UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION 3

STATEMENT OF BASIS

Mittal Steel USA, Incorporated

Bethlehem, PA 18252

Formerly:

Bethlehem Steel Corporation-
Bethlehem Structural Products

EPA ID NO. PAD 990824161

I. Introduction

The United States Environmental Protection Agency (EPA) is issuing this Statement of Basis (SB) under the Resource Conservation and Recovery Act, as amended, 42 U.S.C. §§ 6901 et seq. (RCRA), to solicit public comment on EPA's proposed remedy for a 441-acre parcel (Parcel) located on the property formerly owned and operated by Bethlehem Steel Corporation – Bethlehem Structural Products (BSC) (hereinafter referred to as the BSC Facility or Site), located in the City of Bethlehem and Lower Saucon Township, Northampton County, Pennsylvania. After reviewing extensive soil, groundwater and soil vapor sampling data from the BSC Facility, including the Parcel, EPA is proposing as the remedy for the Parcel the installation of impermeable, protective covers over areas of the Parcel where contaminants remain in the soil over applicable remediation standards; the excavation of materials in accordance with the Soil Management Plan for the Parcel, and the implementation of institutional controls. EPA's proposed remedy is more fully detailed in Section V, below.

The information presented in this SB can be found in greater detail in the work plans and reports submitted to EPA and the Pennsylvania Department of Environmental Protection (PADEP), including the Baseline Environmental Report (BER); the Joint Ground Water Investigation Plan – Summary Report (GWIP Report), and the Soils Investigation Work Plan/Field Sampling Plan. The work plans and reports are available in EPA's Administrative Record. To gain a more comprehensive understanding of the RCRA activities that have been conducted at the BSC Facility, EPA encourages the public to review these documents which are found in the Administrative Record. The Administrative Record and index are available for public review at the EPA Region 3 Office in Philadelphia.

The public may participate in the remedy selection process by reviewing this SB and documents contained in the Administrative Record and submitting written comments to EPA during the public comment period. Public participation is discussed in further detail in Section VIII, below. EPA will address all significant comments submitted in response to the proposed remedy described in this SB. EPA will make a final remedy decision and issue a Final Decision and Response to Comments after it considers information submitted during the public comment period. If EPA determines that new information or public comments warrant a modification to the proposed remedy, EPA may modify the proposed remedy or select other alternatives based on such new information and/or public comments.

II. Background

A. BSC Facility Ownership

From approximately 1899 to 1995, BSC and its corporate predecessors manufactured steel at the BSC Facility. In 1995, BSC discontinued steel manufacturing operations at the BSC Facility and, in 2001, it filed for bankruptcy under Chapter 7 of the United States Bankruptcy Code.

In 2002, BSC entered into an agreement of sale (2002 Sale Agreement) to sell the Parcel to Majestic Realty Co. (Majestic). In May 2003, with approval of the U.S. Bankruptcy Court for the Southern District of New York, International Steel Group Acquisition, Inc. (ISG) acquired substantially all of BSC's assets, including the Parcel. Title to the BSC Facility was taken by Tecumseh Redevelopment, LLC (Tecumseh), a subsidiary of ISG. ISG assumed all of BSC's obligations under the 2002 Sale Agreement. Tecumseh sold approximately 1000 acres of the BSC Facility to Lehigh Valley Industrial Park (LVIP). Tecumseh retained ownership of the Parcel. In 2005, ISG merged with Mittal Steel USA, Incorporated (Mittal).

B. BSC Operations at the Parcel

Most of the Parcel was used by BSC to support the production of its steel products, and included foundries, forges, rolling mills, heat-treatment facilities, and related supply/repair/storage facilities. The operations undertaken at the Parcel included processing steel ingots (billets, blooms, slabs) by heating to make the metal malleable, then rolling the steel into finished products (bars, angles, structural shapes, plates, strips, and coils). The thickness of flat products could be further reduced by cold-rolling (room temperature), and some steel shapes and parts were manufactured by forging. In some of the former buildings on the Parcel, liquid steel was cast into semi-finished products using a continuous casting process. These processes primarily used fuel oil for heating the metal products. The fuel oil was stored in several large above-ground tanks and underground storage tanks (USTs), and was delivered to the furnaces and other points of use via an underground fuel-line system.

