Exhibit A

Waste/Source Areas

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). Investigations conducted at the site identified constituents of potential concern (COPCs) namely BTEX and PAHs in subsurface soil and groundwater above regulatory criteria. These constituents are typical of MGP sites. Waste/Source Areas in the form of coal tar saturated soil and /or non aqueous phase liquid (NAPL) were not detected at the site.

Groundwater

Bedrock was not encountered in the Remedial Investigation and all the monitoring wells were completed in overburden soils. Groundwater samples collected from each of the 8 monitoring wells were analyzed for TCL VOCs, TCL SVOCs, TAL metals and total cyanide. Analytical results for groundwater samples are summarized on Figure 4. VOCs associated with petroleum hydrocarbon compounds were detected above applicable groundwater standards in samples collected from monitoring wells MW-1 (upgradient edge of site), MW-3A (cross gradient to site), and well pair MW-4S (screened in shallow overburden soils) and MW-4D (screened in deeper overburden soils).

Figure 4 identifies sample locations where benzene and SVOCs were detected above groundwater standards. PAHs were detected above groundwater standards in three samples: MW-5 and MW-4S, MW-4D. The MW-4S and MW-4D well pair are located adjacent to two former structures labeled “Refuse Wells” on the former MGP site plans. The function of these “Refuse Wells” is not known. Consistent with VOC results, the highest concentrations were detected in sample MW-4S; seven individual PAH compounds were detected above groundwater standards. Naphthalene was the only PAH detected at a concentration above the groundwater standard in MW-4D. The concentration in MW-4D was approximately 100 times lower than the concentration detected in the shallow well. Four individual PAH compounds were detected in MW-5 at concentrations marginally above standards.

The majority of samples contained iron, manganese, and sodium at concentrations above groundwater standards. The samples are unfiltered and the analysis is sensitive to suspended solids in the sample. These metals at the detected concentrations are common in unfiltered groundwater samples collected from glacial soils and since they are naturally occurring in the groundwater will not be reported in the table.

Total cyanide was detected marginally above groundwater standards in samples analyzed from wells MW-1 and MW-4S. The highest concentrations were detected at well MW-4S located downgradient from the former Refuse Wells and MGP buildings. The groundwater impacts were substantially less in the deeper well at that location (MW-4D) indicating groundwater impacts near the Brook are limited primarily to the upper 20 to 30 feet of the saturated zone.

The presence of benzene in MW-1 (upgradient) and MW-3A (cross-gradient) suggests the presence of an off-site source of that compound that may be contributing in part to the benzene concentrations detected in on-site wells.

Dissolved oxygen concentrations are sufficiently high to indicate biodegradation of aromatic hydrocarbon compounds in groundwater is likely occurring. Groundwater is not used for water supply in the area of the site, and off-site migration of groundwater is not expected to occur. Surface water adjacent to the site contains no detected

concentrations of VOCs or SVOCs, indicating no surface water impact by groundwater COCs. Figure 4 shows the groundwater contour map and the direction of groundwater flow. Table #1 shows the exceedances of groundwater SCGs. Based on the findings of the RI, the past disposal of hazardous waste 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 VOCs and SVOCs.
See section 6.4 for a further discussion of groundwater impacts.

Table # 1 Groundwater

	Constituents of Concern	Concentration Range Detected (ppb)[a]	SCG (ppb)b	Frequency Exceeding SCG
VOCs	Benzene	ND[c] - 960	1	4 of 8
	Toluene	ND - 88	5	1 of 8
	Total Xylenes	ND - 720	5	2 of 8
SVOCs	Benzo(a)anthracene	0.3 - 0.8	0.002	2 of 8
	Benzo(b)fluoranthene	ND - 0.7	0.002	2 of 8
	Benzo(k)fluoranthene	ND - 0.2	0.002	1 of 8
	Benzo(a)pyrene	ND - 0.8	0.002	1 of 8
	Chrysene	ND - 0.4	0.002	2 of 8
	Indeno(1,2,3-cd)pyrene	ND - 0.5	0.002	2 of 8
	Naphthalene	ND - 3200	10	2 of 8
Inorganic Compounds	Cyanide, Total	ND - 276	200	2 of 8

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).
c- ND: not detected

Surface Soil

Surface soil samples were collected from a depth of 0-2 inches to assess direct human exposure. Surface soil sampling locations and results are shown on Figures 5 and 6. Surface soil samples collected during the RI were analyzed for TCL SVOCs, TAL metals and total cyanide. With the exception of DSS10, analyses of each surface soil sample detected two or more individual PAH compounds at concentrations above unrestricted use SCOs. Comparison to commercial use SCOs indicates only benzo(a)pyrene and benzo(a)anthracene were present in some samples at concentrations above this SCO. The highest total PAH compound concentration in a discrete soil sample was detected at DSS2 (73.6 mg/kg), which was collected from a location near the southern site boundary, within 10 feet of the asphalt paved parking lot for the Yates County Correctional Facility. The spatial distribution of SVOCs shows no relation to MGP operations. Figure 6 identifies sample locations where PAHs were detected above unrestricted use SCOs.

