BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

July 9, 2007

Ms. Kelly Lewandowski
Chief, Site Control Section
New York State Department of
Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7020

Re: **Steel Winds 1A**
1951 Hamburg Turnpike, Lackawanna, New York
BCP Application

Dear Ms. Lewandowski:

On behalf of our client, BQ Energy, LLC, Benchmark Environmental Engineering & Science, PLLC has prepared the enclosed Brownfield Cleanup Program (BCP) application for the above-referenced site. Enclosed for your review are one original signed copy and one electronic copy of the BCP application. A hard copy of these documents has also been sent to the individuals listed below.

Please do not hesitate to contact us with any questions.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Thomas H. Forbes, P.E.
Project Manager

Enc.

c: M. Doster, NYSDEC Reg. 9 (w/ enc.)
C. O'Connor, NYSDEC (w/ enc.)
P. Curran, BQ Energy, LLC (w/ enc.)

Brownfield Cleanup Program Application

for Steel Winds IA Site
Lackawanna, New York

BQ Energy, LLC
Patterson, New York

July 2007

0083-004-100

Prepared By:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

726 Exchange Street, Suite 624, Buffalo, New York | phone: (716) 856-0599 | fax: (716) 856-0583

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BROWNFIELD CLEANUP PROGRAM (BCP)

ECL ARTICLE 27 / TITLE 14

DEPARTMENT USE ONLY
BCP SITE #:_____

7/06

Section 1. Requestor Information

NAME BQ Energy, LLC		
ADDRESS 20 Jon Barrett Road		
CITY/TOWN Patterson, NY	ZIP CODE 12563	
PHONE 845-228-3460	FAX 845-228-3470	E-MAIL pcurran@bqpes.com
NAME OF REQUESTOR'S REPRESENTATIVE Paul Curran, P.E.		
ADDRESS 20 Jon Barrett Road		
CITY/TOWN Patterson, NY	ZIP CODE 12563	
PHONE 845-228-3460	FAX 845-228-3470	E-MAIL pcurran@bqpes.com
NAME OF REQUESTOR'S CONSULTANT Benchmark Environmental Engineers & Scientists, PLLC (Thomas H. Forbes, P.E.)		
ADDRESS 726 Exchange Street, Suite 624		
CITY/TOWN Buffalo, NY	ZIP CODE 14210	
PHONE 716-856-0599	FAX 716-856-0583	E-MAIL forbes@benchmarkees.com
NAME OF REQUESTOR'S ATTORNEY David Flynn, Phillips Lytle LLP		
ADDRESS 3400 HSBC Center		
CITY/TOWN Buffalo, NY	ZIP CODE 14203	
PHONE 716-847-8400	FAX 716-852-6100	E-MAIL dflynn@phillipslytle.com

THE REQUESTOR MUST CERTIFY THAT HE/SHE IS EITHER A PARTICIPANT OR VOLUNTEER IN ACCORDANCE WITH ECL § 27-1405 (1) BY CHECKING ONE OF THE BOXES BELOW:

☐ PARTICIPANT

A requestor who either 1) was the owner of the site at the time of the disposal of hazardous waste or discharge of petroleum or 2) is otherwise a person responsible for the contamination, unless the liability arises solely as a result of ownership, operation of, or involvement with the site subsequent to the disposal of hazardous waste or discharge of petroleum.

☑ VOLUNTEER

A requestor other than a participant, including a requestor whose liability arises solely as a result of ownership, operation of or involvement with the site subsequent to the disposal of hazardous waste or discharge of petroleum.

NOTE: By checking this box, the requestor certifies that he/she has exercised appropriate care with respect to the hazardous waste found at the facility by taking reasonable steps to: i) stop any continuing discharge; ii) prevent any threatened future release; and iii) prevent or limit human,environmental, or natural resource exposure to any previously released hazardous waste.

Requestor Relationship to Property (check one):

Previous Owner Current Owner Potential /Future Purchaser ✓ Other Lessee

If requestor is not the site owner, requestor will have access to the property throughout the BCP project. ☑ Yes ☐ No

(Note: proof of site access must be submitted for non-owners)

Section II. Property Information Summary Sheet

PROPERTY NAME: Steel Winds IA

ADDRESS/LOCATION 1951 Hamburg Turnpike CITY/TOWN Lackawanna ZIP CODE 14218

MUNICIPALITY(IF MORE THAN ONE, LIST ALL):
City of Lackawanna

COUNTY Erie SITE SIZE (ACRES) 9.33

LATITUDE (degrees/minutes/seconds) 42 ° 49 ' 36.21" LONGITUDE (degrees/minutes/seconds) 78 ° 52 ' 17.34 "

HORIZONTAL COLLECTION METHOD: ☐ SURVEY ☐ GPS ☑ MAP HORIZONTAL REFERENCE DATUM: NAD83

FOR EACH PARCEL, FILL OUT THE FOLLOWING TAX MAP INFORMATION (if more than three parcels, attach additional information)

Parcel Address	Parcel No.	Section No.	Block No.	Lot No.	Acreage
1951 Hamburg Turnpike (Partial)		141.11	1	1.111	970.819

1. Do the property boundaries correspond to tax map metes and bounds? ☐ Yes ☑ No
   If no, please attach a metes and bounds description of the property.
2. Is the required property map attached to the application? (application will not be processed without map) ☑ Yes ☐ No
3. Is the property part of a designated En-zone pursuant to Tax Law § 21(b)(6)? ☑ Yes ☐ No

For more information go to: http://www.nylovesbiz.com/BrownField_Redevelopment/default.asp.

If yes, identify area (name) Census Tract 012200

☐ 50% ☑ 100% of the site is in the En-zone (check one)

PROPERTY DESCRIPTION NARRATIVE:

The site is currently vacant land on the elevated Lake Erie shoreline. The property is slag fill land that was created by the former owner/occupant, Bethlehem Steel Corp. The proposed BCP Parcel is within an area of the Site that has been approved, through SEQR, for use as a wind energy facility.

List of Existing Easements (type here or attach information)

Easement Holder	Description
None on proposed BCP Site	

List of Permits issued by the NYSDEC or USEPA Relating to the Proposed Site (type here or attach information)

Type	Issuing Agency	Description

Initials of each Requestor: PFC _____ _____ _____ _____ _____

Section III. Current Site Owner/Operator Information

OWNER'S NAME (if different from requestor) Tecumseh Redevelopment, Inc.		
ADDRESS 4020 Kinross Parkway		
CITY/TOWN Richfield, Ohio	ZIP CODE 44286	
PHONE 330-659-9165	FAX 330-659-7434	E-MAIL keith.nagel@mittalsteel.com
OPERATOR'S NAME (if different from requestor or owner) TurnKey Environmental Restoration, LLC (Paul Werthman, P.E.)		
ADDRESS 726 Exchange Street, Suite 624, Buffalo, NY 14210		
CITY/TOWN Buffalo, New York	ZIP CODE 14210	
PHONE 716-856-0635	FAX 716-856-0583	E-MAIL pwerthman@benchmarkees.com

Section IV. Requestor Eligibility Information (Please refer to ECL § 27-1407)

If answering "yes" to any of the following questions, please provide an explanation as an attachment.

1. Are any enforcement actions pending against the requestor regarding this site? ☐ Yes ☑ No
2. Is the requestor subject to an existing order relating to contamination at the site? ☐ Yes ☑ No
3. Is the requestor subject to an outstanding claim by the Spill Fund for this site? ☐ Yes ☑ No
4. Has the requestor been determined to have violated any provision of ECL Article 27? ☐ Yes ☑ No
5. Has the requestor previously been denied entry to the BCP? ☐ Yes ☑ No
6. Has the requestor been found in a civil proceeding to have committed a negligent or intentionally tortious act involving contaminants? ☐ Yes ☑ No
7. Has the requestor been convicted of a criminal offense that involves a violent felony, fraud, bribery, perjury, theft, or offense against public administration? ☐ Yes ☑ No
8. Has the requestor knowingly falsified or concealed material facts or knowingly submitted or made use of a false statement in a matter before the Department? ☐ Yes ☑ No
9. Is the requestor an individual or entity of the type set forth in ECL 27-1407.8(f) that committed an act or failed to act, and such act or failure to act could be the basis for denial of a BCP application? ☐ Yes ☑ No

Section V. Property Eligibility Information (Please refer to ECL § 27-1405)

1. Is the property listed on the National Priorities List? ☐ Yes ☑ No
2. Is the property listed on the NYS Registry of Inactive Hazardous Waste Disposal Sites? ☐ Yes ☑ No
   If yes, please provide: Site #_____ Class # _____
3. Is the property subject to a permit under ECL Article 27, Title 9, other than an Interim Status facility? ☐ Yes ☑ No
   If yes, please provide: Permit type:_____ EPA ID Number:_____
   Date permit issued:_____ Permit expiration date:_____
4. Is the property subject to a cleanup order under navigation law Article 12 or ECL Article 17 Title 10? ☐ Yes ☑ No
   If yes, please provide: Order #_____
5. Is the property subject to a state or federal enforcement action related to hazardous waste or petroleum? ☐ Yes ☑ No
   If yes, please provide explanation as an attachment.

Section VI. Project Description

Please attach a description of the project which includes the following components:

- Purpose and scope of the project
- Estimated project schedule

Section VII. Property's Environmental History

To the extent that existing information/studies/reports are available to the requestor, please attach the following:

1. **Environmental Reports**
   A phase I environmental site assessment report prepared in accordance with ASTM E 1527 (American Society for Testing and Materials: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process), and all environmental reports related to contaminants on or emanating from the site.
   If a final investigation report is included, indicate whether it meets the requirements of ECL Article 27-1415(2): ☐ Yes ☐ No

2. **Sampling Data: Indicate known contaminants and the media which are known to have been affected:**

Contaminant Category	Soil	Groundwater	Surface Water	Sediment	Soil Gas
Petroleum					
Chlorinated Solvents					
Other VOCs					
SVOCs					
Metals					
Pesticides					
PCBs					
Other*					

*Please describe: _____

3. **Suspected Contaminants: Indicate suspected contaminants and the media which may have been affected:**

Contaminant Category	Soil	Groundwater	Surface Water	Sediment	Soil Gas
Petroleum	X	X			
Chlorinated Solvents					
Other VOCs					
SVOCs	X	X			
Metals	X	X			
Pesticides					
PCBs					
Other*					

*Please describe: _____

4. **INDICATE KNOWN OR SUSPECTED SOURCES OF CONTAMINANTS:**

☐ Above Ground Pipeline or Tank	☐ Lagoons or Ponds	☐ Underground Pipeline or Tank	☐ Surface Spill or Discharge
☑ Routine Industrial Operations	☑ Dumping or Burial of Wastes	☐ Septic tank/lateral field	☐ Drums or Storage Containers
☐ Adjacent Property	☐ Seepage Pit or Dry Well	☐ Foundry Sand	☐ Electroplating
☑ Coal Gas Manufacture	☐ Industrial Accident	☐ Unknown	

Other: _____

5. **INDICATE PAST LAND USES:**

☑ Coal Gas Manufacturing	☐ Manufacturing	☐ Agricultural Co-op	☐ Dry Cleaner	☐ Salvage Yard	☐ Bulk Plant
☐ Pipeline	☐ Service Station	☐ Landfill	☐ Tannery	☐ Electroplating	☐ Unknown

Other: _____

6. **Owners**
   A list of previous owners with names, last known addresses and telephone numbers (describe requestor's relationship, if any, to each previous owner listed. If no relationship, put "none").

7. **Operators**
   A list of previous operators with names, last known addresses and telephone number (describe requestor's relationship, if any, to each previous operator listed. If no relationship, put "none").

Section VIII: Contact List Information

Please attach, at a minimum, the names and addresses of the following:

1. The chief executive officer and zoning board chairperson of each county, city, town and village in which the property is located.
2. Residents, owners, and occupants of the property and properties adjacent to the property.
3. Local news media from which the community typically obtains information.
4. The public water supplier which services the area in which the property is located.
5. Any person who has requested to be placed on the contact list.
6. The administrator of any school or day care facility located on or near the property.
7. The location of a document repository for the project (e.g., local library). In addition, attach a copy of a letter sent to the repository acknowledging that it agrees to act as the document repository for the property.

Section IX: Land Use Factors (Please refer to ECL §27-1415(3))

Current Use: ☐ Residential ☐ Commercial ☐ Industrial ☑ Vacant ☐ Recreational (check all that apply)

Intended Use: ☐ Unrestricted ☐ Residential ☐ Commercial ☑ Industrial

Please check the appropriate box and provide an explanation as an attachment if appropriate. Provide a copy of the local zoning classifications, comprehensive zoning plan designations, and/or current land use approvals.

	Yes	No
1. Do current historical and/or recent development patterns support the proposed use? (See #12 below re: discussion of area land uses)	☑	☐
2. Is the proposed use consistent with applicable zoning laws/maps?	☑	☐
3. Is the proposed use consistent with applicable comprehensive community master plans, local waterfront revitalization plans, designated Brownfield Opportunity Area plans, other adopted land use plans?	☑	☐
4. Are there any Environmental Justice Concerns? (See §27-1415(3)(p)).	☐	☑
5. Are there any federal or state land use designations relating to this site?	☐	☑
6. Do the population growth patterns and projections support the proposed use?	☑	☐
7. Is the property accessible to existing infrastructure?	☑	☐
8. Are there important cultural resources, including federal or state historic or heritage sites or Native American religious sites within ½ mile?	☐	☑
9. Are there important federal, state or local natural resources, including waterways, wildlife refuges, wetlands, or critical habitats of endangered or threatened species within ½ mile?	☑	☐
10. Are there floodplains within ½ mile?	☐	☑
11. Are there any institutional controls currently applicable to the property?	☑	

12. Describe on attachment the proximity to real property currently used for residential use, and to urban, commercial, industrial, agricultural, and recreational areas.

13. Describe on attachment the potential vulnerability of groundwater to contamination that might migrate from the property, including proximity to wellhead protection and groundwater recharge areas.

14. Describe on attachment the geography and geology of the site.

Statement of Certification and Signatures

(By requestor who is an individual)

I hereby affirm that information provided on this form and its attachments is true and complete to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to section 210.45 of the Penal Law.

Date: _____ Signature: _____ Print Name: _____

(By an requestor other than an individual)

I hereby affirm that I am Managing Director (title) of BQ Energy (entity); that I am authorized by that entity to make this application; that this application was prepared by me or under my supervision and direction; and that information provided on this form and its attachments is true and complete to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Date: 7-09-07 Signature: PAUL CURRAN Print Name: PAUL CURRAN

SUBMITTAL INFORMATION:

Three (3) complete copies are required.

- **Two (2)** copies, one hard copy with original signatures and one electronic copy in Portable Document Format (PDF) on a CD or diskette, must be sent to:

  Chief, Site Control Section
  New York State Department of Environmental Conservation
  Division of Environmental Remediation
  625 Broadway
  Albany, NY 12233-7020

- **One (1)** hard copy must be sent to the DEC regional contact in the regional office covering the county in which the site is located. Please check our website for the address of our regional offices: http://www.dec.state.ny.us/website/der/index.html

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FOR DEPARTMENT USE ONLY

BCP SITE T&A CODE: _____ **LEAD OFFICE:** _____

LIST OF APPLICATION ATTACHMENTS

NYSDEC Brownfield Cleanup Program Application
BQ Energy, LLC – Steel Winds IA Site
Lackawanna, New York

Attachment No.	Description
1	Property Owner Authorization Letter
2	Site Maps & Legal Description
3	Project Description and Schedule
4	Previous Environmental Investigations/Assessments
5	Listing of Previous Site Owners
6	Listing of Previous Site Operators
7	Contact List Information
8	Document Repository Confirmation Letter
9	Environmental Factors and Historic Land Use Considerations
10	Nearby Land-Use Map & Description
11	Groundwater Vulnerability Assessment
12	Description of Site Geography/Geology
13	Site-Wide Deed Restriction

ATTACHMENT 1

PROPERTY OWNER AUTHORIZATION LETTER

Tecumseh Redevelopment Inc.
4020 Kinross Lakes Parkway
Richfield, Ohio 44286-9000

June 18, 2007

Mr. Paul Curran
BQ Energy, LLC
20 Jon Barrett Rd
Suite 2
Patterson, New York 12563-2164

Re: Brownfields Cleanup Program Application
BQ Energy, LLC – Steelwinds IA Development
Access to 1951 Hamburg Turnpike, Lackawanna, NY

Dear Mr. Curran:

Tecumseh Redevelopment Inc. is the owner of 1951 Hamburg Turnpike, Lackawanna, NY and acknowledges BQ Energy, LLC as an applicant for ~~5.74~~ 9.33 acres, more or less, within our site for a wind energy project under the New York State Brownfield Cleanup Program (BCP) for this property. Tecumseh Redevelopment authorizes BQ Energy, LLC unlimited access to the property proposed for the BCP to perform required environmental investigations, testing and remediation, as necessary.

