*

Alternative 5: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the unrestricted soil clean objectives listed in Part 375-6.8(a). This alternative will include:

Excavation and off-site disposal of all contaminated material above unrestricted soil cleanup objectives. Approximately 22,000 cubic yards of soil will be removed from the site and treated using LTTD, if necessary prior to disposal. The on-site hotel building will be demolished to facilitate soil excavation of the former MGP footprint below the hotel building. This alternative will not rely on institutional or engineering controls to prevent future exposure. It will include implementation of a short-term groundwater monitoring to ascertain the effectiveness of the remedy.

The cost to implement Alternative 5 is estimated as follows:

Present Worth: *$12,000,000*
Capital Cost: *$12,000,000*
Annual Costs: *$0*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Alternative 1: No Action	0	0	0
Alternative 2: Groundwater Monitoring and Institutional Controls	$96,000	$35,000	$700,000
Alternative 3: Targeted Soil Removal, Cover, Groundwater Monitoring and Institutional Controls	$1,200,000	$35,000	$1,800,000
Alternative 4: Deep Soil Removal, Cover, Groundwater Monitoring and Institutional Controls	$4,400,000	$35,000	$5,000,000
Alternative 5: Restoration to Pre-Disposal or Unrestricted Conditions	$12,000,000	0	$12,000,000

Exhibit D

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative 4, Deep Soil Removal, Cover, Groundwater Monitoring and Institutional Controls as the remedy for this site. Alternative 4 will achieve the remediation goals for the site by reducing the volume, toxicity and mobility of contaminated material due to removal and off-site disposal and/or treatment of contaminated source material. The proposed remedy will reduce the source of contamination to groundwater. The elements of this remedy are described in Section 7. The proposed remedy is depicted in Figure 4.

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternative 1 (No Action) does not include active remedial actions and thus will not provide any additional protection to human health and the environment over what currently exists. Additionally, this alternative will not comply with SCGs; since source material will remain in place and continue to pose threat to both human health and the environment. Therefore, Alternative 1 is eliminated from further evaluation.

Alternative 2, Groundwater Monitoring and Institutional Controls, will not provide protection to human health and the environment beyond the groundwater use restrictions provided in the institutional control. This alternative will not comply with SCG as source material will remain in place and continue to impact groundwater while threatening both human health and the environment. Based on this, Alternative 2 is eliminated from further evaluation.

Alternatives 3, 4 and 5 will all provide comparable levels of protection to public health and the environment and were retained for further evaluation

Alternative 3, Targeted Soil Removal, groundwater monitoring and institutional control will provide some protection to the environment. Under this alternative, impacted materials located above the groundwater table will be removed but other impacted materials below water table will remain in place. Alternative 4, Deep Soil Removal and Soil Cover, will achieve protection and provide permanent reduction of impacted materials due to source removal and off-site treatment and/or disposal. Under Alternative 4, source material will be removed to varied depths as shown on Figure 4. Alternative 5, which calls for total removal and off-site treatment and/or disposal of MGP impacted material will provide the greatest protection compared to the other alternatives.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be

applicable on a case-specific basis.

Alternative 3 will achieve SCGs to groundwater level and meet the RAOs by removing impacted materials above the groundwater level to depths up to 9 feet bgs. Alternative 4 will achieve both SCGs and RAOs. Impacted materials above and below groundwater will be removed to depths up to 15 feet bgs for off-site treatment and/or disposal, thereby limiting exposure and the likelihood of off-site migration of contaminants. Alternative 5 will comply with SCGs and meet RAOs as the site will be cleaned and restored to pre-release conditions.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 3 will provide some limited long-term effectiveness and permanence as only impacted materials above the groundwater table will be removed for off-site disposal/treatment. Under this alternative, impacted materials below the groundwater will remain in place. Alternative 4 will provide a greater long-term effectiveness and permanence compared to Alternative 3 as source materials will be removed above and below the groundwater table. Long-term effectiveness is best achieved by Alternative 5, since all contaminated material will be removed from the site to achieve the unrestricted use SCOs, although this increase in effectiveness is slight in comparison to Alternative 4.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternatives 3 and 4 will both provide significant reduction of toxicity, mobility and volume as approximately 1,200 and 6,000 cubic yards of source material will be addressed respectively. However, the volume of the material (1,200 cubic yards) to be removed under Alternative 3 is limited to impacted material above the groundwater. Alternative 4, which requires the excavation and disposal of approximately 6,000 cubic yards of contaminated soil will address impacted material above and below the water table. Alternative 5 will provide the greatest reduction of toxicity, mobility and volume of contaminants by removing all contaminants that exceed pre-disposal conditions from the site.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternatives 3, 4 and 5 all have short-term impacts to the community and workers due to construction activities. Alternative 3 with lesser soil removal compared to Alternatives 4 and 5 will provide the least short-term impacts to the community. Alternative 4 will result in higher short-term impacts to the community and the workers in comparison to Alternative 3. Alternative 5, which calls for total removal of impacted materials to full depth to restore the site to pre-disposal condition will result in a larger amount of excavated material in need of transport through the community for off-site treatment and/or disposal and thus has the greatest short-