Lead and mercury were detected above unrestricted use SCOs in each of the 11 surface soil samples. Zinc was detected above the unrestricted use SCO in all samples except DSS3. Copper and arsenic were also detected above unrestricted use SCOs in one or more samples. However, with the exception of arsenic atDSS2, none of the samples contained metals at concentrations above the commercial use SCOs. The highest metals concentrations were detected in sample DSS2. The spatial distribution of metals shows no relation to MGP operations. Figure 5 identifies sample locations where metals were detected above unrestricted use SCOs. Total cyanide was not detected above Unrestricted Use SCOs in any surface soil samples.

Supplemental surface soil samples were collected from six locations for TCL SVOCs and TAL metals including total cyanide which represent background soil locations. Constituent concentrations detected in the on-site surface soil samples are similar to those in the background surface soil samples. Table # 2 shows the exceedances of surface soil SCGs. The levels of contaminants detected are not indicative of site-related contamination and, based on an assessment of background soil quality, on-site conditions are consistent with background conditions. Therefore, as no site-related surface soil contamination was identified, no remedial alternatives, other than maintaining the existing grass cover ,need to be evaluated for surface soil.

Table # 2 Surface Soil

Constituents of Concern	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Commercial SCG[c] (ppm)	Frequency Exceeding Restricted SCG
On-Site Surface Soil					
SVOCs					
Benzo(a)anthracene	0.56 - 7.5	1	12 of 15	5.6	1 of 15
Benzo(b)fluoranthene	0.89 - 13	1	12 of 15	5.6	0 of 15
Benzo(k)fluoranthene	ND[d] - 1.8	0.8	5 of 15	56	0 of 15
Benzo(a)pyrene	0.58 - 8.2	1	12 of 15	1	12 of 15
Chrysene	0.53 - 6.9	1	11 of 15	56	0 of 15
Dibenzo(a,h)anthracene	ND - 1.9	0.33	11 of 15	0.56	0 of 15
Indeno(1,2,3-cd)pyrene	0.38 - 5.6	0.5	14 of 15	5.6	0 of 15
Inorganics					
Arsenic	3.2 - 21.2	13	2 of 11	16	1 of 11
Copper	14.5 - 59.5	50	2 of 11	270	0 of 11
Lead	138 - 780	63	11 of 11	1,000	0 of 11
Mercury	0.193 - 0.959	0.18	11 of 11	2.8	0 of 11
Zinc	80.4 - 419	109	10 of 11	10,000	0 of 11
Background Surface Soil					
SVOCs					
Benzo(a)anthracene	0.71 - 2.4	1	1 of 3	5.6	0 of 3
Benzo(b)fluoranthene	0.9 - 3	1	2 of 3	5.6	0 of 3
Benzo(k)fluoranthene	0.33 - 1.3	0.8	1 of 3	56	0 of 3
Benzo(a)pyrene	0.77 - 2.8	1	2 of 3	1	2 of 3
Chrysene	0.81 - 2.6	1	1 of 3	56	0 of 3
Dibenzo(a,h)anthracene	0.16 - 0.62	0.33	1 of 3	0.56	1 of 3
Indeno(1,2,3-cd)pyrene	0.52 - 5.6	0.5	3 of 3	5.6	1 of 3
Inorganics					
Lead	76.4 - 263	63	3 of 3	1,000	0 of 3
Mercury	0.114 - 0.264	0.18	2 of 3	2.8	0 of 3
Nickel	17.6 - 49.2	30	1 of 3	310	0 of 3
Zinc	72.4 - 275	109	2 of 3	10,000	0 of 3

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 Commercial Soil Cleanup Objectives.
d- ND: not detected