Please contact me at (330) 659-9165 if you have questions or require additional information.

Sincerely,

Keith Nagel
General Manager

cc: Bill Shaklee, Squire, Sanders and Dempsey
Paul Werthman, TurnKey Environmental Restoration

ATTACHMENT 2

SITE MAPS & LEGAL DESCRIPTION

METES & BOUNDS DESCRIPTION

A Metes & Bounds description for the approximate 9.33-acre Steel Winds IA BCP Parcel is being prepared and will be submitted to the New York State Department of Environmental Conservation under separate cover prior to issuance of the Brownfield Cleanup Agreement.

STEEL WINDS I
(8 existing turbines)

STEEL WINDS IA
(2 planned turbines)

U.S.A.C.E.
SEDIMENT DISPOSAL AREA

GATEWAY TRADE
CENTER (G.T.C.)

PHASE III BRA

SOUTH BUFFALO
RAILROAD COMPANY

BUFFALO
SPECIALTY
STEEL

MITTAL STEEL USA
GALVANIZING MILL

REPUBLIC
ENGINEERED
PRODUCTS, INC.

SOUTH BUFFALO
RAILROAD COMPANY

LAKE ERIE

BUFFALO CRUSHED STONE

SMOKES CREEK

SLIP #3 CREEK

WATER TRENCH

SOUTH RETURN

BUFFALO
OUTER HARBOR

LEGEND:

- TECUMSEH PROPERTY BOUNDARY
- EXISTING BUILDING / STRUCTURE
- RAILROAD TRACK
- SWMU P-01 — APPROXIMATE LOCATION OF SOLID WASTE MANAGEMENT UNIT (SWMU) - REQUIRES FURTHER ASSESSMENT
- SWMU P-04 — APPROXIMATE LOCATION OF SOLID WASTE MANAGEMENT UNIT (SWMU) - REQUIRES NO FURTHER ACTION
- WT#8 — EXISTING STEEL WINDS FACILITY WIND TURBINE (WT)
- BROWNFIELD CLEANUP AREA
- APPROXIMATE BOUNDARY OF STEEL WINDS II FACILITY WITHIN PHASE III BPA (± 55.47 ACRES)
- APPROXIMATE BOUNDARY OF STEEL WINDS IA FACILITY (± 9.33 ACRES)
- WT-NW8 — EXISTING STEEL WINDS FACILITY WIND TURBINE (WT)
- WT-NW9 — PLANNED STEEL WINDS IA FACILITY WIND TURBINE (WT)

1000' 0' 1000' 2000'

SCALE: 1 INCH = 1000 FEET
SCALE IN FEET
(approximate)

NOTES:

1. Building locations are based on historical surveys and maps, all locations should be considered approximate.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

JOB NO.: 0083-004-100

SITE PLAN

BROWNFIELD CLEANUP PROGRAM APPLICATION

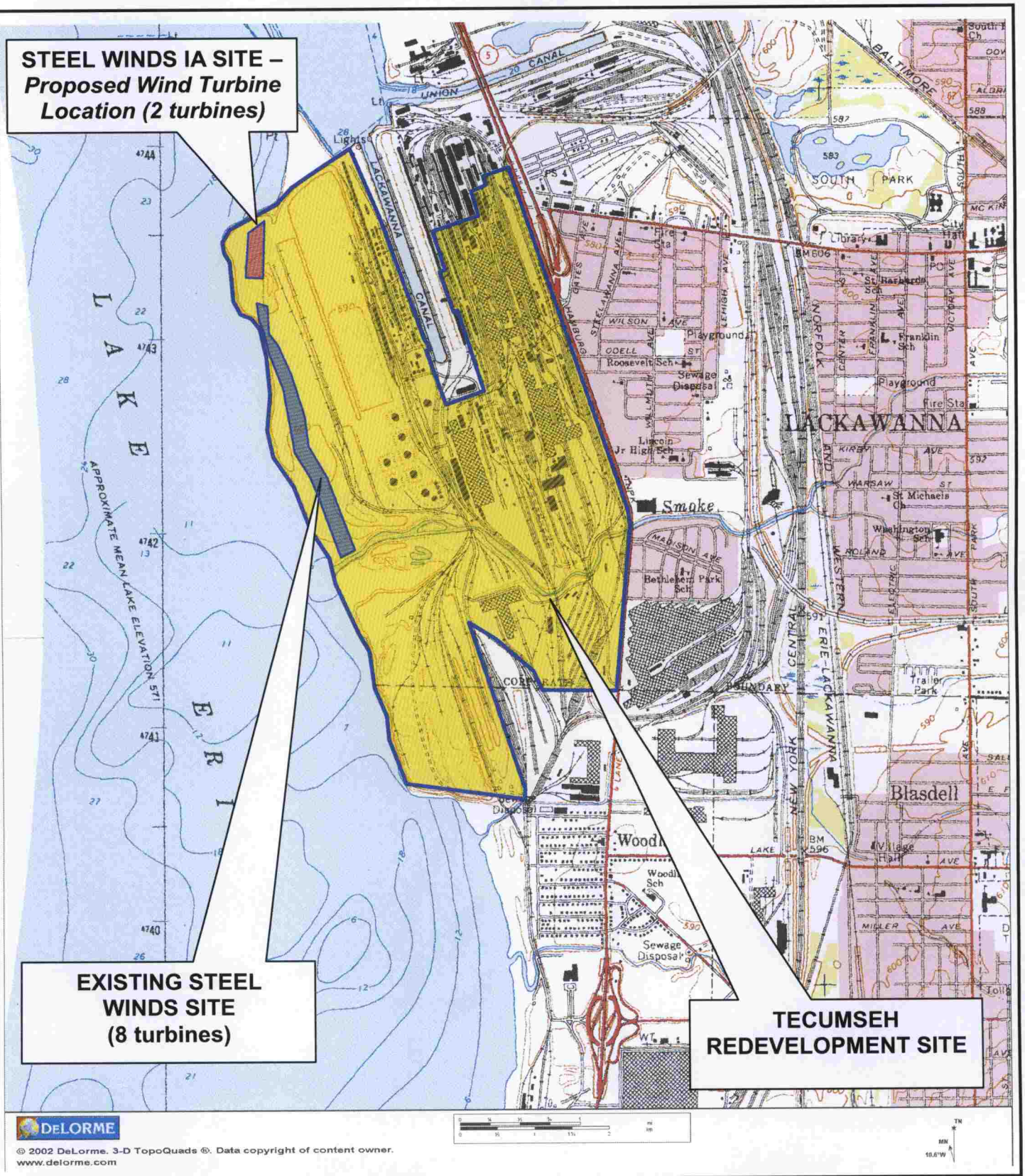
STEEL WINDS IA SITE
LACKAWANNA, NEW YORK

PREPARED FOR
BQ ENERGY, LLC

FIGURE 2-1

F:\CAD\Benchmark\BQ Energy\Steel Winds 1A\BCP Application\Attachments\Figure 02-1A- Planned Wind Turbine Locations.dwg
DATE: JUNE 2007
DRAFTED BY: BCH

FIGURE 2-2



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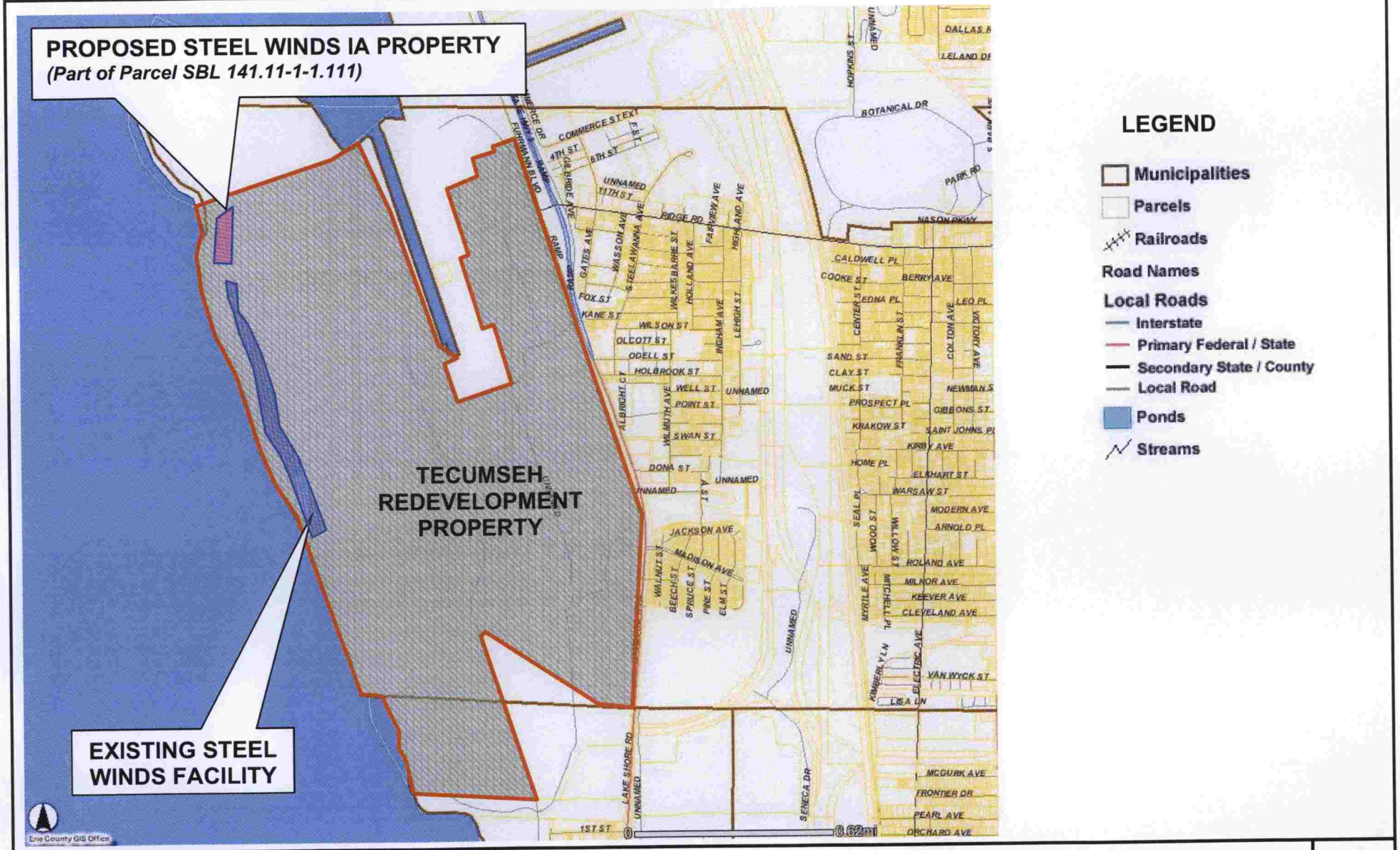
USGS TOPOGRAPHIC MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

STEEL WINDS IA SITE
LACKAWANNA, NEW YORK

PREPARED FOR
BQ ENERGY, LLC

FILEPATH=f:\cad\benchmark\bq energy\steel winds ia\bcp application\attachments\figure 02-2j usgs topographic map.dwg



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TAX MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

STEEL WINDS IA SITE
LACKAWANNA, NEW YORK

PREPARED FOR
BQ ENERGY, LLC

FIGURE 2-3

ATTACHMENT 3

PROJECT DESCRIPTION & SCHEDULE

Project Description and Schedule

Background

Tecumseh Redevelopment, Inc. (Tecumseh) owns approximately 1,100 acres of land at 1951 Hamburg Turnpike; approximately 2 miles south of the City of Buffalo (see Attachment 2, Figure 2-1). The majority of Tecumseh's property is located in the City of Lackawanna (the City), with portions of the property extending into the Town of Hamburg. Tecumseh's property is bordered by: NY State Route 5 (Hamburg Turnpike) on the east; Lake Erie to the west and northwest; and other industrial properties to the south and the northeast. Figure 1 (in Attachment 2) provides an overview of the Tecumseh Property, including major leased or licensed parcels, and adjacent parcels owned by others.

The Tecumseh property is located on a portion of the site of the former Bethlehem Steel Corporation (BSC) Lackawanna Works in a primarily industrial area. The property was formerly used for the production of steel, coke and related products by BSC. Steel production on the property was discontinued in 1983 and the coke ovens ceased activity in 2000. Tecumseh acquired the property, along with other BSC assets, out of bankruptcy in 2003.

A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of the entire former Bethlehem Steel Lackawanna Works was initiated by BSC under an Administrative Order issued by the United States Environmental Protection Agency (USEPA) in 1990. Tecumseh completed the RFI in January 2005. In August 2006, USEPA approved the RFI and terminated Bethlehem Steel's (and in turn Tecumseh's) obligation under the 1990 Administrative Order. Tecumseh is presently negotiating an Order on Consent with the New York State Department of Environmental Conservation (NYSDEC) to undertake corrective measures at certain solid waste management units (SWMUs) primarily on the western slag fill and coke manufacturing portion of the property. In addition, Tecumseh has applied for and received NYSDEC acceptance of three parcels, referred to as Business Park Phase I, II and III, into the NY State Brownfield Cleanup Program (see Figure 3-1). Brownfield Cleanup Agreements have been signed for all three of these parcels. Business Park Phase I encompasses approximately 102 acres, and is presently in the final stages of a Remedial Investigation and Alternatives Analysis Report (RI/AAR). Phases II and III encompass approximately 173 and 128 acres, respectively, and are slated to undergo remedial investigation. A fourth parcel, encompassing 29 acres along the Lake Erie shoreline, was also investigated and is presently undergoing final remedial measures under the NY State Brownfield Cleanup Program. Eight wind turbines and supporting power generation equipment and infrastructure are presently operating on this parcel, which is referred to as the "Steel Winds Site."

Project Description

Redevelopment of the property, including the existing BCP Sites, is guided by a Master Plan (see Figure 3-1). Specifically, in April 2005 Tecumseh signed a Memorandum of Understanding (MOU) with Erie County and the City of Lackawanna to promote redevelopment of the former BSC Lackawanna property following cleanup. Consistent with the Master Plan, BQ Energy, LLC is considering two additional wind turbines to the north of the existing eight turbines. These additional turbines will occupy approximately an approximate 9.33-acre parcel deemed "Steel Winds IA." The Steel Winds IA Site, shown on Figure 2-1 in Attachment 2, is the subject of this BCP application.

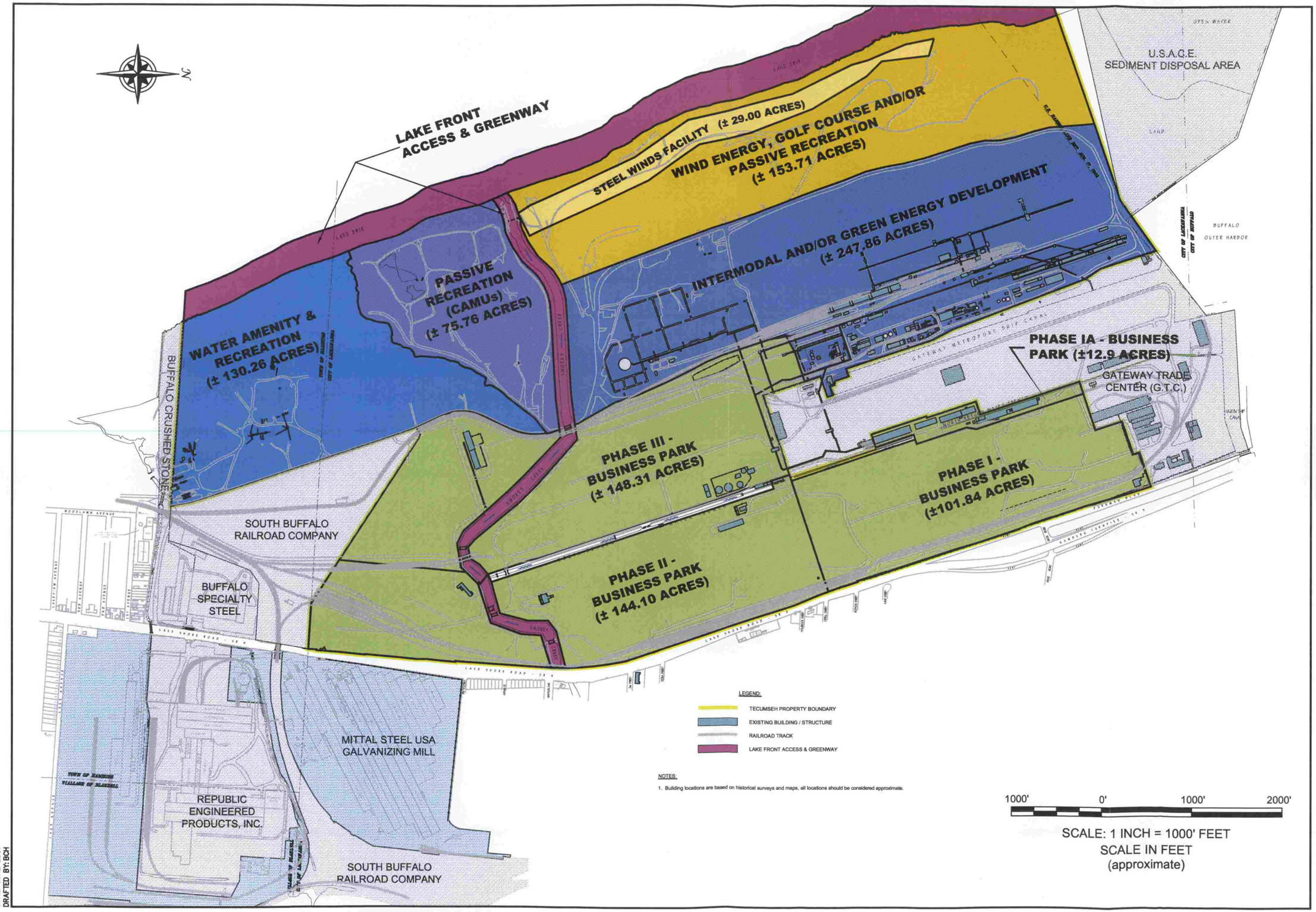
The Steel Winds IA Site is part of an existing lease agreement between Tecumseh Redevelopment, Inc and BQ Energy. The project has been subjected to SEQRA review and has been issued a negative declaration by the City of Lackawanna, the lead agency for the project.