Melting of raw materials to make iron and steel, which was conducted at former BSC properties to the west of the Parcel, resulted in the production of various wastes, including dust and slag from furnaces. BSC disposed of the dust and slag on the Parcel. Scrap iron and steel, as well as un-recoverable steel from the casting process, were also disposed at the Parcel. BSC also processed iron and steel products at the Parcel, which included machining, rolling, and heat treating. These activities involved the storage of chemicals, including solvents and oils, and the generation of waste products.

Pursuant to Section 3010 of RCRA, 42 U.S.C. § 6930, BSC submitted a Notification of Waste Handling Activities and a RCRA Part A Permit Application on November 17, 1980. EPA acknowledged that the BSC Facility qualified for interim status for the treatment, storage and disposal of hazardous wastes associated with steel manufacturing operations under RCRA on July 17, 1981. EPA has never issued a RCRA permit for the BSC Facility.

C. Agency Actions

EPA and PADEP have been coordinating their efforts throughout the investigation, remediation and monitoring of the Parcel. All data and reports have been submitted to and evaluated by both EPA and PADEP. In 2006, Majestic entered the Parcel into the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2), 35 P.S. Sections 6026.101 *et seq.* to facilitate redevelopment of the Parcel.

On September 26, 2007, PADEP and Majestic entered into a Consent Order and Agreement (2007 Consent Order) to address remediation of the Parcel. The 2007 Consent Order requires Majestic to perform, among other things, the proposed remedial measures set forth in the BER. EPA has reviewed the BER and determined that for matters expressly identified in the Administrative Record for this SB, no further investigation or remediation is necessary at the Parcel other than those proposed remedial measures set forth in the BER and the Site-wide groundwater monitoring program to be implemented at the BSC Facility by LVIP. Therefore, with this SB, EPA proposes that upon the completion of the remedial actions required by the 2007 Consent Order, no further remediation of Parcel soils, other than those proposed remedial measures set forth in the BER, will be necessary for matters expressly identified in the Administrative Record for this SB. Upon determining that the proposed remedial measures for the Parcel are complete, EPA will consider issuing a Corrective Action Complete with Controls determination in accordance with the EPA guidance document, "Final Guidance on Completion of Corrective Action at RCRA Facilities (February 25, 2003)." Given that Majestic intends to develop the Parcel in phases and, therefore, may complete the proposed remedial measures for the Parcel on a subparcel by subparcel basis, EPA will, after reviewing the Act 2 Final Report for any such subparcel, issue a Corrective Action Complete with Controls determination for the subparcel, as appropriate.

III. Summary of the Environmental Investigation

Results of environmental investigations revealed that the historic steel manufacturing operations at the BSC Facility have caused soils and Site-wide groundwater to become contaminated with solvents, such as TCE and tetrachloroethane, and polyaromatic hydrocarbons (PAHs).

For purposes of developing and cleaning-up the BSC Facility, the BSC Facility was divided into two primary areas, Bethlehem Works and Bethlehem Commerce Center. Bethlehem Commerce Center was further divided into several additional areas, including the East Lehigh Area upon which the Parcel is located.

In 2003, Majestic after entering into the 2002 Sale Agreement, began conducting remedial investigations at the Parcel. On February 28, 2003, Majestic submitted a Soils Investigation Work Plan/Field Sampling Plan (SIWP/FSP) for the Parcel to PADEP and EPA for review. PADEP subsequently approved the SIWP/FSP on March 31, 2003 and EPA provided comments on April 8, 2003. Majestic submitted additional Work Plan Addenda #1 and #2 to the SIWP/FSP to PADEP and EPA on September 22, 2006 and December 4, 2006, respectively. In response to comments from both agencies, Majestic revised the Work Plan Addenda to include additional soil sampling and analysis and test pit excavation. PADEP approved the Work Plan Addenda on September 26, 2006. Pursuant to the PADEP-approved SIWP/FSP, Majestic sampled and analyzed surface and subsurface soils, soil vapor, and residual sediment from within the former water reservoirs in order to characterize the Parcel.