Subsurface Soil

Subsurface soil sampling locations and results are shown on Figures 7 and 8. Subsurface soil samples collected from borings and test pits during the RI were analyzed for MGP constituents of concern (BTEX, PAH compounds, and total cyanide). Visible coal tar was not observed in any of the subsurface soil samples. Possible MGP impacts (heavy staining and sheen) were observed at one boring location at a depth of 15 feet. Chemical impacts in soil were primarily BTEX and, to a lesser degree, PAH compounds in the area of the gas holder foundation and former MGP buildings and structures. Individual VOCs exceeded their respective unrestricted use SCOs at several locations; none of the soil samples exceeded the commercial use SCOs. Similarly, while individual PAHs exceeded their respective unrestricted use SCOs at five on-site boring locations, the SCG of 500 mg/kg for PAHs was not exceeded at any on-site or off-site location samples taken during the RI, and the number of individual PAHs present above commercial use SCOs was limited to five compounds.

Soil samples collected from off-site locations (MW-2 {9.2 – 10.8 feet}, MW-3A {24 – 26 feet} and MW-5 {18 – 22 feet}) were not elevated with respect to Unrestricted Use SCOs. Figure 8 identifies sample locations where PAHs were detected above unrestricted use SCOs. Detections of BTEX above Unrestricted Use SCOs are shown on Figure 7.

Total cyanide was not detected above Unrestricted Use SCOs in any of the subsurface soil samples. Table # 3 shows the exceedances of subsurface soil SCGs. Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of subsurface 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 VOCs and SVOCs.

Table # 3 Subsurface Soil

Constituents of Concern	Concentration Range Detected (ppm)[a]	Unrestricted Use SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Commercial Use SCG[c]	Frequency Exceeding Restricted SCG
VOCs					
Benzene	ND[d] - 22	0.06	11 of 27	44	0 of 27
Ethylbenzene	ND - 2.6	1	2 of 27	390	0 of 27
Total Xylenes	ND - 5.8	0.26	5 of 27	500	0 of 27
SVOCs					
Benzo(a)anthracene	ND - 9.4	1	7 of 31	5.6	4 of 31
Benzo(b)fluoranthene	ND - 18	1	8 of 31	5.6	4 of 31
Benzo(a)pyrene	ND - 12	1	8 of 31	1	8 of 31
Chrysene	ND - 9.2	1	8 of 31	56	0 of 31
Dibenz(a,h)anthracene	0.11 - 2.5	0.33	1 of 31	.56	1of 31
Indeno(1,2,3-cd)pyrene	ND - 7.5	0.5	8 of 31	5.6	1of 31
Naphthalene	ND - 19	12	2 of 31	500	0 of 31

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- ND: not detected

Surface Water

Surface water samples were collected upstream, directly across from the site and downstream from the site and analyzed for TCL VOCs, TCL SVOCs, TAL metals and total cyanide. VOCs, SVOCs, and total cyanide were not detected in surface water samples. Detected metals concentrations were similar in each of the four samples analyzed, indicating these are naturally occurring or not site related in this surface water. Iron concentrations were detected above surface water criteria in each of the four samples. No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediments

Sediment samples were collected adjacent to, as well as upstream and downstream from the site in Jacobs Brook. Eight samples collected upstream of the site representing background conditions were analyzed for PAHs and TAL metals. One sediment samples collected immediately upstream from the site, two from adjacent to the site and one downstream from the site were analyzed for TCL VOCs, TCL SVOCs, TAL metals and total cyanide.

Several individual PAH compounds were detected in background sediment samples and some at concentrations above sediment criteria. The range of total PAH concentrations was 0.44 to 30.0 mg/kg. The NYSDEC sediment criterion for the lowest effect level for total PAHs is 4 mg/kg. Nickel was the only metal detected in background samples above sediment criteria. Background sediment sample results indicate point source discharges from numerous storm sewer discharge outfall pipe affect sediment quality in Jacobs Brook. VOCs were not detected in any of the sediment samples. SVOCs, metals, and total cyanide were not detected above sediment criteria in the two samples collected from sediment adjacent to the site. Two compounds were detected in Jacobs Brook sediments at levels above the sediment criteria and above the background range of individual PAH compounds at the downstream location . This downstream location is adjacent to a storm sewer outfall that receives drainage from an asphalt paved parking area. The compounds detected in this sample do not appear to be related to the MGP site.