Known and Suspected Environmental Conditions

The proposed Steel Winds IA Site is located on a portion of the former BSC Lackawanna Works that was created from the historic disposal of slag fill (Slag Fill Area – Zone 5 – see Attachment 2 Figure 1) along the Lake Erie shoreline. The slag and other industrial fill materials contain highly variable and sometimes elevated concentrations of metals, as well as semi-volatile and volatile organic compounds (SVOCs and VOCs). SWMU S-18 is located proximate to the proposed Steelwinds IA site. SWMU S-18, deemed the Lime Dust and Kish Landfill, is subject to RCRA corrective measures based on the presence of elevated metals and polyaromatic hydrocarbons associated with basic oxygen furnace (BOF) waste disposal by Bethlehem Steel Corp. The existing Steel Winds Site (Turbines 1 through 8) is also associated with elevated concentrations of metals and PAHs, as well as naphthalene in groundwater. Based on this and other historic site use, the main potential Chemicals of Potential Concern on the Steel Winds IA Site are SVOCs (base-neutral fraction) in surface and subsurface soil/fill. Metals associated with steel manufacturing are also expected to be ubiquitous in surface and subsurface soil/fill and groundwater at the Site.

Schedule

A proposed Project Schedule is attached as Figure 3-2.



DATE: JUNE 2007
DRAFTED BY: BCH

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JOB NO.: 0083-004-100

REDEVELOPMENT MASTER PLAN

BROWNFIELD CLEANUP PROGRAM

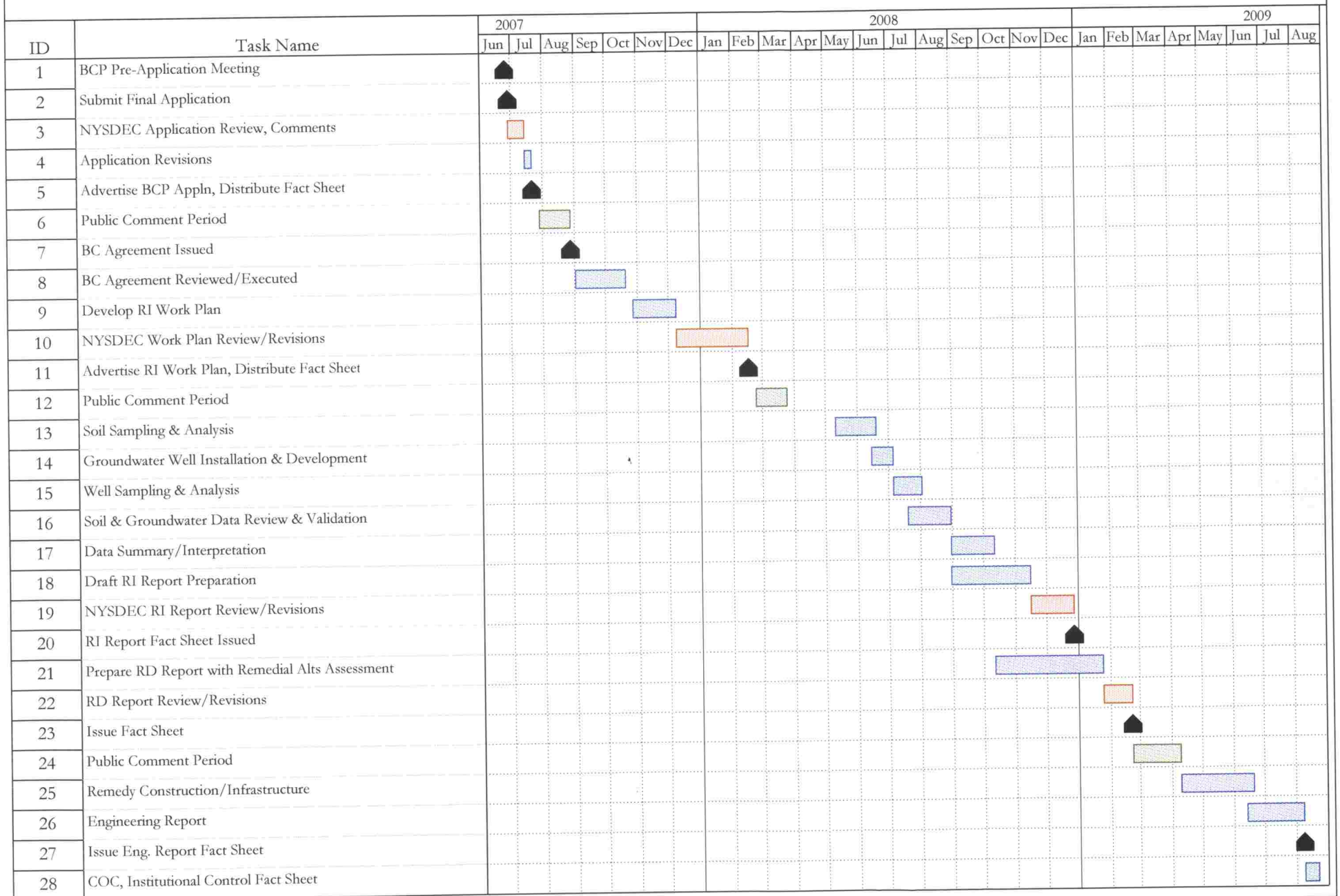
STEEL WINDS IA SITE
LACKAWANNA, NEW YORK

PREPARED FOR
BQ ENERGY, LLC

FIGURE 3-1

PROJECT SCHEDULE
STEELWINDS IA
BROWNFIELD CLEANUP AND REDEVELOPMENT

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC



ID	Task Name
1	BCP Pre-Application Meeting
2	Submit Final Application
3	NYSDEC Application Review, Comments
4	Application Revisions
5	Advertise BCP Appln, Distribute Fact Sheet
6	Public Comment Period
7	BC Agreement Issued
8	BC Agreement Reviewed/Executed
9	Develop RI Work Plan
10	NYSDEC Work Plan Review/Revisions
11	Advertise RI Work Plan, Distribute Fact Sheet
12	Public Comment Period
13	Soil Sampling & Analysis
14	Groundwater Well Installation & Development
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FIGURE 3-2

ATTACHMENT 4

PREVIOUS ENVIRONMENTAL INVESTIGATIONS/ASSESSMENTS

PREVIOUS ENVIRONMENTAL INVESTIGATIONS/ASSESSMENTS

Attached is a copy of the text portion of the SWMU Assessment Report for SWMU S-18, located proximate to the Steel Winds IA Site. A copy of the full RCRA Facility Investigation (RFI) Report, including appendices, has been submitted to the Regional office of the New York State Department of Environmental Conservation under separate cover. In addition, the NYSDEC is referred to the April 2007 Site Investigation/Remedial Alternatives/IRM Report for the Steel Winds Site, which was recently submitted to the NYSDEC and document repository.

Tab S-18

SWMU ASSESSMENT REPORT
LIME DUST AND KISH LANDFILL R
(SWMU S-18)

BETHLEHEM STEEL CORPORATION
LACKAWANNA, NEW YORK

SEPTEMBER 2004

BETHLEHEM STEEL CORPORATION
2600 HAMBURG TURNPIKE
LACKAWANNA, NEW YORK 14218

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1.0 INTRODUCTION

This report documents the results of an environmental assessment of Lime Dust and Kish Landfill R at Bethlehem Steel Corporation's (BSC's) Lackawanna, New York facility. The Lime Dust and Kish Landfill R was identified as Solid Waste Management Unit (SWMU) S-18 in the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) for the facility (USEPA 1988). Landfill R was designated as a SWMU because it received two waste products of the basic oxygen furnace process—lime dust (calcium oxide) and kish (consisting principally of carbon fines) (USEPA 1988). The United States Environmental Protection Agency (USEPA) has required that a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of this and other SWMUs at the BSC facility be completed in accordance with the Administrative Order on Consent (AOC) signed by BSC and USEPA in 1990 (USEPA 1990). The RFI has been conducted in phases (Phases I, IIA, IIB, IIC, and III), and included field work consisting of the collection and analysis of environmental samples from SWMUs and other areas throughout the property. This report evaluates data available to BSC as of November 2001.

An initial SWMU assessment was completed in 1992. The USEPA reviewed and commented on the SWMU S-18 assessment in 1993. This SWMU S-18 assessment includes information to further clarify issues noted in the USEPA comments. A copy of the USEPA comments is provided in Attachment 1.

1.1 Description

SWMU S-18 is an approximately 2-acre, irregularly shaped area located in the northwest portion of Zone 4 of the Slag Fill Area (Figure 1). There are approximately 40 exposed piles of disposed lime dust and kish placed on the slag fill surface with an approximate total volume of 600 cubic yards. The piles, which are located on the northwestern and north ends of the SWMU boundary, are not covered and are exposed to wind and rain. Additionally, in the central portion of the SWMU there is a sloped mound of lime, kish, and slag fill that is approximately 150 feet long and 75 feet wide, with a height ranging from 1 to 9 feet. The extent of the mound material below the surrounding grade is unknown. The volume of this pile, however, is estimated to be 1,900 cubic yards.

The piles are on and surrounded by slag fill at an approximate elevation of 620 feet above mean sea level (msl). Groundwater is at an approximate elevation of 570 feet above msl. Surface water runoff is generally contained within the SWMU S-18 area, although some surface water runoff can occur on the southeastern and northern perimeters of the SWMU.

1.2 History

From 1966 to 1983, two waste products of the basic oxygen furnace (BOF) process, lime dust (calcium oxide) and kish (consisting principally of carbon fines), were disposed of in this landfill. Lime dust, or burnt lime, was produced through the unsuccessful dehydration of lime (i.e., it was either baked too long or not long enough), making it unsuitable for steel making operations. During the hydration process, the lime contacted no other process operations where it could have been intermixed with other waste streams. Kish consists primarily of carbon fines and iron oxides. During handling, the hot iron metals from the Blast Furnace cools down and the carbon that saturates the hot iron separates from solution in the form of a fine particulate. Kish was collected in baghouses at the reladling stations in the BOF where the hot metal was poured in to ladles to be charged into the BOF vessels to make steel. Kish was collected from the baghouses and disposed. Deposition of lime and kish disposal ceased in 1983 when steel making operations shut down. Neither lime dust nor kish are suspected to contain hazardous constituents (USEPA 1988).

On February 20, 1996, BSC filed a declaration in the Erie County Clerk's Office limiting future use of the property around and including SWMU S-18. Under the deed restriction, future use of the property shall be limited to industrial use only. Industrial use includes manufacturing, assembling, warehousing, and related railroad, port, and shipping activities. The deed restriction also prevented the installation and operation of extraction or water wells for the purposes other than environmental remediation use. A copy of the Declaration of Conditions, Covenants, and Restrictions is provided in Attachment 2.

Historical documents obtained from regulatory agencies, including the United States Army Corps of Engineers (US Army Corp) show that the dredge spoils were deposited off the BSC Lackawanna facility shoreline from at least 1937 to 1948. These spoils underlie a significant portion of the current slag fill area (SFA), including the area immediately under SWMU S-18. The contribution of this particular SWMU to groundwater contamination is not known. The potential impact to groundwater beneath the site, especially in the sand unit in the groundwater Zone 3, 4, and 5 is further assessed in the RFI.

The condition of SWMU S-18 has been monitored since June 1992, when BSC reportedly conducted a site inspection that consisted of a walk-through visual inspection. Dames & Moore visited the site in September 1996. URS inspected the SWMU on June 4, 2000. During all three visits, conditions at the unit were found to be consistent with the descriptions in Section 1.1 and Section 4.0 of this report. Documentation of the 1996 and 2000 site visits are provided in Appendix A. Written documentation of the 1992 BSC inspection was not available.

2.0 SAMPLING AND ANALYSIS

Waste and groundwater sampling was conducted in and near SWMU S-18 between 1991 and 2000. Samples of the waste were collected in 1992 for waste characterization as part of the RFI Phase 1 investigation. Samples were also collected in 1994 and 2000 as part of subsequent phases of the RFI. All waste sampling was conducted in accordance with USEPA approved Work Plans (BSC 1989, revised 1990, 1993, 1994, 1997, 1999a).

Groundwater near SWMU S-18 was sampled over several phases of the RFI starting in 1991 and concluding in 2000. All groundwater sampling was conducted in accordance with USEPA approved work plans (BSC 1989, revised 1990, 1993, 1994, 1997, 1999a). A complete list of the site-specific compounds targeted for groundwater analysis in the site investigations is provided in Table 1. Laboratory analytical reports are provided in Section II of the RFI.

There are two groundwater units beneath the site: the shallow fill unit and the deeper sand unit. The shallow fill unit wells are labeled as "A" wells, while the deeper sand unit wells are typically labeled as "B" wells. Groundwater contour maps for the fill and sand units are presented in Figures 2 and 3, respectively.

2.1 Waste Characterization

On June 17, 1992, a composite sample was obtained from discrete surface grab samples collected at several randomly selected piles of lime and kish exposed at the surface. The sample was analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) for seven heavy metals (arsenic, cadmium, chromium, lead, nickel, selenium, and thallium).

On June 15, 1994, two discrete surface grab samples were collected. One sample was collected from a pile of exposed lime dust (S18-LIME) and one from a pile of exposed kish (S18-KISH) (Figure 1). Samples were collected from the 0- to 6-inch depth interval and were analyzed for total volatile organic compounds (VOCs), total semivolatile organic compounds (SVOCs), and metals.

On October 25, and 26, 2000, two borings were advanced in the lime and kish pile area. One kish sample (S-18-B1 (2-4) Kish) was collected from Boring S18-B01. One kish sample (S18-B2 (2-4) Kish) and one lime sample (S18-B2 (2-4) Lime) was collected from Boring S18-B02. All three samples were analyzed for total VOCs, SVOCs and metals. Laboratory analysis included TCLP, Synthetic Precipitation Leaching Procedure (SPLP) and total constituent analysis. Total cyanide, chloride, total recoverable phenolics and sulfates were also analyzed.

On October 26, 2000, two kish grab samples (S18-Kish-Grab1 and S18-Kish-Grab2) were collected from two representative kish piles and two lime grab samples (S18-Lime-Grab1 and S18-Lime-Grab2) were collected from two representative lime piles. Samples were analyzed for total VOCs, SVOCs and metals. Laboratory analysis included TCLP, SPLP and total constituent analysis. Total cyanide, chloride, total recoverable phenolics and sulfates were also analyzed.

On October 26, 2000, two composite kish samples (S18-Kish-Comp1 and S18-Kish-Comp2) were collected from 9 kish piles and two composite lime samples (S18-Lime-Comp1 and S18-Lime-Comp2) were collected from 26 lime piles. Samples were analyzed for total VOCs, SVOCs and metals. Laboratory analysis included TCLP, SPLP and total constituent analysis. Total cyanide, chloride, total recoverable phenolics and sulfates were also analyzed.

A summary of the detected analytes for the 1994 and 2000 sampling events is provided in Table 2 and Table 3. Field sampling records are provided in Appendix B. Laboratory results for samples collected in 1992 are provided in Appendix C.

2.1.1 1992 TCLP Results

TCLP results were compared to regulatory concentration levels listed in 40 CFR Part 261. TCLP results show that all of the metals analyzed for (arsenic, barium, cadmium, chromium, lead, selenium and silver) were below detection limits and, therefore, did not meet TCLP criteria.