On August 2, 2006, Majestic submitted a Ground Water Investigation Work Plan (GWIP) to PADEP and EPA. PADEP subsequently approved the GWIP. As part of the GWIP, in order

to document the baseline groundwater conditions at the Parcel, Majestic collected available data including analytical results from sampling events conducted in 1999 through 2002 on behalf of BSC and November 2005 and August 2006 on behalf of LVIP. Majestic also installed eleven monitoring wells in August and September 2006, installed stream gauging stations, measured water levels, and sampled groundwater during two monitoring events in November 2006 and January 2007, respectively. Majestic presented the groundwater analytical data in the GWIP Report, dated July 13, 2007. The GWIP Report was approved by PADEP on September 26, 2007.

Surface water sampling events were conducted in 1999 through 2002 on behalf of BSC and in 2005 and 2006 on behalf of Majestic. Parcel sampling locations included three surface water/sediment locations along Laubach Creek and one location along the North Tributary to Saucon Creek. Six sampling events were conducted from 1999 through 2002 at these locations. Surface water samples were analyzed primarily for metals with only one round of samples being analyzed for volatile organic compounds (VOCs). The two rounds of surface water samples collected in 2005 and 2006 were analyzed for VOCs, semi-volatile organic compounds (SVOCs), and metals. The 2005 and 2006 events were conducted at the same locations as noted above bordering the Parcel, and included an additional location along Laubach Creek approximately 1,500 feet upstream of the Parcel and an additional location along the North Tributary to Laubach Creek.

In 2003, Majestic began conducting a Baseline Environmental Investigation. As part of that investigation, Majestic collected available analytical data and conducted additional soil and groundwater sampling and analyses to characterize soil, groundwater and surface water contamination on the Parcel. On July 13, 2007, Majestic submitted a Baseline Environmental Report to PADEP and EPA. Based on comments issued by EPA, PADEP and Lower Saucon Township on the July 13, 2007 BER, Majestic developed and submitted a Final BER Addendum and associated Response to Comment Letters on September 11, 2007. On September 26, 2007, PADEP approved the BER. In the BER, Majestic summarizes its investigations at the parcel; compares the analytic data for soil, sediment, groundwater and soil vapor at the Parcel to applicable PADEP and EPA remediation standards, as discussed in more detail in Section IV, below, and proposes remedial actions to address existing soil and groundwater contamination at the Parcel

IV. Investigation Results

A. Soil Contamination

To facilitate its environmental investigations at the Parcel, Majestic divided the Parcel property into the following 15 investigation areas based primarily on historic manufacturing activities:

- Area 1: No. 5 Laydown Area
- Area 2: No. 5 Forge Building Area

- Area 3: Mobile Equipment Repair Facility (MERF) Building Area
- Area 4: 2- and 14-inch Bar Mill Building
- Area 5: No. 10 Treatment and No. 11 Gun Buildings
- Area 6: No. 17 Project Building
- Area 7: Tear Drop Sinkhole Area
- Area 8: Heckett Area
- Area 9: 2-South Landfill
- Area 10: CENTEC Building Area
- Area 11: Fuel Line Areas, Storage Tanks, and Fuel Handling Areas
- Area 12: Intermodal Area
- Area 13: Site-wide Soils/Proposed Borrow Area/Surface Storage/Strategic Ore Pile
- Area 14: SI-1 Impoundments Perimeter
- Area 15: Million-Gallon Reservoir and 50,000-gallon Reservoir

Soil sampling conducted in 2003 and 2006 was performed in the above-listed areas at surface locations from 0 to 2 feet; at subsurface locations from 2 to 15 feet, and at additional locations as was necessary to characterize the vertical soil profile. The analytical data were compared to 1) Act 2 state-wide health medium-specific concentrations (MSCs) for soil, assuming a non-residential use and used-aquifer conditions at the Parcel, and 2) site-specific soil MSCs developed specifically for the Parcel, to evaluate the soil-to-indoor air pathway. Soil sampling results presented in the BER revealed that the following constituents exceeded their respective MSCs in the above-listed areas as shown below in Table 1:

Table 1
Soil Sample Results

Constituent	Area(s) Found Exceeding MSC	Maximum Result (mg/kg)	MSC/Standard (mg/kg) Direct Contact 0-2 ft / Direct Contact 2-15 ft / Soil to Groundwater (MSCs exceeded are **bolded)**
Metals (mg/kg)			
Antimony	13	38.6	1100 / 190,000 / **27**
Arsenic TR	1, 13	59.1	**53** / 190,000 / 150
Boron	1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 13, 16	1150	190,000 / 190,000 / **60**
Cadmium	1, 9, 14, 16	440,000	**210** / **190,000** / **38**
Lead TR	1, 7, 9, 13	12,500	**1000** / 190,000 / **450**
Nickel	1, 10	5110	56,000 / 190,000 / **650**
Selenium TR	9	27	14,000 / 190,000 / **26**
Thallium TR	1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 16	183	200 / 190,000 / **14**
Zinc	9	12, 800	190,000 / 190,000 / **12,000**

Constituent	Area	Max. Result	MSC/Standard
VOCs (mg/kg)			
Benzene	1, 3, 8, 9, 14	33	210 / 240 / **0.5**
Ethylbenzene	3	87.9	10,000 / 10,000 / **70**
Styrene	8	86	10,000 / 10,000 / **24**
Tetracholoethane	8, 9	4.4	1500 / 3300 / **0.5**
Toluene	3	165	10,000 / 10,000 / **100**
Trichloroethene	2, 9	14	970 / 1100 / **0.5**
Vinyl Chloride	3	1.8	53 / 2200 / **0.2**
SVOCs (mg/kg)			
2,4-Dimethylphenol	1	340	10,000 / 10,000 / **200**
2,4-Dinitrotoluene	8	1.7	260 / 190,000 / **0.84**
4-Methylphenol	1, 9	490	14,000 / 190,000 / **51**
Anthracene	1, 8, 9	3800	190,000 / 190,000 / **350**
Benzo(a)anthracene	1, 8, 9	3800	**110** / 190,000 / **320**
Benzo(a)pyrene	1, 2, 4, 5, 6, 8, 9, 10, 11, 13	5300	**11** / 190,000 / **46**
Benzo(b)fluoranthene	1, 8, 9	6700	**110** / 190,000 / **170**
Benzo(g,h,i)perylene	1, 8, 9	3100	170,000 / 190,000 / **180**
Benzo(k)fluoranthene	1	2600	**1100** / 190,000 / **610**
Carbazole	1, 8, 9	2400	4000 / 190,000 / **83**
Chrysene	1, 8, 9	3700	11,000 / 190,000 / **230**
Dibenz(a,h)anthracene	1, 2	1200	**11** / 190,000 / **160**
Fluoranthene	1, 9	9200	110,000 / 190,000 / **3200**
Fluorene	1	5700	110,000 / 190,000 / **3800**
Indeno(1,2,3-cd)pyrene	1	3800	**110** / 190,000 / 28,000
Naphthalene	1, 8, 9, 16	17,000	56,000 / 190,000 / **25**
Phenanthrene	1	14,000	190,000 / 190,000 / **10,000**
Pyrene	1, 9	6200	84,000 / 190,000 / **2200**

B. Groundwater Contamination

Contour maps showing groundwater elevation data across the Parcel, developed in association with the November 2005 sampling event, show that overburden groundwater generally flows in a westerly direction across the Parcel, with a northwesterly direction in the northwestern portion of the Parcel. These data also show that bedrock groundwater generally flows in a northwesterly direction across the Parcel towards Laubach Creek and the Lehigh River. As cited in the Phase 1 Environmental Site Assessment – East Lehigh Area (SAIC, 2001), groundwater in deeper bedrock aquifers in the vicinity of the site tends to flow west and northwest toward Saucon Creek and the Lehigh River.

The GWIP Report groundwater analytical data were compared to the Act 2 groundwater MSCs for non-residential and used aquifers. Based on this comparison, the concentrations of the following contaminants exceeded Act 2 groundwater MSCs at the Parcel:

-BEHP was found in well MW-M8 during the January 2007 sampling event at a concentration of 11 micrograms per liter (µg/L), slightly above the Act 2 groundwater MSC of 6 µg/L

-Boron was found in well MW-M10 during both the October 2006 and January 2007 sampling events at concentrations of 849 to 894 µg/L, respectively, above the Act 2 groundwater MSC of 600 µg/L

-TCE was found in three wells, MW-47BR, MW-48OV, and MW-48BR, located at the western boundary of the Parcel adjacent to Laubach Creek, and two wells, MW-59OV and MW-59BR, located within the SI-1/Impoundments area (not part of the Parcel), at concentrations of 10 to 14 µg/L during the 2006 and 2007 sampling events.