The detected concentrations in samples collected adjacent to and downstream from the site were within the range of PAHs detected in the upstream samples (background). The majority of sediment samples are dominated by concentrations of pyrene, benzo(b)fluoranthene, chrysene, and fluoranthene and are fairly diverse with respect to the relative concentrations. MGP impacts in soils exhibit a more consistent pattern and are generally dominated by concentrations of naphthalene, phenanthrene, anthracene, and fluoranthene. The comparison of sediment sample PAH fingerprints and PAH fingerprints of MPG impacted soil show no discernable influence on the PAH chemistry of downstream sediment samples from on-site PAHs. No site-related sediment contamination of concern was identified during the RI/FS. Therefore, no remedial alternatives need to be evaluated for sediment.

Table # 5 Sediments

	Constituentsof Concern	ConcentrationRange Detected(ppm)[a]	SCG(ppm)[b]	FrequencyExceeding SCG
Sediments				
SVOCs	Benzo(b)fluoranthene	0.35 - 4.6	1.3	1 of 3
	Benzo(k)fluoranthene	0.11 - 4.9	1.3	1 of 3

	Benzo(a)pyrene	0.22 - 2.6	1.3	1 of 3
	Chrysene	0.2 - 2.7	1.3	1 of 3
	Dibenzo(a,h)anthracene	0.044 - 0.49	0.0634	1 of 3
	Total PAHs	1.97 - 34.72	4	1 of 3
	Copper	7.1 - 23.4	16	1 of 3
	Nickel	6.8 - 17.7	16	1 of 3
SVOCs	Benzo(b)fluoranthene	0.11 - 5	1.3	1 of 8
SVOCs Inorganic Compounds Inorganic Compounds	Benzo(a)pyrene	0.059 - 2.5	1.3	1 of 8
	Chrysene	0.57 - 3.1	1.3	1 of 8
	Dibenzo(a,h)anthracene	0.014 - 0.66	0.0634	7 of 8
	Total PAHs	0.441 - 30.6	4	5 of 8
	Copper	13.3 - 25.3	16	4 of 8
	Lead	11.7 - 34.7	31	1 of 8
	Manganese	286 - 386	460	2 of 8
	Nickel	6.8 - 17.7	16	1 of 8
	Zinc	53.8 - 139	120	1 of 8

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in sediment;
b - SCG: The Department's "Technical Guidance for Screening Contaminated Sediments."

Soil Vapor Intrusion

Due to the presence of MGP- related contamination in the soil and groundwater, there is a potential for on-site soil vapor contamination. There is also a potential for people to come into contact with this contamination due to soil vapor intrusion if the use of the on-site buildings change or if new buildings are constructed on-site. Therefore the remedy selection process will address the potential for on-site soil vapor intrusion.

The evaluation of the potential for off-site soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of indoor air and crawl space air in the adjacent Linden St. residence and one outdoor ambient air sample. No sub-slab soil vapor samples were collected because the crawl space and cellar have dirt floors. Based on the concentration detected, , no site-related indoor air or crawl space air contamination of concern was identified during the RI. Therefore, no additional off-site sampling is necessary.

Exhibit B

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 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 groundwater contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

Exhibit C

Description of Remedial Alternatives

Soil Remedial Alternatives

Soil Alternative 1: No Action

Under the no action alternative, no remedial activities would be conducted at the site.
There is no cost associated with the no action soil alternative.

Soil Alternative 2: Institutional Controls and Site Management

Contamination at the site is currently isolated from contact with human and ecological receptors. The goal of Alternative 2 is to maintain this isolation through institutional controls. The current site cover, consisting of two storage buildings and thick, well-maintained turf will be maintained to allow the current use of the site to continue. A groundwater use restriction will be imposed to prohibit the use of groundwater on the site without proper treatment. Use of the site for agriculture or vegetable gardens would be prohibited. Restrictions on the handling and disposal of soils generated by any future excavation work will be established, along with requirements to re-establish an acceptable soil cover.

The institutional control (in the form of an environmental easement) will preclude site development for unrestricted residential use. If the site is redeveloped for some other use in the future, an equivalent cover system will be established so as to maintain the isolation of site contaminants from human or ecological contact.

A site management plan (SMP) will be prepared to detail the steps and requirements necessary to assure the easement remains in place and effective. NYSEG or any subsequent property owner will provide a periodic certification that the environmental easement remains in force, and that the existing site cover either remains in place, or has been replaced in accordance with NYSDEC-approved modifications.