2.1.2 1994 Total Constituent Results

For the kish sample (S18-KISH), VOCs were not present above detection limits. Only trace levels of four polynuclear aromatic hydrocarbons (PAHs) ranging from fluoranthene [84.0 micrograms per kilogram (µg/kg)] to benzo(g,h,i)perylene (110 µg/kg) were detected at levels below the reporting limits. The PAHs are typical of coal combustion by-products. Eight metals were detected above method detection limits in the kish sample, ranging from thallium [7.1 milligrams per kilogram (mg/kg)] to lead (452 mg/kg).

In the lime dust sample (S18-Lime), no VOCs or SVOCs were present above detection limits. Only four metals were present above detection limits ranging in concentration from 2.8 mg/kg of selenium to 87.5 mg/kg of antimony and lead, respectively.

2.1.3 2000 Total Constituent Results

Lime and kish samples from borings S18-B01 and S18-B02 had 11 detected SVOCs and 14 detected metals. No VOCs were detected in the samples. SVOCs were found in higher concentrations in the Kish samples. SVOC concentrations ranged from 48 µg/kg of pyrene [S18-B02 (3-4 ft) LIME] to 60,000 µg/kg of fluoranthene [S18-B01 (2-4 ft) KISH]. Metals ranged in concentration from 0.1 mg/kg of mercury [S18-B01 (2-4 ft) KISH] to 323,000 mg/kg of calcium [S-18-B02 (2-4 ft) LIME].

Analytical results for the kish grab and composite surface samples showed the presence of several SVOCs and metals. The seven SVOCs detected ranged from 260 µg/kg of phenanthrene in S18-KISH-G01 to 3,800 µg/kg of chrysene in S18-KISH-G02. Fourteen metals were detected in samples. Concentrations ranged from 0.43 mg/kg of mercury to 99,200 mg/kg of calcium, both in S18-KISH-G01. VOCs were not detected in the grab samples. VOCs were not analyzed in the composite samples.

Results for the grab and composite lime surface samples showed no VOCs detected in the grab sample and no SVOCs detected in the grab and composite samples. VOCs were not analyzed in the composite sample. Up to twelve metals were detected in the four samples analyzed. Concentrations ranged from 0.018 mg/kg of mercury in S18-LIME-CO2 to 533,000 mg/kg of calcium

in S18-LIME-C02. The second and third highest metal concentrations were magnesium (57,200 mg/kg) and lead (216 mg/kg), both present in S18-LIME-G01.

2.1.4 2000 SPLP Results

SPLP analysis was conducted to more closely mimic the effect of compounds leaching from the waste piles due to rainwater infiltration. The analysis was performed in accordance with the USEPA's SW846 Method 1312 protocols. The SPLP results help evaluate what compounds can potentially leach from the waste piles into the subsurface. Several VOCs, SVOCs and metals, all at low concentrations, were detected in the kish and lime samples from borings S18-B01 and S18-B02. Although no VOCs were detected in the Total Constituent analysis, 4 VOC compounds were detected, with concentrations ranging from .0021 milligrams per liter (mg/L) of ethylbenzene to 0.011 mg/L of toluene, both detected in S18-B02 (2-4 ft) LIME. Three SVOCs were detected, ranging from .0041 mg/L of naphthalene in S18-B02 (2-4 ft) LIME to 0.013 mg/L of both naphthalene and phenanthrene in samples S18-B02-(2-4 ft) LIME and S18-B01 (2-4 ft) KISH, respectively. SPLP results for the kish and lime grab and composite surface samples showed no VOCs present, and only one SVOC [bis(2-ethylhexyl)phthalate at .004 mg/L] detected in one of the kish grab surface samples (S28-KISH-G02).

Eleven metals were also detected at low concentrations in both boring and surficial samples. The detections ranged from 0.000047 mg/L of mercury in samples S18-B2 (2-4 ft) KISH to 948 mg/L of calcium in S18-LIME-C01. The next two highest metals detected were potassium (710 mg/L) and magnesium (57.5 mg/L), both present in S18-KISH-G01.

2.1.5 2000 TCLP Results

TCLP results for the kish samples from Borings S18-B01 and S18-B02 showed no VOCs, several SVOCs and several metals present. All of the detected parameters were at low concentrations. Laboratory results for the lime sample from Boring S18-B02 revealed three VOCs, one SVOC and several metals at low concentrations.

TCLP results for the surficial kish and lime grab and composite samples showed the presence of several VOCs, SVOCs, and metals in most of the samples. Concentrations were generally low. Lead results, however, ranged from 15.4 mg/L to 37.7 mg/L, which indicates that the concentration of lead in the TCLP extract on the surface kish material in SWMU S-18 does meet TCLP criteria.

2.2 Groundwater

Six monitoring wells, MWN-05A, MWN-05B, MWN-05D, MWN-14A, MWN-14B, and MWN-42A were used to evaluate the groundwater near SWMU S-18. Monitoring wells MWN-05A, MWN-14A, and MWN-42A are screened in the fill unit. Monitoring well MWN-05D is screened in the bedrock. MWN-05B and MWN-14B are screened in the sand unit. Monitoring well locations are shown in Figures 1, 2, and 3. Groundwater elevation contours for the fill and sand units are shown in Figure 2 and Figure 3, respectively.

On October 25, 2000, monitoring well MWN-42A was installed approximately 500 feet east and upgradient of SWMU-S18. Additionally, monitoring wells MWN-14A and MWN-14B are situated approximately 1,000 feet upgradient of SWMU S-18 (Figures 2 and 3). Monitoring wells MWN-05A, MWN-05B, and MWN-05D are located downgradient of SWMU S-18.

From 1991 to 1999, several rounds of groundwater samples were collected from upgradient wells MWN-14A and MWN-14B and downgradient wells MWN-05A, MWN-05B, and MWN-05D over several phases of the RFI. In November 1999, all of the onsite wells were sampled within nine days. However, monitoring well MWN-42A has been sampled only once, on December 19, 2000, following its installation. Analytical data from the 1999 and 2000 sampling events are used to evaluate groundwater conditions relative to SWMU S-18. A summary of detected analytes in the downgradient wells and upgradient wells is presented in Table 4A and Table 4B, respectively.

2.2.1 Groundwater Results

For the groundwater samples collected in 1999 and 2000, several VOCs, SVOCs, and metals were detected in the three upgradient wells (MWN-14A, MWN-14B and MWN-42A) and in the three downgradient wells (MWN-05A, MWN-05B and MWN-05D). For the shallow ("A") wells placed in the fill, concentrations of these parameters were generally higher in the upgradient wells.

In the sand unit, monitoring well MWN-05B, contained concentrations of 2 VOCs (chlorobenzene and ethylbenzene), SVOCs (acenaphthylene, anthracene, bis(2-ethylhexyl)phthalate, 3&4-methylphenol, naphthalene, and phenol) and total metals (barium, cadmium, calcium, chromium, iron, lead, magnesium, nickel, potassium, silver, and sodium) that were of slightly higher concentrations than in the upgradient well MWN-14B, which is screened in the same geologic unit. USACE dredge spoils are present within this unit; therefore it is unknown what effect these materials have had on groundwater quality.

In bedrock well MW-05D, one VOC (xylene), no SVOCs and 8 metals (barium, calcium, chromium, iron, magnesium, nickel, potassium and sodium) were detected at concentrations lower than those found in the upgradient and downgradient wells located in the overlying groundwater zones.

2.3 Summary of Analytical Data

Total analysis of the subsurface material indicated that 11 SVOCs and 14 metals were present. The surface kish material contained 7 SVOCs and 14 metals in detectable concentrations. The surface lime material contained no VOCs or SVOCs, but did contain 12 metals.

SPLP analysis indicated that 11 of the 12 metals detected in the total-analysis samples have the potential to leach from the surface materials. SPLP results for the kish and lime grab and composite surface samples showed no VOCs present, and only one SVOC [bis(2-ethylhexyl)phthalate at .004 mg/L] detected in one of the kish grab surface samples (S28-KISH-G02).

The concentration of lead in the TCLP extract of the surficial kish material in SWMU S-18 does meet TCLP criteria. However, for those samples that were above RCRA criteria for lead, the corresponding SPLP analyses for the same samples were non-detect. Lime was determined to be nonhazardous.

Total metal concentrations in the upgradient and downgradient wells indicated that several SVOCs and numerous metals present in the SWMU material were also present in the downgradient wells at concentrations higher than upgradient wells. USACE dredge spoils are present in the sand unit, and it is unknown what effect these materials have had on groundwater quality. Further evaluation of the potential groundwater impacts resulting from the dredge spoils is provided in the RFI.

The presence of a restrictive covenant on the slag fill area, including SWMU S-18, restricts the current and future use of the property to commercial and industrial uses. In addition, groundwater use is also restricted. This reduces the risk of exposure to the SWMU material.

The potential risks associated with the compounds detected in the SWMU material are further evaluated in the Human Health Risk Assessment presented in Section 3.0.

3.0 RISK ASSESSMENT

A human health risk assessment, as described in the *Human Health Risk Assessment* Work Plan (BSC 1997), was conducted for SWMU S-18. The results of the Tier 1 Human Health Risk Assessment (HHRA) are presented here and are organized into the following sections: Data Evaluation, Exposure Assessment, Toxicity Assessment, Risk Characterization and Uncertainty Analysis. The major components of this HHRA have previously been presented in Human Health Risk Assessment Report, Part IV of this RFI Report. Therefore, the following sections provide summary overviews of previously presented information. This section, therefore, serves as a summary report, bringing together all associated and related work from previous risk assessment deliverables, and providing the conclusions of the SWMU-specific risk assessment.

3.1 Data Evaluation

A list of 96 constituents of potential interest (COPIs) was developed for the BSC Lackawanna, New York facility based on USEPA and industry studies (BSC 1998). The list contains hazardous constituents that could be present in the waste streams as a result of integrated iron and steel plant operations, such as those historically conducted at the Lackawanna site. The Human Health Risk Assessment ID No. 1 (BSC 1998) established the chemicals of potential concern (COPCs) for each SWMU at the Lackawanna Site. The COPCs were determined by sequentially applying the following criteria to each COPI on a medium by medium basis for each SWMU and watercourse: 1) the chemical was detected in at least 5% of the samples, 2) the chemical was detected in at least one sample at levels above background (*i.e.*, the maximum concentration was above background; for chemicals in surficial SWMU material only), and 3) the chemical was positively detected in at least one sample at levels above applicable screening criteria [*i.e.*, the maximum concentration was greater than the screening criteria: USEPA Region III Risk Based Concentrations (RBCs), USEPA Soil Screening Levels (SSLs), or NYSDEC Ambient Water Quality Standards and Guidance values]. In accordance with ID No. 1, a background comparison was not made for the subsurface SWMU material in this report.

The sampling data for SWMU S-18 (as presented in Section 2.0 of this report) were evaluated in order to identify the site-related COPCs for the SWMU. COPCs were originally determined in ID

No. 1; however, as some screening criteria were revised since ID No. 1 was submitted, the screening process was also updated and is presented in Tables 5 and 6. For the groundwater evaluation, data from groundwater Zone 4 was used. Based on the above criteria, and ID No. 1, twenty COPCs were identified for SWMU S-18. Five inorganic (antimony, arsenic, chromium, lead, thallium) and no organic chemicals were identified in surficial SWMU material (Table 5). Four inorganic (arsenic, chromium, lead, thallium) and three organic (anthracene, benzo(a)anthracene, benz(a)anthracene) COPCs were identified in subsurface soil (Table 6). Fourteen organic (benzene, chlorobenzene, 1,1-dichloroethane, ethylbenzene, methylene chloride, pyridine, toluene, trichloroethene, xylenes, acenaphthylene, anthracene, fluorene, naphthalene, phenanthrene) COPCs were identified in groundwater (Table 7).

Representative concentrations were then determined for each COPC. If the sample size for a dataset was ten or greater, the 95% upper confidence limit of the mean was used. For those datasets with sample sizes of less than ten, the maximum concentration was used. Ten samples were collected of the surficial SWMU material, therefore, 95% UCL could be calculated. Three samples were collected of subsurface SWMU material; therefore, the maximum concentration was used to represent these COPCs. SWMU S-18 is located in Groundwater Zone 4 (BSC 1998), which had more than ten samples; therefore, the 95% UCL was used. The COPCs, as determined in ID No. 1, and their representative concentrations are presented in Table 8.

3.2 Exposure Assessment

The exposure assessment conducted for SWMU S-18 included a review of current and future human receptor scenarios and potential exposure pathways, as related to COPCs. In general, exposure pathways by which a human receptor could come into contact with SWMU material are defined by four components (USEPA 1989):

- A source and mechanism of constituent release to the environment;
- An environmental transport mechanism;
- A point of potential human contact with the affected medium, and
- A route of entry into humans.

If any one of these components is missing, the pathway is considered incomplete and does not contribute to receptor exposure.

Human Health Risk Assessment ID No. 2 (BSC 1999) presented the current and future human receptor scenarios and potentially complete exposure pathways for each of the SWMUs identified at the Lackawanna Site. For SWMU S-18, the potential receptor scenarios include a current non-BSC commercial/industrial worker, a future commercial/industrial worker, a future construction worker, a future utility/maintenance worker, a trespasser, a future marina worker, a future greenway user, a future fenceline resident, and a present fenceline resident. Potentially complete exposure pathways were established for each receptor scenario. For the commercial/industrial worker scenario, the utility/maintenance worker scenario, and the trespasser scenario, the following pathways were determined to be complete: direct contact (*i.e.*, ingestion or dermal contact) with surface SWMU material, inhalation of airborne particulates from uncovered surface SWMU material, or from inhalation of vapors from groundwater. These pathways also apply for the construction worker and utility/maintenance worker scenarios; however, these receptors could additionally be exposed to subsurface SWMU material during potential future digging activities. For the marina worker scenario, greenway user scenario, and residential scenarios, inhalation of particulates in surficial SWMU material is the only complete exposure pathway. A detailed description of the potentially exposed receptor scenarios and pathways for SWMU S-18 can be found in ID No. 2 (BSC 1999), and a summary is provided in Table 9.

3.3 Toxicity Assessment

A toxicity assessment characterizes the relationship between the exposure to a COPC and the frequency of adverse health effects that may result from such an exposure (dose-response). The end result of the dose-response assessment is the determination of human uptake levels that provide an adequate measure of protection to exposed persons for carcinogenic and noncarcinogenic endpoints. The derivation of acceptable levels of exposure (*e.g.*, risk-based screening levels (RBSLs)) and the manner in which these levels are used in this HHRA are discussed below.

Tier 1 RBSLs were calculated and compared to the representative SWMU-18 COPC concentrations. Risk-based screening levels are defined as concentrations of COPCs in media that are

not expected to produce any adverse health effects under chronic exposure conditions. Tier 1 RBSLs were developed using information previously defined and described in detail in the Work Plan and ID No. 2; this information is summarized here. The equations used to calculate the RBSLs follow basic USEPA risk assessment principles (USEPA 1989; 1996). Conservative exposure parameters, as defined by the ASTM Standard (ASTM 1995) and USEPA guidance (USEPA 1989; 1991a, and 1991b), and USEPA toxicity criteria (USEPA 2001); were inputs into these equations to develop the RBSLs. As some of the toxicity criteria have been updated by the USEPA since originally presented in ID No. 1, they are presented in Table 10 of this HHRA. The above information was used to calculate Tier 1 RBSLs for COPCs in SWMU material and groundwater, for each of the nine exposure scenarios.

It should be noted that, in groundwater, many of the RBSLs calculated were greater than the chemical's solubility in water. This indicates that, based on the predicted amount of chemical volatilization, pure product in the groundwater would not pose an inhalation health threat from these chemicals. The solubility limits of these chemicals are indicated in Table 11.

Similarly, the RBSL calculated for anthracene in subsurface SWMU material (trespasser scenario) was determined to be health protective at a concentration that is greater than its saturation limit in soil. It is important to consider that chemical emissions from soil to air reach a plateau at the chemical's saturation limit, and volatile emissions will not increase above this level, regardless of how much more chemical is added to the soil. In other words, the exposure concentration for an inhalation-only scenario cannot exceed a chemical's soil saturation limit. Furthermore, an RBSL that is above the saturation limit is not likely to pose an increased risk or hazard (USEPA 1996a). Therefore, this RBSL for anthracene, which is based only upon the inhalation pathway, is capped at the saturation limit, and "> sat" is indicated on Table 11. Other RBSLs that are not based solely on inhalation were not capped at the saturation limit, as the potential exposure concentrations are greater than the saturation limit for direct contact scenarios (e.g., dermal contact, ingestion).

Lastly, some of the RBSLs for COPCs in SWMU material were determined to be health protective at levels that are greater than 1,000,000 parts per million (mg/kg); such cases are noted by the following indicator ">1,000,000" in Table 11. For those RBSLs that were based on inhalation, if a calculated RBSL is greater than both the saturation limit in soil and 1,000,000 mg/kg, ">1,000,000"

is shown in Table 11 as it is more indicative of the level of health-protectiveness.