Based on the groundwater characterization presented in the GWIP Report, EPA has determined that the Parcel is not a source of Site-wide groundwater contamination. The contaminated groundwater under the Parcel comes from a northern, upgradient source. LVIP is currently conducting groundwater investigations at the BSC Facility including the Parcel as discussed in Section V.B., below.

C. Soil Vapor Intrusion

To evaluate whether soil vapor intrusion is a potential concern at the Parcel, Majestic screened all soil sample results against site-specific non-residential soil-to-indoor air screening criteria (MSC_{SG}) for sandy soil. Majestic developed the site-specific criteria for the Parcel for all VOCs detected in soils using EPA's Johnson & Ettinger SL-ADV Bulk Soil Model.

Soil boring concentrations exceeded site-specific non-residential soil-to-indoor air screening criteria at numerous locations for the following compounds: benzene, PCE, TCE, and total xylenes. These exceedances were found in the following areas:

- 2 South Landfill (2SL) – 5 locations
- 12-inch and 14-inch Bar Mill Building (BMB) – 2 locations
- Heckett area (HKA) – 3 locations, including test pit TP-17
- No. 5 Forge Area (N5A) – 3 locations
- No. 5 Forge Building (N5F) – 2 locations
- No. 5 Laydown Area (N5L) – 2 locations
- SI-1 Boundary Area (SI-1) – 1 location

Soil gas samples from within the SI-1 area (not part of the Parcel) indicate the presence of elevated VOC concentrations; elevated concentrations of 1,1,1-TCA were detected in soil gas samples from the east-central portion of the SI-1 Area, extending to the east toward the Parcel.

The primary health concern associated with soil vapor intrusion is that vapor can volatilize from the plume and migrate vertically through soil into basements through cracks, joints and utilities openings. Most of the buildings and related structures on the Parcel were demolished between 1995 and 2006. Currently, former building slabs and a few unoccupied smaller out-buildings in the CENTEC Building and Pump House areas remain at the Parcel. However, Majestic's redevelopment plans for the Parcel include the construction of buildings, warehousing structures and parking lots. Based on the final grading plan for each area where buildings or other structures are to be built, the site-specific non-residential soil-to-indoor air screening criteria, as discussed above, will be reapplied to evaluate the soil vapor intrusion pathway following Parcel re-grading.

D. Surface Water

Based on analytical data from surface water samples taken in 1999 through 2002 and in 2005 through 2006, it is apparent that surface waters do not show any impact from potential groundwater discharges to the surface water on the Parcel.

In 2005, the only SVOC detected in surface water samples collected from Laubach Creek was BEHP. However, this compound was not detected elsewhere at elevated concentrations and is a common artifact of field or laboratory contamination from plastic implements. Metals were detected in the surface water samples, but none of the detected concentrations exceed the applicable surface water quality criteria.

Furthermore, groundwater elevations and hydraulic gradients measured in monitoring wells indicate that groundwater discharges into Laubach Creek approximately 500 ft upstream of location LCSW-01A. Although TCE was found in wells 500 ft upstream of location LCSW-01A, TCE was not detectable in surface water at the LCSW-01A location.

E. Ecological Screening

Chemical constituents detected on the Parcel in soil and groundwater are not considered to be at levels of ecological concern. Surface water and sediment sampling data show that Parcel activities have not affected Laubach Creek. There are no complete exposure pathways.

V. Proposed Remedy

A. Soil

For Parcel soils, EPA is proposing the following as the final remedy:

1) the installation of impermeable protective covers over areas where levels of soil contamination exceed Pennsylvania's Statewide Health Standards for non-residential soil-to-groundwater criteria for a used aquifer;

2) the installation impermeable protective covers or addition of regulated fill over areas where levels of soil contamination exceed Pennsylvania's Standards for direct contact with soil;

3) the excavation and removal of materials in accordance with the Soil Management Plan; and

4) the implementation of institutional controls, in the form of deed notices and easements and/or restrictive covenants, in order to prevent any activities which would interfere with or adversely affect the integrity and protectiveness of the final remedy. The institutional controls are necessary to ensure that the integrity and protectiveness of the impermeable protective covers are maintained and to inform subsequent purchasers of the Parcel property of the environmental conditions at the Parcel and of EPA's final remedy for the Parcel.