Present Worth:..*$138,000*
Capital Cost:..*$42,000*
Annual Costs:...*$96,000*

Soil Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and meets the unrestricted soil cleanup objectives listed in Part 375-6.8(a). This alternative includes the excavation and removal of soil containing COCs above Part 375 Unrestricted Use SCOs. Under this alternative, all of the historic fill material (estimated to include the upper 6 to 15 feet of soil/fill, including the entire bank of Jacobs Brook) as well as deeper soils containing COCs at concentrations above Part 375 Unrestricted Use SCOs would be removed. Excavating deep soils along site boundaries would necessitate sheet pile installation around portions of the Site perimeter. Erosion control, development of a Storm Water Pollution Prevention Plan (SWPP), and other regulatory requirements (e.g., community air monitoring plan) would be necessary as part of the detailed design of this alternative.

This alternative entails excavation of approximately 10,000 cubic yards (cy) of soil for off-site disposal. Actual excavation limits would be determined by completion of a pre-design sampling investigation. The remedy will not rely on institutional or engineering controls to prevent future exposure. There is no Site Management, no restrictions, and no periodic review. This remedy will have no annual cost, only the capital cost.

Capital Cost:..*$4,485,000*

<u>Groundwater Remedial Alternatives</u>

Groundwater Alternative 1: No Action

Under this alternative, no active remedial activities would be conducted. There is no cost associated with the no action groundwater alternative.

Groundwater Alternative 2: Institutional Controls and Site Management

An institutional control in the form of an environmental easement will be established for the parcel to preclude site development for residential use and a groundwater use prohibition. This remedy will have no annual cost, only the capital cost.

Capital Cost:..*$30,000*

Groundwater Alternative 3: Groundwater Monitoring With Site Management

Groundwater alternative 3 relies on naturally occurring chemical, biological, and/or physical processes to degrade MGP related COCs in groundwater. These processes would continue to reduce the toxicity, mobility, and mass of dissolved phase MGP constituents in groundwater. A groundwater monitoring program would be developed for the site to monitor on-site and off-site groundwater quality. The monitoring program would assess groundwater flow direction and monitor concentrations of COCs in groundwater. No new monitoring wells are required under this alternative. Institutional controls as described above for Alternative GW-2 would also be included in Alternative GW-3.

Present Worth:..*$264,000*
Capital Cost:..*$42,000*
Annual Costs:..*$222,000*

Exhibit D

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Subsurface Soil Alternatives			
S-1:Soil No Action	0	0	0
S-2: Soil IC and Site Management	42,000	96,000	138,000
S-3: Restoration to pre-disposal conditions	4,485,000	0	0
Groundwater Alternatives			
GW-1: No Action	0	0	0
GW-2: IC and Site Management	30,000	0	0
GW-3: Groundwater Monitoring with Site Management	42,000	222,000	264,000

Note: Annual Costs include OM&M costs estimated over 30 years and presented on a present worth basis.

Exhibit E

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Soil Remediation Alternative S-2 and Groundwater Remediation Alternative GW-3, as the remedy for this site. The elements of this remedy are described in Section 7.2

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives.

Soil Alternative S-2 (ICs and Site Management) combined with Groundwater Alternative GW-3 (Groundwater Monitoring with Site Management) are being proposed because, as described below, they satisfy the threshold criteria and provides the best balance of the balancing criteria described in Section 7.1. This remedy would achieve the remediation goals for the site by the implementation of a Site Management Plan that would: restrict groundwater usage, maintain the existing site cover, provide procedures for handling residual contaminated soils and groundwater that may result from excavation at the site and evaluate the potential for soil vapor intrusion should any building be developed at the site, including the provision to implement actions (e.g. mitigation or monitoring) recommended to address exposures related to soil vapor intrusion. A groundwater monitoring program would be implemented to monitor on-site and off-site groundwater quality. An environmental easement would be established for the property to preclude site development for any residential use.

Soil

Three soil remediation alternatives were described in Exhibit C:

- S-1 No Action
- S-2 Institutional Controls and Site Management

S-3 Restoration to **Pre-Disposal or Unrestricted Conditions**

These alternatives are compared below.

<u>Overall Protection of Human Health and the Environment:</u> Alternative S-1 is inadequate with respect to long term protection of human health and the environment. With proper maintenance as would be required by the environmental easement and associated SMP, Alternative S-2 would be protective of human health and the environment.

With respect to overall protection of human health and the environment, the only potentially substantive benefit associated with Alternative S-3 over Alternative S-2 is the potential for acceleration of the remediation of groundwater as a result of removal of COCs from the saturated zone. The RI showed that COCs present in soils at the site have not likely resulted in off-site impacts to groundwater. Therefore, it is unlikely these soils represent a continuing source of potential off-site groundwater impacts.