In accordance with ID No. 2, lead in SWMU material was evaluated for the industrial/commercial, construction worker, utility/maintenance and trespasser direct contact scenarios; it was not evaluated for any other scenario (i.e., inhalation routes).

In accordance with Part IV of this RFI report, those COPCs that do not exceed the Tier 1 RBSLs are not evaluated further. For those COPCs that exceed Tier 1 RBSLs, the risk to human health is evaluated further in the Tier 1 Risk Characterization.

A comparison of the representative COPC concentrations to RBSLs for each of the exposure scenarios is presented in Table 11. This comparison provides a preliminary screening of potential risk to the specific receptor populations and exposure pathways identified for this SWMU. As presented in Table 11, the following chemicals exceeded the future commercial/industrial worker scenario RBSL for direct contact with surficial SWMU material: antimony, arsenic, lead and thallium. For the future construction worker scenario, antimony, arsenic, lead and thallium also exceed the direct contact with surficial SWMU material RBSLs, and arsenic, lead and benzo(a)pyrene exceeded the direct contact with subsurface SWMU material RBSLs. Lead exceeds the direct contact with surficial SWMU material RBSL for the future utility/maintenance worker scenario, and lead and benzo(a)pyrene exceed the direct contact with subsurface material RBSL for this scenario. For the trespasser, the representative concentration of lead in surface soil exceeds the direct contact RBSL. For all other scenarios and chemicals, the representative concentrations are below the respective RBSLs and therefore, are not evaluated further.

3.4 Risk Characterization

Risk characterization involves the estimation of the magnitude of potential adverse health effects of the COPCs, and summarizing the nature of the health impact to the defined receptor populations. It combines the results of the toxicity and exposure assessments to provide numerical estimates of health risk.

In accordance with Part IV of this RFI report, those COPCs that exceed an RBSL were further evaluated in the Tier 1 Risk Characterization, or HHRA. For those COPCs that exceeded an RBSL, a screening-level hazard index (SLHI) was calculated to evaluate noncarcinogenic health effects, and a total screening-level cancer risk ($SLCR_{total}$) was calculated to evaluate carcinogenic effects. SLHI and $SLCR_{total}$ methodology are presented in Part IV (BSC 1998). The Tier 1 HHRA results are presented in Table 12.

3.4.1 Noncarcinogenic Hazard

The noncancer hazards were assessed in this HHRA using a hazard quotient approach (USEPA 1989). For each COPC, the noncarcinogenic RBSL was compared to the COPC's representative concentration to determine the screening level hazard quotient (SLHQ) for that chemical. The equation is as follows:

$$SLHQ = \frac{\text{Representative concentration}_{COPC/medium}}{RBSL_{COPC/medium/receptor/pathway}}$$

The SLHQs for each chemical are summed to create a total Screening Level Hazard Index ($SLHI_{total}$) for each pathway. The smaller the SLHQ/SLHI, the greater the degree of protection for that pathway. Based on USEPA methodology (USEPA 1989) and as discussed in the Work Plan, if the SLHI is less than 1, the risks are considered negligible. Those $SLHI_{total}$s that exceed 1 were further evaluated by developing target organ-specific SLHIs. This process is appropriate as only chemicals affect different biological target endpoints, and it is only relevant to quantify the additive effects of similar chemicals. This process is illustrated in Table 12.

For the future commercial/industrial worker scenario, the $SLHI_{total}$ is 8.0. The liver/blood/hair SLHI is 6.5 (antimony and thallium in surficial SWMU material) and the total skin SLHI is 1.5 (arsenic in surficial SWMU material). For the future construction worker scenario, the total SLHI is 2.5. The liver/blood/hair target organ SLHI is also 2.5 (antimony and thallium in surface SWMU material).

3.4.2 Carcinogenic Risk

In a human health risk assessment, carcinogenic health risks are defined in terms of the probability of an individual developing cancer over a lifetime as the result of exposure to a given chemical at a given concentration (USEPA 1989). The incremental probability of developing cancer over a lifetime (*i.e.*, the theoretical excess lifetime cancer risk) is the additional risk above and beyond the cancer risk an individual would face in the absence of the exposures characterized in this risk assessment. In this HHRA, cancer risk was evaluated according to the following equation:

$$\text{SLCR} = \frac{\text{Representative concentration}_{\text{COPC/medium}}}{\text{RBSL}_{\text{COPC/medium/receptor/pathway}}} x \text{ Target Risk Level}$$

Cancer risks are summed regardless of the differences in target organ, weight-of-evidence for human carcinogenicity, or potential chemical interactions (*e.g.*, antagonistic or synergistic effects). This approach is consistent with USEPA's current approach to carcinogenic effects, which is to assume effects are additive unless adequate information to the contrary is available (USEPA 1989).

Based on USEPA methodology (USEPA 1989) and as discussed in the Work Plan (BSC 1997), if the total screening level cancer risk ($SLCR_{total}$) for each receptor/pathway is less than 1×10^{-4}, the risks are considered negligible. All SLCRs are below 1×10^{-4}. For the future commercial/industrial worker, the $SLCR_{total}$ is 6×10^{-6}, attributable solely to direct contact with arsenic in surface SWMU material. For the future construction worker scenario, the $SLCR_{total}$ is 1×10^{-6}. This was further broken down by pathway: the SLCR for direct contact with surficial SWMU material is 3×10^{-6} (arsenic) and the SLCR for direct contact with subsurface soil is 8×10^{-6} (arsenic and benzo(a)pyrene). For the future utility/maintenance worker scenario, the SLCR total is 1×10^{-6}, attributable solely to benzo(a)pyrene in subsurface SWMU material.

3.5 Conclusion

The HHRA completed for SWMU S-18 indicates that carcinogenic risks are negligible, but noncancer hazards are not.

The results of the HHRA indicate that antimony, arsenic, and thallium in surficial SWMU exceed noncarcinogenic RBSLs and produce a hazard index greater than the Tier 1 acceptable noncarcinogenic benchmark of 1.0 for certain scenarios. Specifically, for the future commercial/industrial worker scenario, the calculated noncarcinogenic hazard indices for antimony, arsenic and thallium in surface SWMU material are greater than the Tier 1 noncarcinogenic benchmark. For the future construction worker scenario, the calculated noncarcinogenic hazard for antimony and thallium in surface SWMU material is greater than the Tier 1 noncarcinogenic benchmark.

Additionally, lead in surficial SWMU material is found at a level higher than the Tier 1 RBSLs for the future commercial/industrial worker scenario, the future construction worker scenario, the future utility maintenance worker scenario, and the trespasser scenario. In subsurface SWMU material, the representative concentration of lead exceeds the future construction worker scenario and future utility/maintenance worker scenario RBSLs.

Based on these results and in accordance with the work plan, further evaluation will be completed during the Corrective Measures Study (CMS) and may include a Tier 2 assessment or an evaluation of corrective measures. The uncertainties inherent in these conclusions are presented in the following Uncertainty Analysis.

3.6 Uncertainty Analysis

There are multiple sources of uncertainty identified for any risk assessment. These include, among others, uncertainty associated with the toxicity criteria used to derive dose-response factors, uncertainties associated with exposure parameters used in the exposure assessment, and uncertainties associated with combining exposure parameters and toxicity criteria to characterize risk.

In the development of any health assessment, some level of uncertainty is introduced each time an assumption is relied upon to describe a dynamic parameter. Some assumptions have a significant scientific basis while others do not, which may result in the selection and use of conservative, default exposure parameters in the exposure assessment. The selection of multiple conservative assumptions in the exposure assessment generally results in an overestimation of

potential health risks associated with exposure to specific chemical constituents. The primary areas of uncertainty for this risk assessment are qualitatively discussed below.

3.6.1 Site Sampling and Representative Concentrations

SWMU samples were selected in an attempt to identify the highest concentrations of chemicals at the site. Sample biasing was accomplished based on visual observations and photoionization detector readings. Thus, the sampling activities are thought to have characterized the most highly impacted areas of the SWMU, and do not represent an average. This is conservative, as a potential receptor is not expected to remain on, or inhale particulates from, one portion of the SWMU for his or her entire exposure duration. Therefore, it is believed that the maximum concentrations used in this HHRA are likely to represent the true maximum site concentrations.

It should also be noted that, for all of the COPCs in subsurface SWMU material, the maximum concentration was used as the representative concentration in this HHRA. This was because an insufficient number of samples were collected to calculate a 95% UCL. Also, the maximum concentration of antimony in surface SWMU material is an estimated value. Thus, the confidence in risk calculations involving this concentration is somewhat less than for other calculations. Use of the maximum concentrations of the biased sampling is a very conservative methodology utilized in this HHRA.

3.6.2 COPC Selection Process

The COPCs evaluated for SWMU S-18 were identified in the Human Health Risk Assessment Interim Deliverable (ID) No. 1 (BSC 1998). These chemicals were selected in part because of their representative concentrations exceeded Region III RBCs (USEPA 2000b) for residential scenarios. Since no residential exposures are realistic for any of the on-site scenarios, some chemicals have been retained as COPCs, which are not likely to pose a potential threat to most of the human receptors, evaluated here.

3.6.3 Exposure Parameters

Several conservative default exposure parameters (*e.g.*, inhalation rates, exposure frequency, exposure duration) were incorporated into the exposure assessment to define general population behavior. For example, for the industrial/commercial worker scenarios, default exposure parameters are intended to be conservative and representative of an individual who is consistently present at the site 24 hours a day, 250 days a year, in the area of highest concentration. It is more likely that the exposure of an industrial worker to a *particular SWMU* (i.e., SWMU material) on the Lackawanna site is limited to an average of only a few hours a day, 2 weeks year. Most parameters incorporated into the exposure assessment to define the receptor scenarios are conservative values and used to define a worst-case population behavior. The net effect of using multiple conservative exposure assumptions is the overestimation of potential health risks.

Additionally, for a receptor population such as an industrial worker or a resident (*i.e.* where exposure duration is greater than 250 days/year), exposure frequency typically is corrected in site-specific health risk assessments for the fraction of the year when outdoor exposure to soil is limited due to severe weather conditions such as snow, ice, rain and freezing temperatures (USEPA 1989). This factor is called a meteorological factor. Because of the geographical location of the Lackawanna site, a correction factor for weather conditions would be reasonable. In this Tier 1 human health risk assessment, exposure did not exclude days when the temperature is less than 32°F and when there is snow cover or the ground is wet from other forms of precipitation. Thus, applying a more realistic exposure frequency and a meteorological factor would result in higher RBSLs.

3.6.4 Toxicity Assessment

Noncarcinogenic Criteria- Toxicity information for many of the COPCs is limited for humans. Consequently, depending on the quality and extent of toxicity information, varying degrees of uncertainty are associated with the calculated toxicity values. The USEPA derives reference concentrations (RfC; inhalation exposures) and reference doses (oral exposures) for chemicals using an uncertainty factor (UF) approach. The UF for arsenic, for instance, is 3. This was applied to account for both the lack of data to preclude reproductive toxicity as a critical effect and to account for some uncertainty in whether the NOAEL of the critical study accounts for all sensitive individuals.

The UF for chromium, however, is 300. The uncertainty factor of 300 represents two 10-fold decreases in dose to account for both the expected interhuman and interspecies variability in the toxicity of the chemical in lieu of specific data, and an additional factor of 3 to compensate for the less-than-lifetime exposure duration of the principal study.

Carcinogenic Criteria- USEPA cancer SFs are developed using variations of the Linear Multistage Model (LMS) for carcinogenicity. The LMS is highly conservative as it assumes linearity between dose and effect to zero dose assuming no threshold for carcinogenicity. However, the human body has mechanisms to detoxify most chemicals particularly at low doses, and therefore many scientists believe that most, if not all carcinogens only cause cancer above a "threshold dose."

The carcinogenic COPCs evaluated for this SWMU include arsenic. The inhalation slope factor for arsenic is based on human data from occupational exposure studies. An extrapolation from animal data is not necessary, thereby reducing the some uncertainty in the slope factor. However, there is significant uncertainty associated with the low dose extrapolation (environmental exposures are relevant in the low dose range) used to generate the slope factor. The EPA has used its default linear model to estimate risks in the low dose range citing lack of carcinogenic mode of action information. Thus, should this information become available, the low dose carcinogenic risks for arsenic may be evaluated differently.

Absence of Inhalation Toxicity Criteria - Although toxicity information is generally available for the most significant chemicals and exposure routes in this HHRA, there were some volatile COPCs in this HHRA for which no inhalation toxicity criteria (RfDs or cancer slope factors) exist. In the absence of data, either the oral RfD or oral SF was used to evaluate inhalation exposures. The letter "R" on Table 10 notes these instances. This assumes that the chemical is equitoxic by both routes (oral and inhalation). It is more conservative to evaluate these chemicals for inhalation exposures than to not evaluate them at all. Thus, this method potentially overestimates inhalation risks for COPCs evaluated as such. This uncertainty is not applicable however to the inhalation RfCs or slope factors for the COPCs which showed exceedances of their Tier 1 RBSLs (benzene, naphthalene, and arsenic) at this SWMU.

The development of an RBSL for lead, based on pharmacokinetic modeling (the USEPA Adult Lead Model) is inherently uncertain. These uncertainties relate to whether the model is capable of fully accounting for all significant variables that affect blood lead levels and whether selected input values that cannot be measured, are accurate, especially for future, hypothetical populations. In addition, the use of this model for the trespasser is highly uncertain since it is not known whether an adolescent (who is not pregnant) is more sensitive to the effects of lead than the developing fetus of a pregnant adolescent.

3.6.5 Risk Characterization

Uncertainties in the risk characterization portion of the risk assessment for the site are a combination of the uncertainties associated with both the dose-response assessment and the exposure assessment. As discussed above, the assumptions and parameters used for both the dose response and exposure assessments are extremely conservative. In addition, since the toxicity criteria and exposure parameters are combined in the risk characterization, the conservatism is compounded.

3.6.6 Uncertainty Analysis Summary

This Tier 1 HHRA includes uncertainties and conservative assumptions that, in general, effectively combine to overestimate the potential current and future exposures. The major sources of uncertainty contributing to the conservatisms in this HHRA are summarized below:

- Biased SWMU sample collection
- Use of maximum concentrations as representative concentrations
- Compounding effect multiple conservative exposure parameters
- No meteorological factor adjustment

The net effect of the uncertainties of this HHRA is the generation of risk and hazard estimates that probably far exceed any true exposure conditions that currently exist or which could possibly exist in the future.

4.0 CONTAINMENT

SWMU S-18 was placed directly on slag fill and there is no engineering containment structure, such as a liner or cover, in place. However, SWMU S-18 is surrounded by slag piles on the west, and, partially, the north and east sides which generally contain surface water runoff within the SWMU area. The southern portion of the fill area slopes toward the south into a small basin contained by the surrounding slag piles. Surface water can leave the area to the southeast. Additionally, the extreme northern area of the SWMU S-18 area slopes toward the former slag reclamation area (Figure 1). There is no cover material on the lime dust or kish piles and, therefore, the waste material is exposed to rain and wind.

The topography at SWMU S-18 is such that surface runoff can leave the site on the southeastern and northeastern sides. There are no drainage channels or ditches that collect surface water runoff and direct the flow to Lake Erie; rather, the surface water runs off the area via sheet flow across the slag surface. The runoff drains to both the former slag reclamation area to the north and to the access road to SWMU S-18 to the southeast, and eventually infiltrates into the slag material because of the porous nature of surrounding areas.

5.0 CONCLUSION

Based upon the data collected and evaluated during the investigations, the following conclusions can be made:

- The type of material landfilled is a dry dirt-like material placed on top of steel slag. There are no engineering containment structures in place.

- The 1992 TCLP extract concentration indicates that metals in the lime and kish material stockpiled at the SWMU does not exceed TCLP criteria.

- In the 2000 analysis, the concentration of lead in the TCLP extract in the surficial material in kish in SWMU-S-18 does exceed TCLP criteria. However, lead was not detected in the same samples in the SPLP extraction analysis. Lime was determined to be non-hazardous.

- The 1994 total VOC, SVOC, and metals analyses of the kish material indicated the presence of four SVOCs; [benzo(a)fluoranthene, benzo(ghi)perylene, fluoranthene, and indeno(1,2,3-cd)pyrene] at low concentrations. All eight metals analyzed (antimony, arsenic, cadmium, chromium, lead, nickel, selenium, and thallium) also were detected in the sample.

- 2000 SPLP analysis indicated that 11 of the 12 metals detected in the total-analysis samples have the potential to leach from the surface materials.