These proposed remedial measures are fully detailed in the BER. As detailed in the BER, installing impermeable, protective covers will prevent potential direct contact with contaminated soils via incidental ingestion, inhalation and dermal contact and subsurface vapor intrusion. Impermeable, protective covers will also reduce infiltration of rainwater thereby addressing the soil-to-groundwater pathway. Examples of acceptable protective covers include concrete building floor slabs; concrete footers; concrete-paved exterior areas (e.g., loading docks); concrete walks; retaining walls; bituminous concrete paving (roads and parking lots), and clean soil covers which are a minimum of one foot thick and have a vegetated surface. Clean soil covers must meet the definition of "clean fill" or "regulated fill" in PADEP's Management of Fill Policy and are not appropriate protective covers for areas that contain constituents which exceed Act 2 MSCs for soil-to-groundwater pathway elimination.

EPA understands that the remedy for soils, to be selected by EPA in the Final Decision and Response to Comments, will be implemented through the 2007 Consent Order.

B. Groundwater

For groundwater at the Parcel, EPA is proposing to require the implementation of institutional controls with no further remedial actions required by Majestic. EPA is proposing that institutional controls be implemented to prohibit the use of groundwater for domestic purposes and the installation of groundwater extraction wells, unless such wells are necessary for the performance or completion of remedial activities required by PADEP and/or EPA.

Any further groundwater monitoring and/or remediation at the Parcel will be part of the Site-wide monitoring program which will address Site-wide groundwater contamination associated with the BSC Facility. This program will be implemented by LVIP under PADEP and/or EPA oversight.

C. Soil Vapor

EPA is also proposing to require that Act 2 MSCs for indoor air be attained when the Parcel is developed for industrial use. Although no current or imminent soil vapor threats exist at the Parcel, as there are no occupied buildings at this time, VOC constituents remaining in the groundwater and soil at the Parcel may migrate vertically into buildings or other structures which are to be built on the Parcel.

The vapor intrusion pathway for these areas will be re-evaluated as the final grading plan for each section of the Parcel is finalized. EPA proposes that based on the nature and location of any future building, vapor intrusion threats into buildings or other structures be addressed by one or more of the following remedial activities which will be implemented through the 2007 Consent Order:

1) additional investigation – Additional soil gas surveys may be necessary to further delineate areas above the MSC_{SG} screening values.

2) remediation of the soils/fill materials – Excavation and removal or in-situ remediation of soil/fill material in excess of the site-specific soil-to-indoor air MSCs may be considered if these materials are expected to be within 100 ft of a proposed building/confined spaces.

3) building location(s) – As part of the redevelopment plan, future buildings and other structures may be sited 100 ft or more from soils in excess of the site-specific soil-to-indoor air MSCs to eliminate the vapor intrusion pathway.

4) site-specific indoor air modeling of proposed structures – In the event that buildings are proposed in areas that either fail the Soil Indoor Air Quality screening process or are known to have soil gas concentrations at depth that are in excess of the Act 2 MSC_{SG} standards, a building/site-specific evaluation of the proposed buildings may be conducted. This evaluation will include modeling the soil vapor intrusion pathway with EPA's version of the Johnson & Ettinger vapor intrusion model using a mixture of PADEP default parameters and site-specific building and geotechnical parameters.

5) engineering controls – If site-specific indoor air MSCs cannot be met at some areas of the Parcel, engineering controls, e.g., vapor barriers, sub-slab venting or depressurization, and institutional controls in the form of deed notices and easements and/or restrictive covenants, will be implemented. These engineering and institutional controls will be implemented through the 2007 Consent Order.

With regard to the inhalation potential discussed above, installation of subsurface utilities or utility corridors may be restricted in areas where soils containing elevated VOC concentrations exist. As described in the BER, an evaluation of Parcel soils with respect to site-specific screening criteria for VOCs will be conducted and used to outline areas where special restrictions may be needed, subject to final grading plans and building designs.