term impacts. Excavation to such deeper depth will result in significant disruption to the community, onsite business and other nearby commercial establishments as a result of the need for large scale dewatering, treatment and disposal of water. Former MGP related structures located within the foot print of on-site building may need to be removed, if necessary and determined to contain impacted materials above pre-disposal condition. Alternative 5 will also result in significant noise generation and heavy truck traffic. Over 2,000 tractor truck round trips will be required to accomplish this remedy. Soil excavation and backfilling activities will be completed in approximately 3, 4 and 7 months for Alternatives 3, 4 and 5, respectively.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternatives 3, 4 and 5 are all readily implementable but with varied degrees of difficulties. Personnel, equipment and technology required to accomplish excavation are easily available. Alternative 5 with the demolition of the hotel building and significant greater volume of soil excavation will be the most challenging to design and construct. Dewatering associated with Alternative 5, due to deeper and full depth and volume of removal will be challenging and difficult to accomplish. Excavation and off-site treatment and disposal are reasonably available resources. Dealing with subsurface utilities and public roadways will present additional challenges in implementing Alternatives 3, 4, and 5.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The costs of the alternatives vary significantly. Alternative 3 has a low cost, but will leave source material below groundwater table in place. With its large volume of soil to be handled (to meet unrestricted use), Alternative 5 will have highest present worth cost. Though Alternative 5 will result in significant reduction in the volume of contaminated materials, it will only provide minimal additional protection of public health and the environment over Alternative 4. The increase of over 100 percent compared to the cost to implement Alternative 4 is not justified by the marginal increase in protection.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