- Groundwater results indicate that SWMU S-18 has not impacted the shallow fill unit groundwater beneath the SWMU. Additionally, the SWMU is located within areas determined to be historical US Army Corp of Engineers dredge spoils disposal grounds. The analytical results from the deeper "B" wells (downgradient MWN-5B and upgradient MWN-14B) indicate that the sand unit may have been impacted by an on-site source. Because of the presence of U.S. Army Corps of Engineer drudge spoils in this unit; the contribution of SWMU S-18 to groundwater contamination is not known.

- The results of the Tier I human health risk assessment indicate that direct contact with antimony, arsenic, thallium, and/or lead in surficial materials poses a potential non-carcinogen risk to future commercial/industrial and/or construction workers.

- Additionally lead in surface SWMU material is found at levels higher than Tier 1 RBSLs for the future utility maintenance worker and trespasser scenarios. In subsurface SWMU material, the representative concentration of lead exceeds the future construction worker and future utility/maintenance worker scenario RBSLs.

Based on these results and in accordance with the Work Plan, further evaluation will be completed during the Corrective Measures Study (CMS) and may include a Tier 2 assessment or an evaluation of corrective measures.

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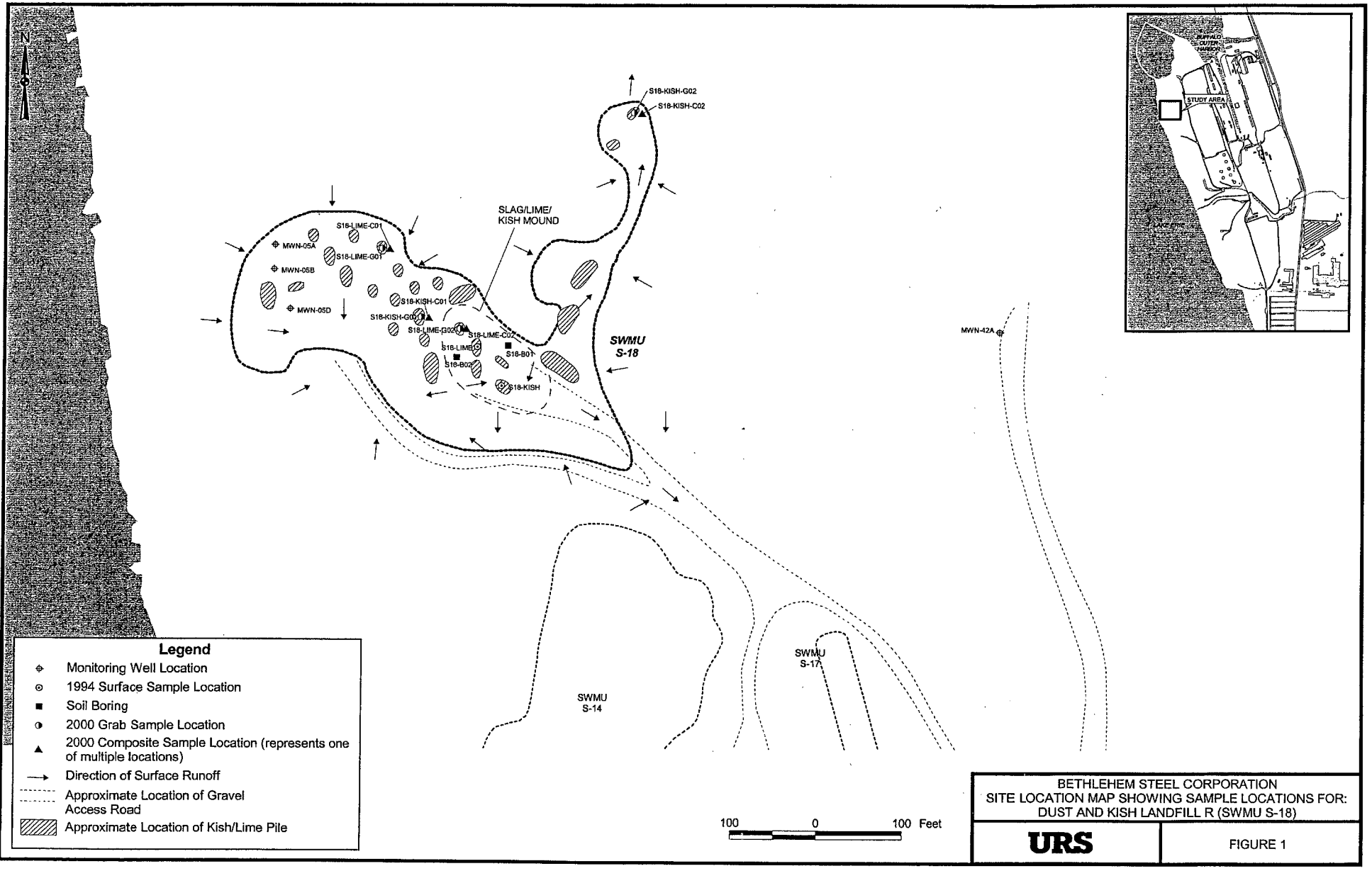


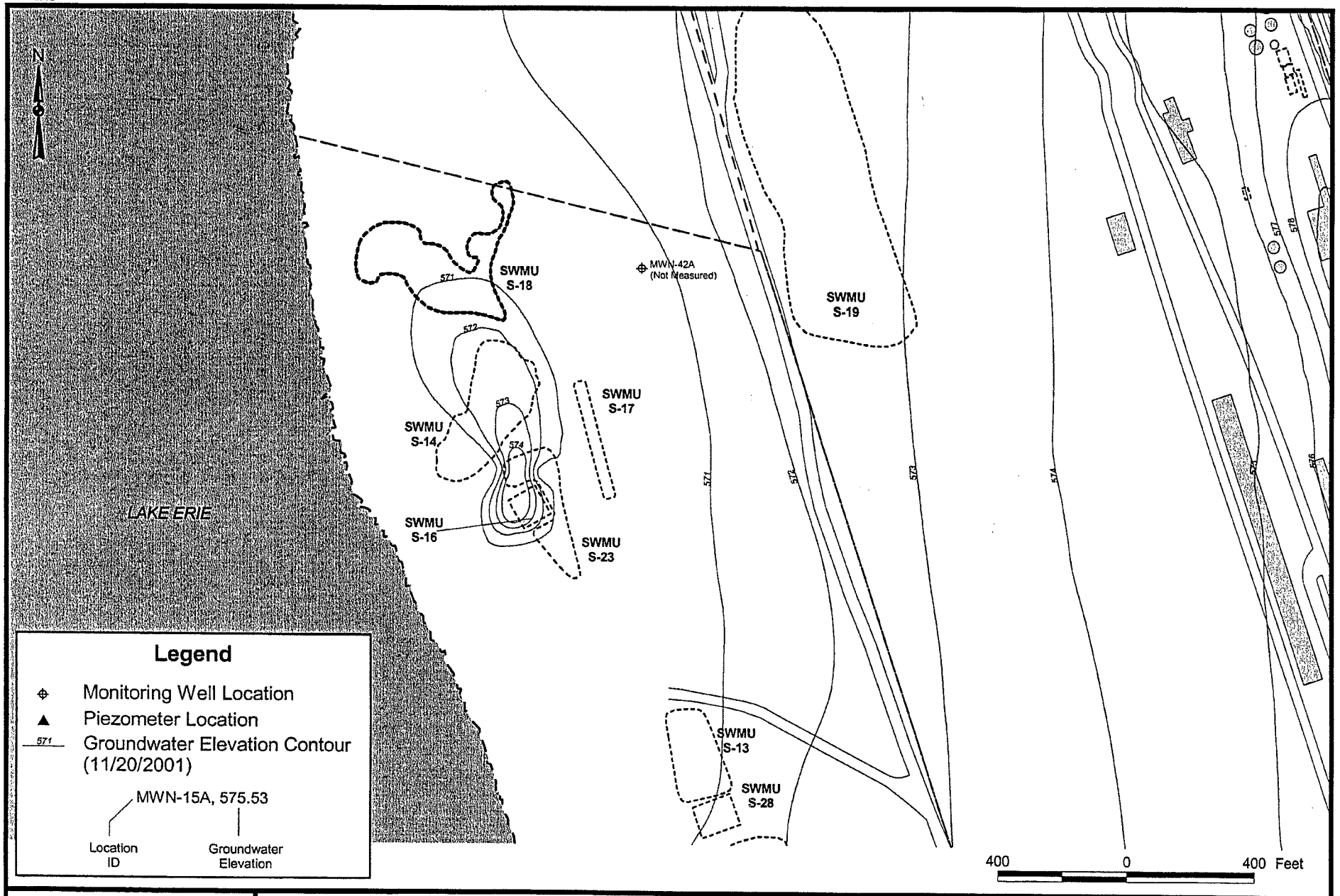
BETHLEHEM STEEL CORPORATION
SITE LOCATION MAP SHOWING SAMPLE LOCATIONS FOR:
DUST AND KISH LANDFILL R (SWMU S-18)

URS

FIGURE 1

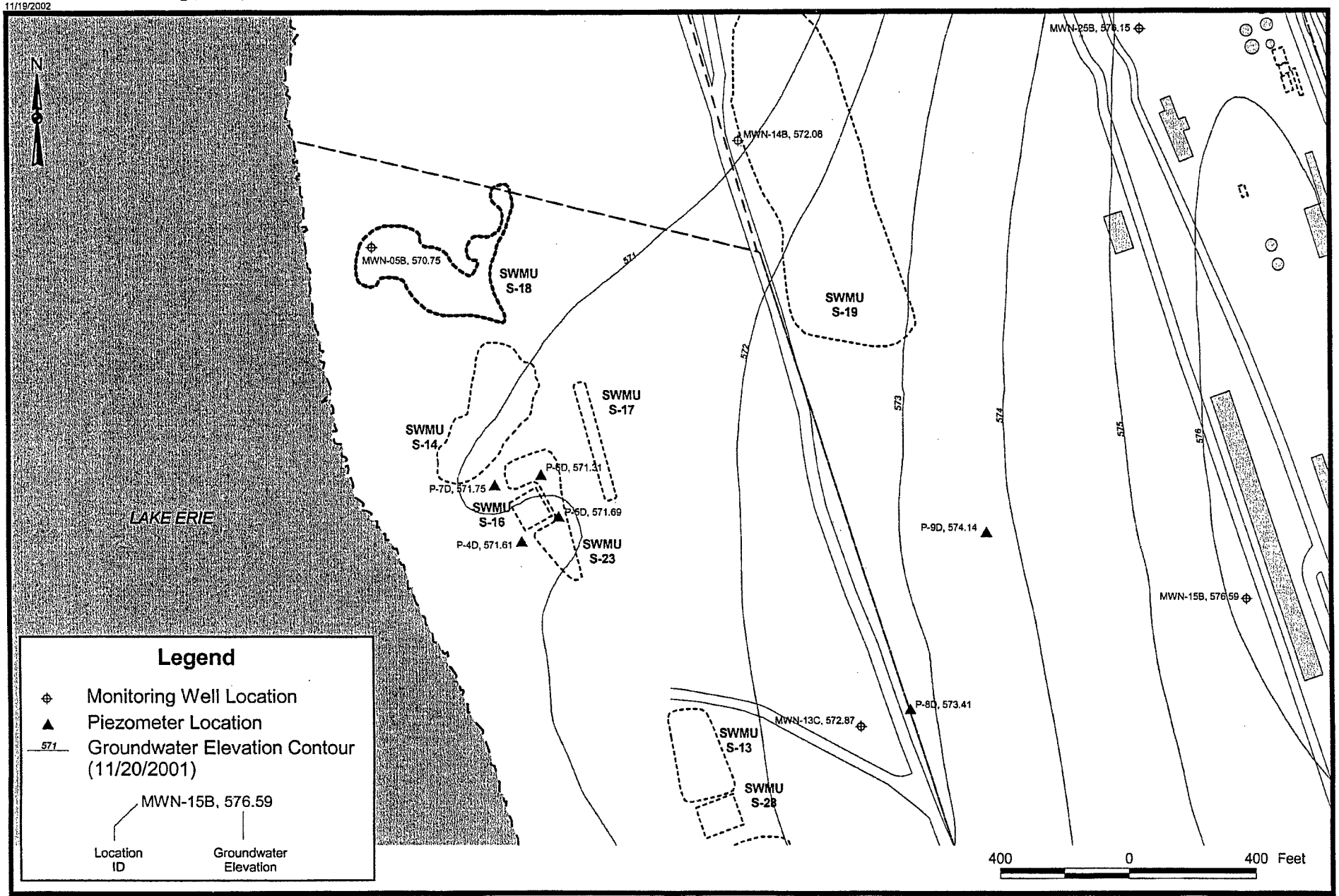
N:\11172830.00200\GIS\PRESENT\swmu_reports-18.apr SWMU S-18 SAMPLING LOCATIONS
11/22/2002

N:\11172630.00000\GIS\PRESENT\swmu_report\s-18.apr 11/01 FILL GROUNDWATER ELEVATIONS
11/19/2002



URS	BETHLEHEM STEEL CORPORATION MONITORING WELL/PIEZOMETER LOCATION MAP WITH GROUNDWATER ELEVATION CONTOURS (FILL UNIT)	FIGURE 2

N:\11172630.00000\GIS\PRESENT\swmu_report\s-18.apr 11/01 SAND GROUNDWATER ELEVATIONS
11/19/2002



URS	BETHLEHEM STEEL CORPORATION MONITORING WELL/PIEZOMETER LOCATION MAP WITH GROUNDWATER ELEVATION CONTOURS (SAND UNIT)	FIGURE 3

ATTACHMENT 5

LISTING OF PREVIOUS SITE OWNERS

The Steel Winds IA Site was created after 1937 by filling with slag beyond the Lake Erie shoreline. As such, ownership records are provided after 1937 for the subject Site. According to the Real Estate Records, Bethlehem Steel Company owned the subject Site in 1937. In 1964, Bethlehem Steel Company merged into Bethlehem Steel Corporation. Finally, in 2003 Tecumseh Redevelopment, Inc. purchased the property. Tecumseh has no relationship with the prior owner/occupants.

Bethlehem Steel Corporation has dissolved. Certain assets of BSC are presently owned by Mittal Steel USA. Mr. Myles Lalley of Mittal Steel is a former BSC employee with knowledge of past BSC Lackawanna site operations. Mr. Lalley's contact information is presented below.

Mr. Myles Lalley
Environmental Supervisor
Mittal Steel USA
3175 Lakeshore Rd.
Blasdell, New York 14219
Tel. 716-821-3213

ATTACHMENT 6

LISTING OF PREVIOUS SITE OPERATORS

As was discussed in Attachment 5, the Steel Winds IA Site was created after 1937 by filling with slag beyond the Lake Erie shoreline. As such, operator records are provided after 1937 for the subject Site. According to the Real Estate Records, Bethlehem Steel Company owned and operated the subject Site in 1937. In 1964, Bethlehem Steel Company merged into Bethlehem Steel Corporation. Finally, in 2003 Tecumseh Redevelopment, Inc. purchased the property becoming the operators of the Site.

Bethlehem Steel Corporation has dissolved. Certain assets of BSC are presently owned by Mittal Steel USA. Mr. Myles Lalley of Mittal Steel is a former BSC employee with knowledge of past BSC Lackawanna site operations. Mr. Lalley's contact information is presented below.

Mr. Myles Lalley
Environmental Supervisor
Mittal Steel USA
3175 Lakeshore Rd.
Blasdell, New York 14219
Tel. 716-821-3213

ATTACHMENT 7

CONTACT LIST INFORMATION

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Ms. Megan Gollwitzer
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Buffalo, N.Y 14203

Mr. Cameron O'Connor
N.Y.S. D.O.H.
584 Delaware Avenue
Buffalo, NY 14202

Senator Charles Schumer
U.S. Senate, Suite 660
130 South Elmwood Avenue
Buffalo, NY 14202

Senator Hillary Rodham-Clinton
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Senator William Stachowski
58th District, N.Y.S. Senate
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Congressman Brian Higgins
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Buffalo, NY 14210

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146th Assembly District
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Blasdell, NY 14219

Assemblyman Mark J.F. Schroeder
145th Assembly District
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Buffalo, NY 14210

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95 Franklin Street
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Mr. Peter Camaratta
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City of Lackawanna
Mayor Norman L. Polanski, Jr.
City of Lackawanna Offices
714 Ridge Road
Lackawanna, NY 14218

Supplier of Potable Water
Erie County Water Authority
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Buffalo, NY 14203

Local News Media

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Buffalo, NY 14240

WBEN News Radio 930
Entercom Radio of Buffalo
500 Corporate Pkwy
Suite 200
Buffalo, NY 14226

WKBW-TV
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WIVB TV Channel 4
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ARTVOICE
810 Main Street
Buffalo, NY 14202

Document Repository
Lackawanna Public Library
560 Ridge Road
Lackawanna, NY 14218
Attn: Jennifer Hoffman, Librarian
Phone: (716) 823-0630

Local School
Lackawanna City School
Superintendent Paul G. Hashem
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McKinley School Administrative Building
Lackawanna, NY 14218
Phone: (716) 827-6767

Nearby Properties and Owners:

Nearby properties and owners are listed on the attached spreadsheet.