VI. Evaluation of Criteria

This section provides a description of the criteria EPA uses to evaluate proposed final remedies under the Corrective Action Program. The criteria are applied in two phases. In the first phase, EPA evaluates three remedy threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

A. Threshold Criteria

1. Protection of Human Health and the Environment

a. Soils

The proposed remedy provides overall protection of human health and the environment by eliminating potential exposures to soil contamination. The proposed remedy requires the installation of impermeable, protective covers over areas where levels of soil contamination exceed applicable Act 2 standards. In fact, under the proposed redevelopment of the Parcel, up to 90% of the Parcel will be covered with impermeable, protective covers. Covering areas which exceed applicable soil-to-groundwater MSCs will eliminate direct contact and ingestion pathways. The protective covers will also reduce infiltration of contaminants through the soil column. Institutional controls will also be implemented to prevent the disturbance of the protective covers. Additionally, institutional controls will include restrictions on the future use of the property to prevent any activities which would interfere with or adversely affect the integrity or effectiveness of the remedial actions performed at the Parcel.

b. Groundwater

There are no human health threats associated with domestic uses of the contaminated groundwater at the Parcel because groundwater is not used for drinking water purposes. The implementation of institutional controls will prohibit future domestic uses of the groundwater and the installation of groundwater extraction wells, unless such wells are necessary for the performance or completion of remedial activities required by PADEP and/or EPA.

c. Soil Vapor Intrusion

The primary health concern of the contaminated groundwater under the Parcel is vapor intrusion into buildings and confined spaces. No current soil vapor threats exist at the Parcel as there are no occupied buildings at this time. However, redevelopment plans for the Parcel include the construction of buildings and other structures. The redevelopment grading plan has not been finalized, therefore the vapor intrusion pathways will be re-evaluated as a final grading plan is established for each area of the Parcel. The existing Parcel characterization data will be used as a basis of comparison to determine if additional data and/or remedial measures are needed. Possible remedial measures include excavation, soil vapor extraction, vapor barriers, changing building location, and institutional controls include deed notices, easements and restrictive covenants. Additional data required may include soil vapor surveys and indoor-air

modeling. Vapor intrusion threats into buildings or other confining space will be addressed by one or more of the above methods in accordance with Act 2 requirements, based on the nature of potentially affected proposed structures.

2. Achieve Media Cleanup Standards

Parcel investigations completed by Majestic and BSC demonstrate that levels of metals, VOCs and SVOCs in soil are found at levels that exceed the Act 2 MSCs of non-residential/used aquifer, direct contact, soil-to-groundwater and soil gas screening values. The proposed remedy of creating impermeable surfaces and re-evaluating vapor intrusion on a subparcel basis will eliminate the pathways identified above.

3. Control the Source(s)

The installation of impermeable, protective covers will control the source of potential direct contact with soils via incidental ingestion, inhalation and dermal contact and subsurface vapor intrusion on the Parcel. In addition, the protective covers will also act to reduce infiltration of rainwater thereby controlling the soil-to-groundwater pathway. In addition, the implementation of institutional controls will prevent any future use of the property which would interfere with or adversely affect the integrity or effectiveness of the remedial actions performed at the Parcel.

The use of groundwater for domestic purposes will be prohibited through institutional controls such deed restrictions and/or restrictive covenants. Therefore, under the proposed final remedy, there will be no pathway for exposure to groundwater.

B. Balancing Criteria

EPA presents the seven criteria below to illustrate the suitability of the proposed remedy:

1. Long-Term Reliability and Effectiveness

EPA's proposed remedy for Parcel soils, which includes the installation of impermeable protective covers, will provide an effective long-term and permanent solution by eliminating potential exposures to soil contamination via incidental ingestion, inhalation and dermal contact. In addition the impermeable protective covers will minimize contaminant migration to the groundwater. The implementation of institutional controls will prevent any activities which would interfere with or adversely affect the integrity and protectiveness of the impermeable protective covers, thereby maintaining the long-term effectiveness of the proposed remedy.