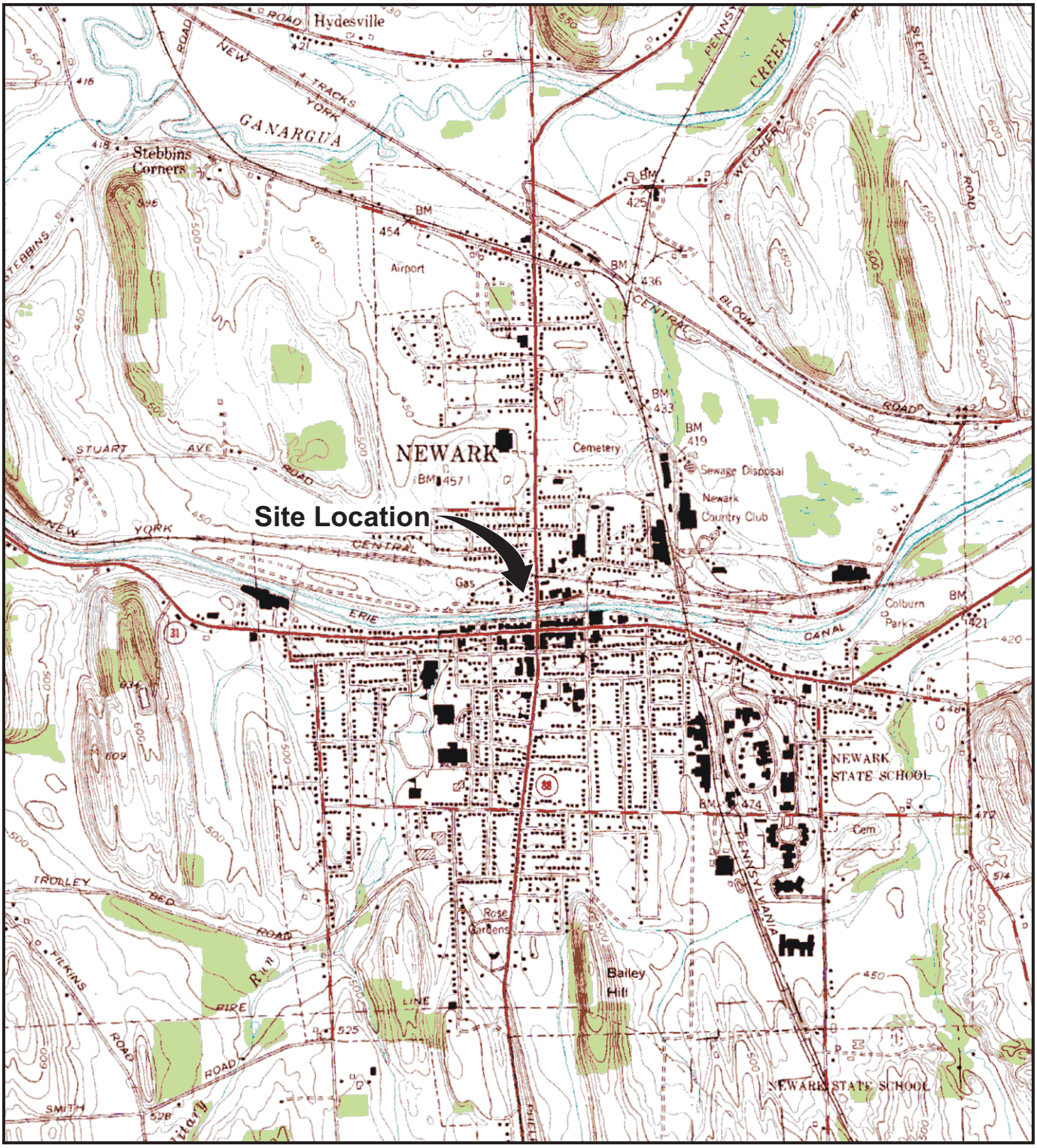
Since the anticipated use of the site is commercial, Alternative 3 will be less desirable because source material below the water table will remain in place on the property and will continue to impact groundwater. Alternatives 4 and 5 will permanently remove contaminated material. The remaining contamination under Alternative 4 will be controlled by the implementation of a Site Management Plan. Under Alternative 5, all of the soil above unrestricted SCOs will be removed and restrictions on the site use will not be necessary.

Alternative 5 will allow for any future use of the property. Alternatives 3 and 4 will allow the property to be used for commercial (which also allows industrial) purposes. Since the present and anticipated future use of the site is commercial, Alternative 4 will be desirable as source material above and below water level will be removed.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative 4 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., NEWARK, NY, 1952, PHOTOREVISED 1952.

2000' 0 2000'

Approximate Scale: 1" = 2000'