Property Owners - Individuals

Property Address		Owner 1		Owner 2		Mailing Address				
No.	Street	First Name	Last Name	First Name	Last Name	No.	Street	City	State	Zip
109	Gates Ave.	Stephen	Yerkovich	c/o Edward	Yerkovich	6180	Old Lake Shore Rd	Lakeview	NY	14085
113	Gates Ave.	Stephen	Yerkovich	c/o Edward	Yerkovich	6180	Old Lake Shore Rd	Lakeview	NY	14085
13	Kane St.	Angel R.	Mercado			13	Kane St.	Lackawanna	NY	14218
17	Kane St.	Angel R.	Mercado			13	Kane St.	Lackawanna	NY	14218
23	Kane St.	Ellen M.	Pauley-Blaze			23	Kane St.	Lackawanna	NY	14218
30	Kane St.	Gobran	Albanna			60	Holland Ave.	Lackawanna	NY	14218
33	Kane St.	Joseph J.	Pajak			33	Kane St.	Lackawanna	NY	14218
34	Kane St.	Gobran	Albanna			60	Holland Ave.	Lackawanna	NY	14218
36	Kane St.	Daniel S.	Cizdziel			5304	Big Tree Rd.	Orchard Park	NY	14127
37	Kane St.	Joseph J.	Pajak			33	Kane St.	Lackawanna	NY	14218
38	Kane St.	Daniel S.	Cizdziel			5304	Big Tree Rd.	Orchard Park	NY	14127
39	Kane St.	Daniel S.	Cizdziel			5304	Big Tree Rd.	Orchard Park	NY	14127
42	Kane St.	Daniel S.	Cizdziel			5304	Big Tree Rd.	Orchard Park	NY	14127
46	Kane St.	Daniel S.	Cizdziel			5324	Big Tree Rd.	Orchard Park	NY	14127
48	Kane St.	Daniel S.	Cizdziel			5324	Big Tree Rd.	Orchard Park	NY	14127
143	Steelawanna Ave.	Barbara A.	Peoples			26	Wilson St.	Lackawanna	NY	14218
145	Steelawanna Ave.	Elnora	Williams			2295	Ferrier Rd.	Eden	NY	14057
149	Steelawanna Ave.	Lena Pearl	Flippen			20	Holland Ave.	Lackawanna	NY	14218
155	Steelawanna Ave.	Annie & Tom	Morman			88	Wasson	Lackawanna	NY	14218
161	Steelawanna Ave.	Milicia (estate)	Evanovich	James	Evanovich	161	Steelawanna Ave.	Lackawanna	NY	14218

Property Owners - Companies & Organizations

Property Address		Owner 1	Mailing Address				
No.	Street	Name	No.	Street	City	State	Zip
60	Commerce Dr.	One Commerce Drive Properties, Inc.	60	Commerce Dr.	Lackawanna	NY	14218
100	Commerce Dr.	Kenworth of Buffalo NY, Inc.	100	Commerce Dr.	Lackawanna	NY	14218
170	Commerce Dr.	Crown Atlantic Co., LLC		P.O. Box 353	McMurray	PA	15317
47	Gates Ave.	Lackawanna Municipal Housing A	135	Odell	Lackawanna	NY	14218
0	Hamburg Tpke.	Gateway Trade Center, Inc.		P.O. Box 880	Buffalo	NY	14224
2256	Hamburg Tpke.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
2290	Hamburg Tpke.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
2300	Hamburg Tpke.	T&T Andolino Properties, LLC	2300	Hamburg Tpke.	Lackawanna	NY	14218
2350	Hamburg Tpke.	RAF Supply, Inc.	2350	Hamburg Tpke.	Lackawanna	NY	14218
2770	Hamburg Tpke.	State of New York	182	E. Union St.	Allegany	NY	14706
0	Kane St.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
18	Kane St.	Fruci Apartments LLC		P.O. Box 116	West Seneca	NY	14224
10	N. Gates Ave.	Punto Franco Ltd. c/o Lincoln Securities Corp.	155	Great Arrow Dr.	Buffalo	NY	14207
31	N. Gates Ave.	Safety Kleen Systems, Inc. c/o Burr Wolf		P.O. Box 27713	Houston	TX	77227
41	N. Gates Ave.	Safety Kleen Systems, Inc. c/o Burr Wolf		P.O. Box 27713	Houston	TX	77227
70	N. Gates Ave.	Marotta Leasing, Inc.	70	N. Gates Ave.	Lackawanna	NY	14218
121	N. Gates Ave.	Puglisi Funding, Inc.	50	Ridge Rd.	Lackawanna	NY	14218
17	Odell St.	RAF Supply, Inc.	2350	Hamburg Tpke.	Lackawanna	NY	14218
0	Ridge Rd.	LCDC	640	Ridge Rd.	Lackawanna	NY	14218
10	Ridge Rd.	55 North Gates Avenue, LLC	5500	Pebble Beach Dr.	Hamburg	NY	14075
43	Ridge Rd.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
47	Ridge Rd.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
50	Ridge Rd.	Puglisi Funding, Inc.	50	Ridge Rd.	Lackawanna	NY	14218

Property Owners - Companies & Organizations							
Property Address		Owner 1	Mailing Address				
No.	Street	Name	No.	Street	City	State	Zip
55	Ridge Rd.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
15	Simon Ave.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
22	Simon Ave.	BGI Interiors, Inc.	22	Simon Ave.	Lackawanna	NY	14218
36	Simon Ave.	City of Lackawanna	714	Ridge Rd.	Lackawanna	NY	14218
0	Steelawanna Ave.	T&T Andolino Properties, LLC	2300	Hamburg Tpke.	Lackawanna	NY	14218
243	Steelawanna Ave.	RAF Supply, Inc.	2350	Hamburg Tpke.	Lackawanna	NY	14218

ATTACHMENT 8

DOCUMENT REPOSITORY CONFIRMATION LETTER

TurnKey Environmental Restoration, LLC

June 7, 2007

Ms. Jennifer Hoffman
Buffalo & Erie County Public Library
Lackawanna Public Library Branch
560 Ridge Road
Lackawanna, NY 14218
(716) 823-0630

Re: Document Repository for Steel Winds IA, Lackawanna, NY
BQ Energy, LLC
NYSDEC Brownfield Cleanup Program

Dear Ms. Hoffman:

Per my telephone conversation with Ms. Victoria Dale, thank you for agreeing to the Lackawanna Public Library Branch acting as the document repository for the above-referenced site. We will be forwarding the Brownfield Cleanup Program Application and associated documents for review by the interested public.

Please contact us if you have any questions or require additional information

Sincerely,
TurnKey Environmental Restoration, LLC

Lori Riker

Lori E. Riker, P.E.
Senior Project Engineer

c: File: 0083-004-100

ATTACHMENT 9

ENVIRONMENTAL FACTORS, HISTORIC LAND USE CONSIDERATIONS AND FLOODPLAIN MAP

Information related to 'important federal, state or local natural resources, including waterways, wildlife refuges, wetlands, or critical habitats or endangered or threatened species proximate to the site was researched and reported in the "Revised Draft RCRA Facility Investigation Report, Part III: Ecological Risk Assessment" Former Bethlehem Steel Corporation, September 2004. Excerpts from this reference are included in this attachment for inclusion into the BCP Application. The following provides a brief summary of the attachment:

- There are no wetlands on the former BSC Site. As such, there are no wetlands on the proposed Steel Winds IA BCP Site.

- The former BSC site is "adjacent to a Significant Coastal Fish and Wildlife Habitat, Smokes Creek Shoals". The significance is due to the importance of Smokes Creek Shoals as a walleye spawning area. However, the proposed Steel Winds IA BCP Site is located nearly ½ mile north of Smokes Creek. Accordingly, this potential environmental factor is not relevant to the proposed Steel Winds IA BCP Site.

- There are no threatened or endangered species, nor important plant habitats listed at the former BSC Site. As such, there are no similar concerns on the proposed Steel Winds IA BCP Site

Excerpt from "Revised Draft RCRA Facility Investigation Report, Part III: Ecological Risk Assessment" Former Bethlehem Steel Corporation, July 1998.)

identify potential runoff pathways from the site SWMUs to the on-site and off-site watercourses (discussed on a SWMU-by-SWMU basis in Parts V and VI of this RFI report). The slag fill is generally very porous, meaning that precipitation typically is taken into the slag before substantial runoff occurs. Exceptions include precipitation that falls on the shoreline embankments (e.g., along Lake Erie) that slope towards a water body.

There is a state-regulated wetland area to the northeast of the site, approximately 1 mile from the site boundary, but other than some riparian wetlands along the margins of Smokes Creek, there are no wetlands on the site itself (see Figure 3-5). This nearby offsite wetland appears to be a remnant of what was probably, before industrialization of the area, a much larger wetland associated with the Buffalo River. Part of this wetland lies within the Tifft Farm Nature Preserve operated by the Buffalo Museum of Science. WETLANDS

Natural Resources Information Review

Information concerning the natural resources of the site vicinity was requested from the U.S. Fish and Wildlife Service and the following New York State Department of Environmental Conservation (NYSDEC) entities:

- Natural Heritage Program
- Significant Habitats Program
- Bureau of Fisheries, Lake Erie Unit
- Environmental Disturbance Investigation Unit
- Toxic Substances Monitoring Program.

Information was obtained also from the State University College at Buffalo. The type of information obtained from these entities is identified in the following paragraphs; the complete information is available from these entities or is attached hereto.

The NYSDEC's Natural Heritage Program provided a letter stating that the site is "adjacent to a Significant Coastal Fish and Wildlife Habitat, Smokes Creek Shoals" (Appendix A). According to Floyd Cornelius of the Bureau of Fisheries, Lake Erie Unit (Dunkirk, NY), the Smokes Creek Shoals habitat is mainly important as a walleye spawning area. In the 1994 Annual Report, the Lake Erie Unit asserted that "the Buffalo Harbor muskellunge fishery is truly exceptional and of SEE ATTACHED LETTER

statewide significance." The letter from the Natural Heritage Program office also indicated that there were no threatened or endangered species listed at the site.

NYSDEC's Toxic Substances Monitoring Program reported the results of tissue analyses on fish taken from Lake Erie at Lackawanna for chlorinated organics, mercury and arsenic in 1978; PCBs and some pesticides in 1979 and 1980; and PCBs, mercury, and some pesticides in 1987. Fish tissues obtained from this area had concentrations of these substances that were not different from other relatively uncontaminated areas. In 1994, the NYSDEC Division of Fish and Wildlife added polycyclic aromatic hydrocarbons (PAHs) to the list of analytes for the first time (NYSDEC 1994). Concentrations of PAHs in young-of-the-year fish collected at Smokes Creek were below detection limits (acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, chrysene, benzo(a)anthracene, benzo(b)anthracene, benzo(a)pyrene, pyrene) or quantitation limits (benzo(k)anthracene, phenanthrene). This document is included as Appendix B.

NYSDEC's Division of Fish and Wildlife sent five reports in response to BSC's request for information. These reports are included as Appendix C. They describe historical accounts of fish mortality near the site. No reports dated after 1975 were received from NYSDEC, and the NYSDEC did not provided fish mortality reports pertaining to other incidents near the site but not attributed to BSC discharges.

The State University College at Buffalo conducted field studies at Smokes Creek in 1985 and 1986 in order to investigate potential toxicity in the creek and occurrence of walleye spawning (Appendix D). The location of stations in these studies is shown on Figure 3-6. In the 1985 field study, the benthic fauna were characterized, sediment toxicity testing was conducted, and walleye spawning was assessed.

More recent studies of the water quality in Smokes Creek (except as performed as part of this RFI) are not available; however, information from toxicity testing (for SPDES permit purposes) of the BSC Galvanized Products Division discharges at outfalls 216 and 217, a non-contact cooling and operating water discharge from the Coke Oven operations (outfall 223) in 1992 and 1993 concluded that there was no evidence of acute toxicity to test organisms from these discharges (Appendix E). In addition, in 1991 New York State reclassified Smokes Creek from a Class D stream to a Class C stream as a result of water quality improvements.

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York 14203-2999
(716) 851-7010

Michael D. Zagata
Commissioner

July 18, 1995

Mr. Bill Starkel
Six Piedmont Center
Suite 500
3525 Piedmont Road
Atlanta, GA 30305

Natural Heritage Request
Bethlehem Steel RCRA Facility
City of Lackawanna, Erie County

Dear Mr. Starkel:

I have reviewed our Natural Heritage Data for Significant Habitats and threatened and endangered species at the above location.

The referenced project is adjacent to a Significant Coastal Fish and Wildlife Habitat; Smoke Creek Shoals.

For more information, contact Mr. Steve Mooradian, Regional Fisheries Manager, NYSDEC Region 9, 128 South Street, Olean, NY 14760; phone (716)372-0645.

There are no threatened or endangered species listed at the site. The Significant Habitat and Natural Heritage files are continually changing. The information in this letter should not be substituted for an on-site survey that may be required for environmental assessment.

Sincerely,

Mark Kandel
Sr. Wildlife Biologist

MK/dah

cc: Mr. Steve Mooradian, Regional Fisheries Manager

Many of the important species were identified floristically, but because the site is generally characterized by simple communities in early stages of primary succession, many habitats were characterized on a floristic basis as well. Annual and perennial life histories were assessed for important species using information presented in Fernald (1970) and United States Soil Conservation Service (1982). Bare ground was included as a cover type because it can be indicative of stress to vegetation. Estimates of the height of shrubs and trees were also made. Surficial materials were described qualitatively including observational parameters such as color, grain size, thickness, and moisture condition.

Because both physical and chemical stressors may result in vegetational changes, notes were made on signs of physical disturbance and estimates of the length of time since the disturbance. SWMU boundary conditions tended to be similar to surrounding habitat, so descriptions of the vegetation around 26 SWMUs provided the information needed for habitat characterization. A vegetation map prepared in 1993 for the SFA (Appendix E) and site-wide observations of wildlife and vegetation were also used for assessing habitat extent and resource quality. Photographs were taken to document surface conditions on or around each SWMU.

Prior to the 1995 observations, an ecological survey of the SFA was performed in May 1993 (Appendix E). The map of the SFA vegetation referenced earlier was produced, and notes were made of the animal species observed, including their relative abundance and behavior. Most conspicuous was a large nesting colony of ring-billed gulls observed around the Corps of Engineers spoil disposal area off of the north end of the site. Nesting colonies of bank swallows and rough-winged swallows were also noted at several locations along the SFA where the slag formed cliffs or steep banks.

Little evidence was observed to indicate frequent use of the terrestrial portion of the site by wildlife. Given the disturbed nature of terrestrial habitat on the site, this is not surprising. Some wildlife species such as beaver, deer, fox, rabbits and raccoons would be expected to forage in some of the less disturbed portions of the site for food such as forbes and small trees by deer, and small rodents, beetles and forbes by the other species. Small insectivores or seed-eating birds would also forage on the site for beetles, flying insects and seeds.