<u>Compliance with SCGs:</u> All soil alternatives evaluated generally comply with applicable location specific and action specific SCGs listed in Tables 2B and 2C. Alternatives S-1and S-2 would not meet chemical-specific SCGs until natural attenuation processes had reduced concentrations of COCs to the identified levels, which would occur

over time. Chemical-specific SCGs pertaining to waste characterization would be met for all soils to be disposed off-site. Alternative S-3 would comply with chemical specific SCGs by removing all historic fill and deeper soil.

Long-Term Effectiveness: As discussed in Section 6.2, Alternative S-1 cannot be considered to be effective over the long term. The long term effectiveness of Alternative S-2 could be achieved through use of institutional controls and the SMP. The ICs and SMP would control any subsurface construction work performed at the site in that it would specify safety measures to prevent worker exposure and procedures for proper soil handling/disposal and excavation. Alternative S-3 is effective in eliminating exposure to COCs

Reduction of Toxicity, Mobility, or Volume: Alternatives S-3 would reduce the volume of historic fill and MGP impacts at the site through removal and off-site disposal at a permitted facility. However, if an off-site source is contributing to on-site concentrations of benzene, removal of the historic fill and MGP impacts would reduce only part of the source volume. Alternatives S-1 and S-2 would not immediately reduce toxicity, mobility or volume of contamination except as results from the ongoing natural attenuation processes at the site.

Short-Term Effectiveness: Alternatives S-1 and S-2 would both be effective over the short term since the existing grass and sod cover prevents exposure to site soils and these alternatives do not involve any construction activities.

Alternative S-3 presents short-term concerns associated with the uncovering and handling of impacted soils. It would also involve a high degree of community disruption including closing Linden Street to pedestrian traffic and temporary closing of Linden Street to vehicular traffic to accommodate the truck traffic required to implement the alternative. Alternative S-3 would also require management of up to 1,600 trucks (for removal of site soil and replacement with off-site soil) on a site that would be nearly entirely excavated. Short term nuisance issues associated with traffic, off-site staging of trucks, vibration (during sheet pile installation), noise and odors would be unavoidable and would last approximately three months. The short-term impacts associated with S-3 would result in significant community disruption.

Implementability: Truck staging and traffic associated with Alternative S-3 also represents a concern with respect to safety, associated with this large an increase in truck traffic in an area unaccustomed to such traffic are considerable and not entirely avoidable.

Groundwater

Three groundwater remediation alternatives were evaluated in Exhibit C:

- Alternative GW-1 – No Further Action
- Alternative GW-2 – Institutional Controls and Site Management
- Alternative GW-3 – Groundwater Monitoring with Site Management

Overall Protection of Human Health and the Environment: In the absence of institutional controls to restrict groundwater use and minimize on-site exposures should excavations below the water table be performed in the future, GW-1 would not be protective of human health and the environment. GW-2 provides a mechanism to protect human health and the environment from exposure to impacted groundwater. Institutional controls would prevent on-site groundwater use and minimize any exposure during future excavation activities that occur below the water table. Alternative GW-3, in addition to having institutional controls, would provide for long-term groundwater monitoring to confirm reduction of COCs in on-site and off-site groundwater.

Compliance with SCGs: Natural attenuation processes would continue to prevent off-site exceedance of SCGs under all three alternatives. In addition, for all three alternatives the natural attenuation processes may eventually attain chemical specific SCGs at the site. Alternative GW-3 would provide long-term monitoring to track progress toward attaining SCGs at the site.

Long-Term Effectiveness: Lacking institutional controls, GW-1 would not prevent future exposure to COCs in on-site groundwater. Alternative GW-2 provides institutional controls to prevent exposure to COCs in on-site groundwater. Alternative GW-3 provides institutional controls to prevent exposure to COCs in on-site groundwater and also provides long- term monitoring to confirm reduction of COCs in on-site and off-site groundwater.

Reduction of Toxicity, Mobility, or Volume: All three alternatives would reduce toxicity, mobility or volume of contamination as a result of the ongoing natural attenuation processes at the site.

Short-Term Effectiveness: Since impacted groundwater has not migrated off-site and is not used on-site or by local residents and commercial businesses (municipal water is used by nearby residents and businesses), over the short term all three alternatives may be considered protective of the public and the environment.

Implementability: There are no significant implementability concerns with any of the three groundwater remediation alternatives.