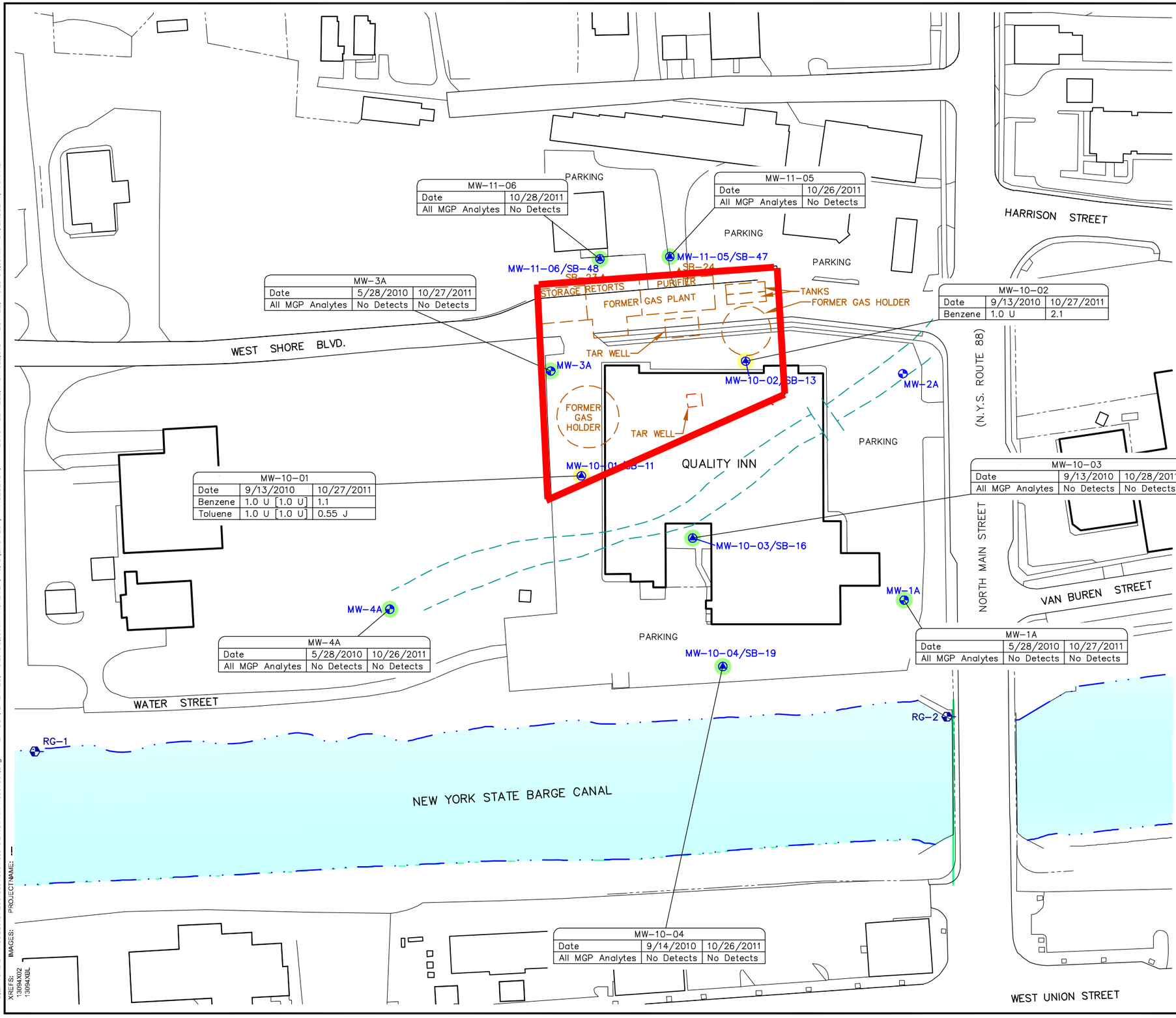
NYSEG
NEWARK FORMER MANUFACTURED GAS PLANT SITE
SITE NO. 8-59-021
PROPOSED REMEDIATION ACTION PLAN

SITE LOCATION MAP

ARCADIS

FIGURE
1

01/04/2013 SYRACUSE, NY-ENV/CAD-DJHOWES
B0013094/0004/00010/CDR/13094N01.CDR



LEGEND:

- MW-1A — MONITORING WELL WITH "A" DESIGNATION INSTALLED IN EARLY 1990'S
- MW-10-02 — MONITORING WELL
- RG-1 — RIVER GAUGE
- FORMER MGP STRUCTURES
- APPROXIMATE FORMER LOCATION OF MILITARY BROOK (PRE 1924)
- APPROXIMATE FORMER MGP BOUNDARY
- J — INDICATES AN ESTIMATED VALUE
- U — THE COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- [ ] — RESULTS IN BRACKETS ARE FOR DUPLICATE SAMPLES
- SAMPLING LOCATIONS NOT CONTAINING MGP-RELATED COCs AT CONCENTRATIONS GREATER THAN NYSDEC CLASS GA STANDARDS AND GUIDANCE VALUES.
- SAMPLING LOCATIONS CONTAINING MGP-RELATED COCs AT CONCENTRATIONS GREATER THAN NYSDEC CLASS GA STANDARDS AND GUIDANCE VALUES.