2. Reduction of Toxicity, Mobility, or Volume of Wastes

Unacceptable exposure pathways will not exist at the Parcel upon completion of the proposed final remedy. The installation of the impermeable, protective covers will eliminate the potential for direct contact exposure and reduce the mobility of the contaminants as well.

Covering areas of soil which exceed soil-to-groundwater MSCs will reduce infiltration and downward migration of contaminants to groundwater.

3. Short-Term Effectiveness

The short-term effectiveness of a remedy is related to the risks posed to the community and workers involved in the design, construction and implementation of the remedy. The short-term risks posed by the proposed remedy for the Parcel are expected to be minimal. There are no residential communities in the vicinity of the Parcel, therefore, no short-term hazards to the residents have been identified for the proposed remedy. Workers are required to comply with the Occupational, Safety and Health Administration rules and to follow the Health and Safety Plans and Soil Management Plans submitted to EPA and PADEP.

4. Implementability

Implementability includes the technical and administrative feasibility of constructing and operating the proposed remedy. The proposed remedy for the Parcel is both technically and administratively feasible. The redevelopment plan, including the construction of the buildings, warehousing structures and parking lots, has been approved by PADEP. The final remedy is readily implementable through the oversight of PADEP under the 2007 Consent Order.

5. Cost

Majestic has already expended the capital costs involved in performing the investigations, and will, upon purchase of the Parcel, assume responsibility for costs required to complete remedial activities necessary to meet non-residential standards for soils during and following site redevelopment. EPA will require Majestic to provide assurances of financial responsibility for completing the final remedy consistent with Section 3004(u) of RCRA, 42 U.S.C.§ 6924(u).

6. Community Acceptance

Community acceptance of EPA's proposed remedy will be evaluated based on comments received during the public comment period and will be described in the Final Decision and Response to Comments.

7. State Acceptance

State acceptance will be evaluated based on comments received from PADEP during the public comment period and will be described in the Final Decision and Response to Comments.

VII. Environmental Indicators

EPA has established two environmental indicators that are designated to measure the human health and groundwater impacts of RCRA facilities. These two indicators use environmental data and apply a decision matrix to determine whether human health impacts are

"under control" and that groundwater contamination is "under control." BSC met the human health indicator at the BSC Facility on January 7, 2004. Additional investigation is required to determine if the groundwater indicator has been met at the BSC Facility. This additional investigation will be conducted under a facility-wide groundwater monitoring program, which will include groundwater under the Parcel. Current environmental data indicate that groundwater leaving the Parcel is not impacting the downgradient property or surface water. EPA believes that these environmental indicators provide additional evidence that the actions completed and proposed for the Parcel have been effective and will protect human health and the groundwater in the long-term.

VIII. Public Participation

EPA is requesting comments from the public on the remedy proposed in this SB. On September 28, 2007, EPA will place an announcement in the local newspaper, The Express-Times, to notify the public of the availability of this Statement of Basis, its supporting Administrative Record, and the public's opportunity to request a public meeting on EPA's proposed corrective action for the Parcel. The public comment period will last thirty (30) calendar days from the date that this SB is publicly noticed in The Express-Times. Comments should be sent to EPA in writing to the address listed below, and anyone submitting comments will receive a copy of the Final Decision and Response to Comments.

A public meeting will be held upon request. Requests for a public meeting should be made to Ms. Linda Matyskiela of the EPA Regional Office at the address listed below or at 215-814-3420.

The Administrative Record contains all information considered by EPA when making this determination. The Administrative Record is available for review during business hours at the following location:

U.S. Environmental Protection Agency Region 3 (3WC22)
1650 Arch Street
Philadelphia, PA 19103
Contact: Linda Matyskiela
Phone: 215-814-3420 Fax: 215-814-3113
E-mail:matyskiela.linda@epa.gov

Following the thirty (30) day public comment period, EPA will prepare a Final Decision and Response to Comments in which it will identify the selected remedy for the Parcel. The Response to Comments will address all significant written comments and any significant oral comments generated at a public meeting, if such a meeting is held. The Final Decision and Response to Comments will be made available to the public. If, on the basis of such comments or other relevant information, significant changes are proposed to be made to corrective measures identified by EPA in this SB, EPA will seek additional public comments on any such proposed revised remedy.