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG TITLED "LOCATION MAP NEWARK MGP SITE VILLAGE OF NEWARK WAYNE COUNTY, NEW YORK", REVISED 6/03/99, AT A SCALE OF 1"=200'.
2. AERIAL DOWNLOADED FROM NYS GIS CLEARINGHOUSE, DATED 2005. COORDINATES ARE STATE PLANE NAD 83.
3. FORMER MGP SITE FEATURES FROM DWG FILE PROVIDED BY NYSEG TITLED "NEWARK FORMER MGP SITE VILLAGE OF NEWARK TOWN OF ARCADIA WAYNE COUNTY, NEW YORK", REVISED 12/18/02, AT A SCALE OF 1"=40'. FORMER MGP SITE FEATURE LOCATIONS ARE APPROXIMATE.
4. SAMPLING LOCATIONS BASED ON A SURVEY DRAWING BY FISHER ASSOCIATES TITLED "MONITORING WELL LOCATION MAP", DATED 09/21/10, @ A SCALE OF 1" = 40'.
5. RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L) OR PARTS PER BILLION.

0 100' 200'

GRAPHIC SCALE

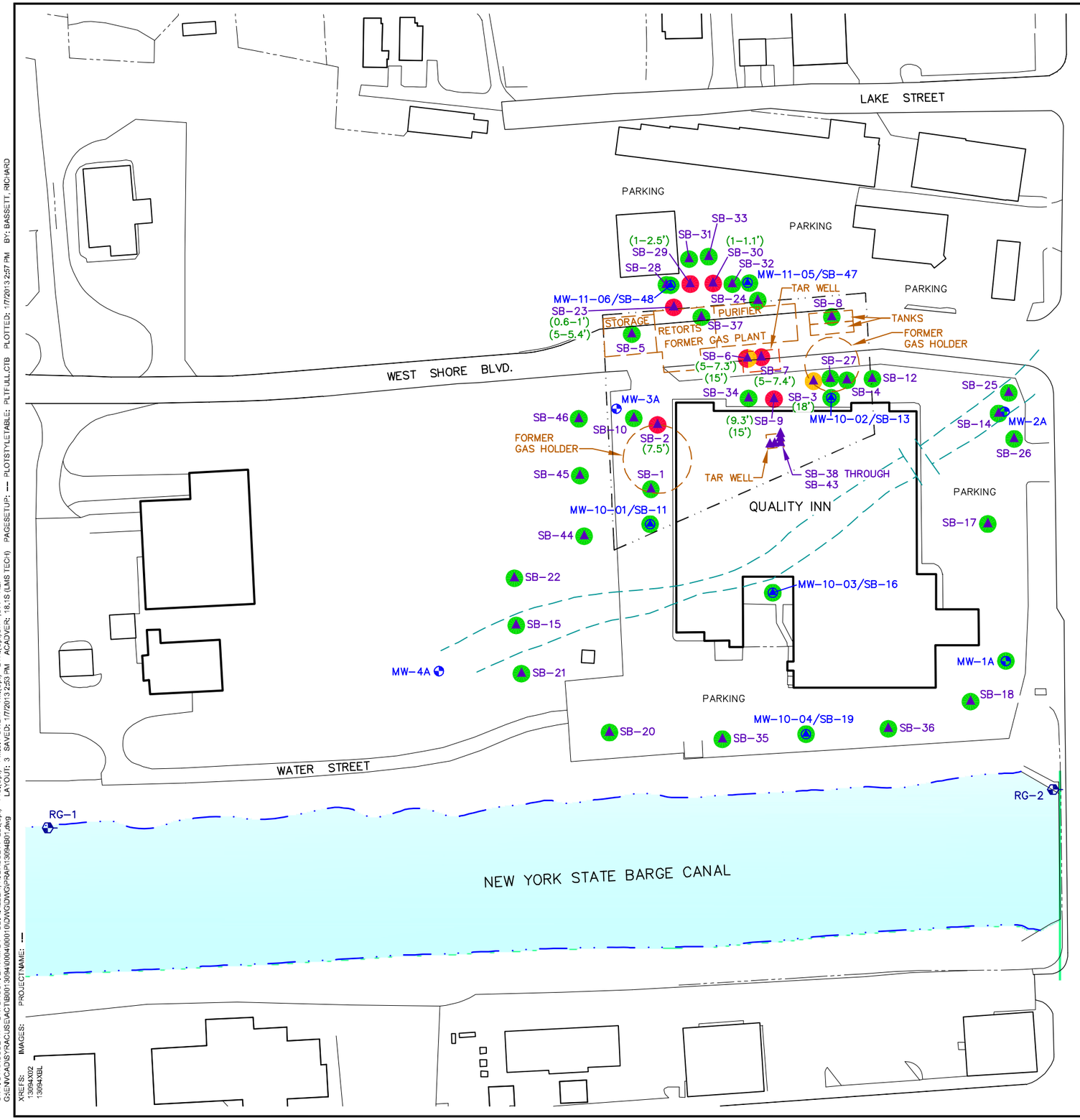
NYSEG
NEWARK FORMER MANUFACTURED GAS PLANT SITE
SITE NO. 8-59-021

PROPOSED REMEDIAL ACTION PLAN

EXTENT OF GROUNDWATER IMPACTS

ARCADIS

FIGURE 2



LEGEND:

- SB-20 — SOIL BORING
- MW-10-02/SB-13 — MONITORING WELL/SOIL BORING
- RG-1 — RIVER GAUGE
- MW-1A — MONITORING WELL WITH "A" DESIGNATION INSTALLED IN EARLY 1990'S
- FORMER MGP STRUCTURES
- APPROXIMATE FORMER LOCATION OF MILITARY BROOK (PRE 1924)
- APPROXIMATE FORMER MGP BOUNDARY
- SB-29 — SOIL BORING WITH TAR-LIKE MATERIAL
- SB-3 — SOIL BORING WITH TRACE OIL-LIKE MATERIAL
- SB-44 — SOIL BORING WITH NO OBSERVED IMPACTS
- (1-2.5') — DEPTH OF OBSERVED IMPACT

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG TITLED "LOCATION MAP NEWARK MGP SITE VILLAGE OF NEWARK WAYNE COUNTY, NEW YORK", REVISED 6/03/99, AT A SCALE OF 1"=200'.
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4. SAMPLING LOCATIONS AND QUALITY INN BUILDING BASED ON A SURVEY DRAWING BY FISHER ASSOCIATES TITLED "MONITORING WELL LOCATION MAP", DATED 09/21/10, @ A SCALE OF 1" = 40'.

0 100' 200'

GRAPHIC SCALE

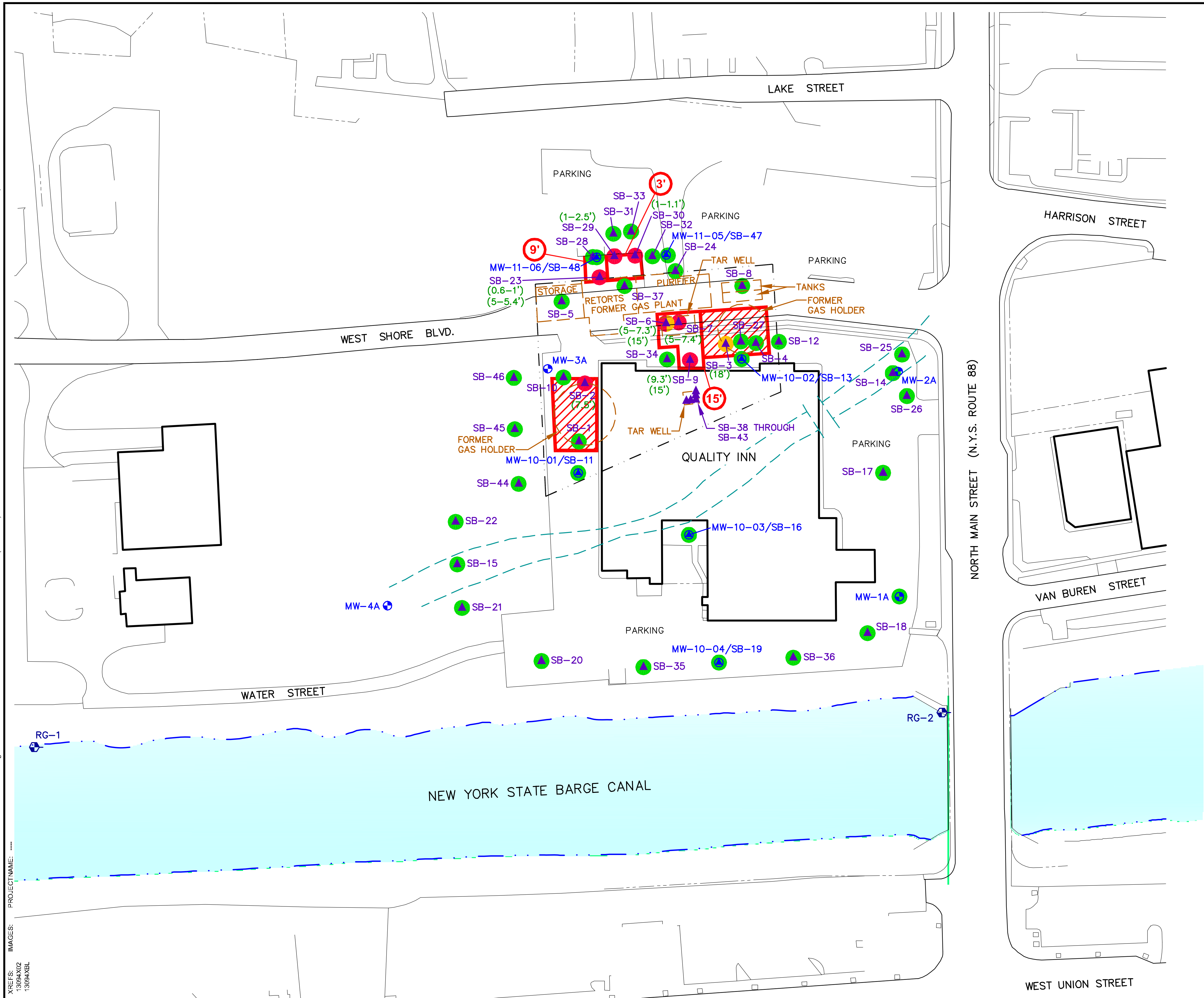
NYSEG
NEWARK FORMER MANUFACTURED GAS PLANT SITE
SITE NO. 8-59-021

PROPOSED REMEDIAL ACTION PLAN

EXTENT OF SOIL IMPACTS

ARCADIS

FIGURE 3



LEGEND:

SB-20	SOIL BORING
MW-10-02/SB-13	MONITORING WELL/SOIL BORING
RG-1	RIVER GAUGE
MW-1A	MONITORING WELL WITH "A" DESIGNATION INSTALLED IN EARLY 1990'S
	FORMER MGP STRUCTURES
	APPROXIMATE FORMER LOCATION OF MILITARY BROOK (PRE 1924)
	APPROXIMATE FORMER MGP BOUNDARY
SB-29	SOIL BORING WITH TAR-LIKE MATERIAL
SB-3	SOIL BORING WITH TRACE OIL-LIKE MATERIAL
SB-44	SOIL BORING WITH NO OBSERVED IMPACTS
(1-2.5')	DEPTH OF OBSERVED IMPACT
	PROPOSED HORIZONTAL LIMITS OF REMOVAL
9'	PROPOSED DEPTH OF REMOVAL
	AREA REQUIRING FURTHER INVESTIGATION

NOTES:

1. BASE MAP PREPARED FROM DWG FILE PROVIDED BY NYSEG TITLED "LOCATION MAP NEWARK MGP SITE VILLAGE OF NEWARK WAYNE COUNTY, NEW YORK", REVISED 6/03/99, AT A SCALE OF 1"=200'.
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0 100' 200'
GRAPHIC SCALE

NYSEG
NEWARK FORMER MANUFACTURED GAS PLANT SITE
SITE NO. 8-59-021
PROPOSED REMEDIAL ACTION PLAN

PROPOSED REMEDY- ALTERNATIVE 4
DEEP SOIL REMOVAL

ARCADIS

FIGURE
4