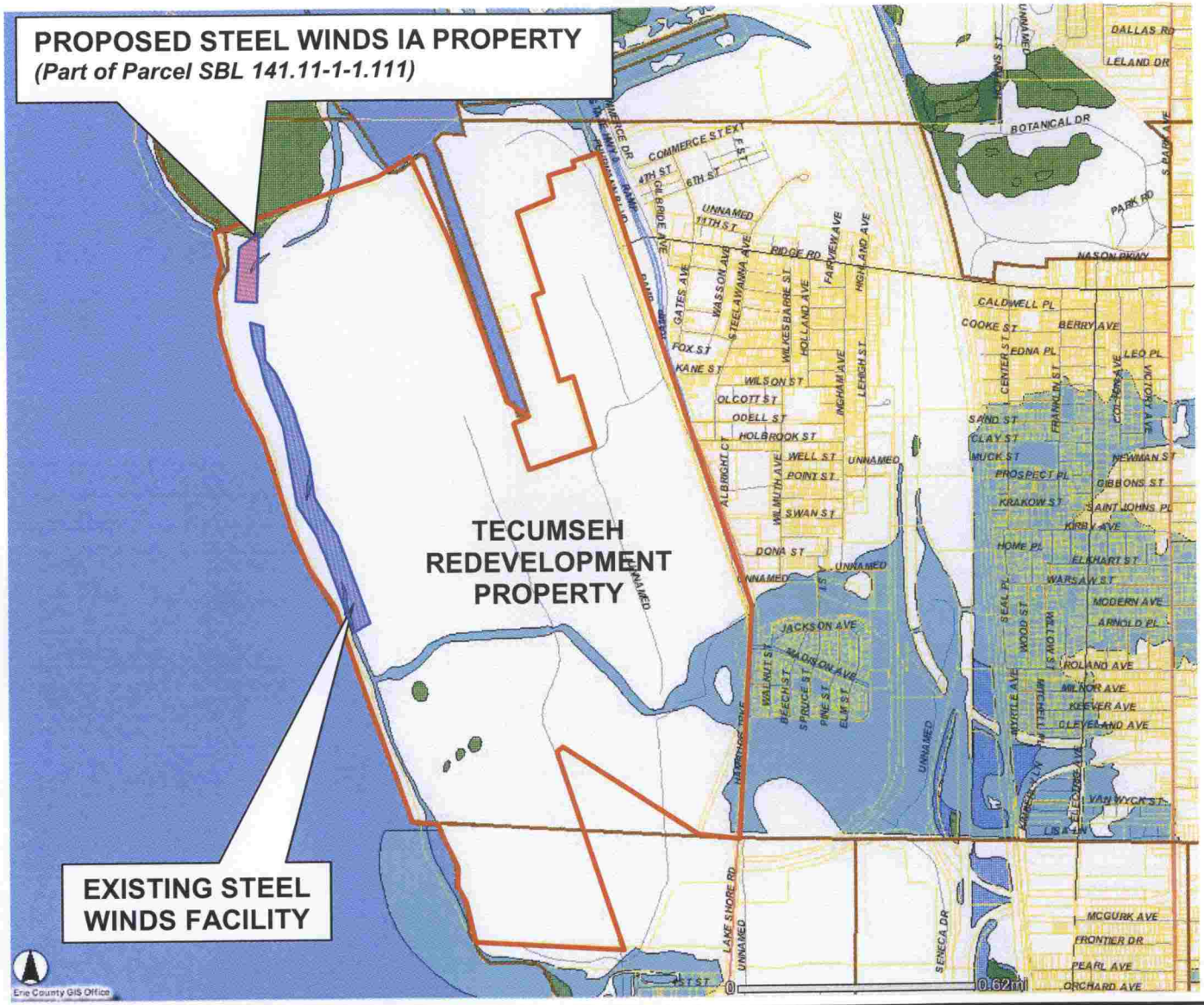
The survey made use of the Erie County Waterfront Master Plan (Saratoga Associates 1991) for information about natural resources in the study area, which included the coastal zone for the entire county. Lists of animals and plants expected to inhabit the study area, in both aquatic and

terrestrial environments, are also included in this resource. Important habitats for fish are presented therein as well. According to Saratoga Associates (1991), and based on on-site observations, there are no wetlands of appreciable size, threatened or endangered species, nor important plant habitats at this site.

The results of the survey indicated that most of the SFA is not vegetated (Figure 3-9). Almost all of the vegetated areas are in very early stages of primary succession, where the dominant plants are typically hardy and fast-growing, and have seeds that disperse over a large area. The most frequently encountered plants around the SWMUs are goldenrods (*Solidago* spp.), wild carrot (*Daucus carota*), staghorn sumac (*Rhus typhina*) and eastern cottonwood (*Populus deltoides*). Although cottonwoods were frequently seen, they were usually young. Little cover was provided by trees around the SWMUs (Table 3-1). The majority of the areas are typified by a perennial forb cover or bare ground. The patterns of cover seen around the SWMUs were typical of the SFA in general. Only a few locations, such as SWMU S-4 and a small area on the northwest edge of SWMU-22, have been undisturbed long enough to develop small woodlots.

Although there is evidence of recent and ongoing physical disturbance, mainly from environmental investigations, many areas in Zones 2, 3 and 4 have probably been substantially undisturbed for the 14 years since the cessation of steel-making on the site in 1983. Given this length of time, the dominance of herbs and persistence of bare ground indicate that the plant community in the SFA is developing at a slow pace characteristic of primary succession in this climate and on this type of substrate. In addition to disturbance, seed dispersal and substrate quality undoubtedly contribute to the observed successional rate.

Seed dispersal appears to be somewhat important to the development of the site's vegetation community. Nearly all the trees on the SFA, large and small, are in the willow family (Salicaceae). The willow family is characterized by seeds with long, silky down that enables them to be carried considerable distances by the wind. However, herbs mature much faster than trees, and coverage of bare ground by diverse herbs would be expected to have occurred within the 14 years since disturbances related to steel making operations ceased. As discussed below, potentially toxic materials in soils (if those effects can actually be distinguished from physical effects of site-related materials) appeared to be important only within SWMUs, leaving continued disturbance and substrate quality as the most likely explanation for lack of a diverse herb community at the site.



BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

PROJECT NO.: 0083-004-100

DATE: JUNE 2007

DRAFTED BY: BCH

STATE AND FEDERAL WETLAND/FLOODPLAIN MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

LACKAWANNA, NEW YORK
STEEL WINDS IA SITE

PREPARED FOR
BQ ENERGY, LLC

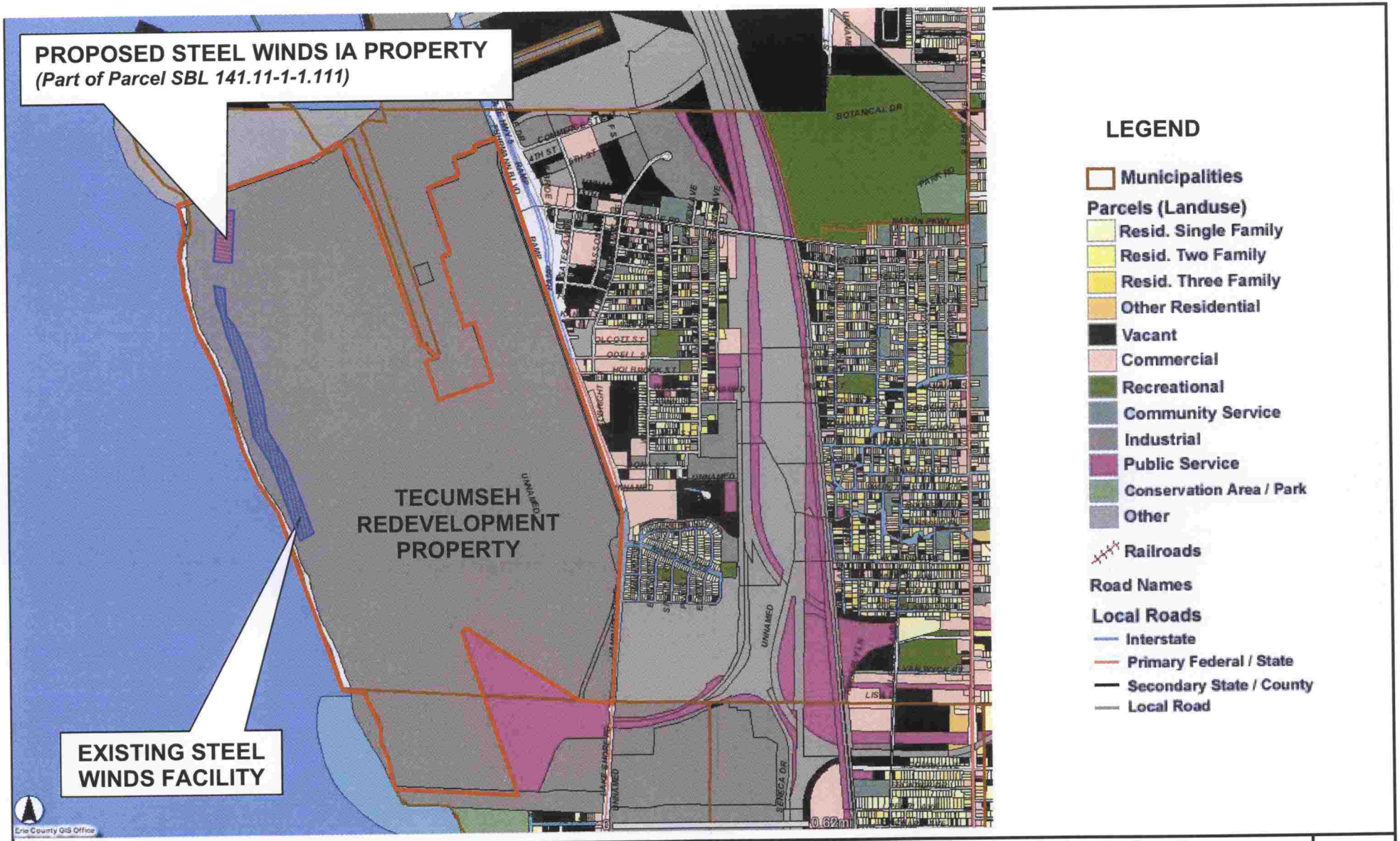
FIGURE 9-1

ATTACHMENT 10

NEARBY LAND USE MAP & DESCRIPTION

Land Use

The 1,100-acre property owned by Tecumseh Redevelopment is largely vacant with the exception of existing wind turbines, rail and some limited industrial tenant occupancy. The Tecumseh property is roughly bounded by NYS Route 5 to the east; Lake Erie to the west; the property boundary of the Gateway Trade Center Property and the U.S Army Corps of Engineers sediment disposal area to the north; and South Buffalo Railroad Company and Buffalo Crushed Stone property to the south (see Figure 2-1 in Attachment 2). Outside of these neighboring properties, the majority of the surrounding property is currently zoned as industrial or commercial with some mixed use residential property (See Figure 10-1).



BENCHMARK
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(716) 856-0599

PROJECT NO.: 0083-004-100
DATE: JUNE 2007
DRAFTED BY: BCH

REGIONAL LAND USE MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

LACKAWANNA, NEW YORK
STEEL WINDS IA SITE

PREPARED FOR
BQ ENERGY, LLC

FIGURE 10-1

ATTACHMENT 11

GROUNDWATER VULNERABILITY ASSESSMENT

Potential Vulnerability of Groundwater to Contamination

Groundwater at the Site may be contaminated as a result of impacts from upgradient sources. There is a deed restriction (Attachment 13) that prohibits the use of groundwater from the entire approximately 1,100-acre BSC site. Consequently, no groundwater supply wells are present on the 1,100-acre property. Regionally, groundwater in the area has not been developed for industrial, agriculture, or public supply purposes. Municipal potable water service is provided off-site and on-site by the Erie County Water Authority. Groundwater vulnerability would potentially be related to potential environmental impacts on the off-site area to the east of the Site, and related to the discharge of groundwater to Lake Erie.

Groundwater Flow/Recharge

Groundwater elevation maps completed during the RFI for the 1,100-acre former BSC Site (Reference 1) indicate that groundwater flows regionally west across the former BSC Site toward Lake Erie (Reference 2) with discharge into Lake Erie.

Based on previous investigations completed on the Tecumseh property in the general vicinity of the Steel Winds Site (Reference 3), groundwater modeling indicates that shallow groundwater generally flows west toward Lake Erie. Historical groundwater elevation measurements taken from monitoring wells on the Steel Winds Site indicate that the first water bearing zone (i.e., water table) ranges from 10 to as much as 50 feet below grade within the slag/fill unit. The confined and saturated groundwater unit within the uppermost part of the bedrock is assumed to discharge into Lake Erie.

Recommendations

No recommendations at this time.

References:

1. United States Environmental Protection Agency (USEPA), National Enforcement Investigation Center (NEIC). 1988. *RCRA Facility Assessment, Bethlehem Steel Corporation, Lackawanna, New York*. September.

2. *Phase I Environmental Site Assessment Report, Parcel B*, Bethlehem Steel Corporation, March 2001.

3. TurnKey Environmental Restoration, LLC. 2007. *Site Investigation/Remedial Alternatives Report/IRM Report*, prepared for BQ Energy, LLC. April.

ATTACHMENT 12

DESCRIPTION OF SITE GEOGRAPHY/GEOLOGY

1.0 SITE GEOGRAPHY

1.1 LAND USE AND DEMOGRAPHY

The Site is located in an urbanized area of the City of Lackawanna, Erie County, NY. The Site is currently owned by Tecumeh Redevelopment, Inc. Land use surrounding the Site includes primarily industrial and commercial properties, with some residential/mixed use and vacant properties (see Figure 10-1). The population of the City of Lackawanna in 2000 was 19,064 (2000 U.S. Census). The 2004 population estimate for the City of Lackawanna is 18,394 (a decline of 3.5%). The 2000 population in Erie County was 950,265 compared to the 2004 estimated population of 936,318 (a decline of 1.5%). The average household income in the City of Lackawanna in 2000 was $29,354.

1.2 SITE TOPOGRAPHY, PHYSIOGRAPHY, AND DRAINAGE

The proposed Steel Winds IA BCP Site sits atop a steep bluff approximately 15 to 45 feet above average Lake elevation. Site topography is highly variable due to slag/fill deposition patterns. The United States Geological Survey Buffalo, SW, New York Quadrangle indicates that the surrounding area west of the Site slope steeply toward Lake Erie. The surrounding area east of the Site generally slopes gently to the east. Due to the granular nature of the slag/soil fill there is very little ponded stormwater or runoff as most of the precipitation seeps into the highly permeable slag/soil fill.

1.3 SITE STRUCTURES AND VEGETATION

The proposed Steel Winds IA Site contains no structures or discernable features, except for former slag-filled access roads and slag/fill piles. The land surface is generally flat and sparsely vegetated with voluntary indigenous shrubs, grasses, weeds and emergent trees.

2.0 SITE GEOLOGY

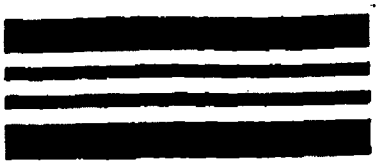
Slag/fill deposits cover nearly the entire Site. Below the slag/fill layer on portions of the Site is believed to be historic dredge spoils placed by the US Army Corps of Engineers from past dredging of the Buffalo Harbor and the Buffalo River. Subsurface lithology observed during the Site Investigation of the Steel Winds Site to the south of the subject property generally consisted of a fill unit with an underlying slag unit. In some locations, the fill and slag were intermixed. The fill unit was generally comprised of fine to coarse sand and gravel, with some slag, construction debris, scrap tires, and other plastic and brick debris. The thickness of the fill unit generally ranged from 1 to 11 feet. A slag unit was present beneath the fill and extended beyond the vertical limit of the test pits. The slag unit was described as grey/white, well graded, loose, and dry. Based on previous investigations, bedrock is composed mostly of dark gray and black fissile shale.

ATTACHMENT 13

SITE-WIDE DEED RESTRICTION

THIS IS NOT
A BILL

Erie County Clerk's Office
County Clerk's Recording Page



Control # 199602210963

Index DEED LIBER

Book 10897 Page 6053

No. Pages 0017

Instrument DECL RSTRCT COV
Date : 2/21/1996
Time : 2:52:44

Return To:

BOX 374 JAP

BETHLEHEM STEEL CORPORATION

COUNTY	$	56.00
	$	.00
[illegible]	$	5.00
	$	.00
	$	.00
	$	.00
	$	.00
	$	.00
	$	.00
Total:	$	61.00

MORTGAGE TAX

Serial #

City/Town	$	.00
S.M.A.	$	.00
Trans. Auth.	$	.00
Total	$	.00

STATE OF NEW YORK
Erie County Clerk's Office

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 316-A(5) OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK DO NOT DETACH

DAVID J SWARTS
County Clerk

TRANSFER TAX

Transfer Tax	$	.00
Amount	$	.00
Transfer Tax #		

D108976053

Box 374

JAP

DECLARATION
OF
CONDITIONS, COVENANTS AND RESTRICTIONS

Made By: Bethlehem Steel Corporation
1170 Eighth Avenue
Bethlehem, Pennsylvania 18016-7699

Dated: February 20, 1996

R 592929

779-16 RR 963

DECLARATION OF CONDITIONS, COVENANTS AND RESTRICTIONS

THIS DECLARATION OF CONDITIONS, COVENANTS AND RESTRICTIONS, made this 20th day of February, 1996, by Bethlehem Steel Corporation, a corporation duly formed and existing under the laws of the State of Delaware, authorized to do business in the State of New York, and having its principal place of business in the City of Bethlehem, Lehigh County, Pennsylvania, with a mailing address of 1170 Eighth Avenue, Bethlehem, Pennsylvania 18016-7699 (hereinafter "BSC"),

W I T N E S S E T H:

WHEREAS, BSC is the owner of certain noncontiguous lands adjacent to the eastern shore of Lake Erie situate partly in the City of Lackawanna, partly in the Town of Hamburg and partly in the Village of Blasdell, all in the County of Erie, State of New York, containing in the aggregate approximately 1,215 acres, and encompassing approximately 2.5 miles in an approximate north-south direction and approximately 1.4 miles in an approximate east-west direction, which were formerly part of the site of an integrated steel plant, and a portion of which lands is described and delineated more particularly in SCHEDULE B herein (said portion shall be hereinafter referred to as the "Premises"); and

WHEREAS, the history of the Premises is described more fully in SCHEDULE A herein; and

WHEREAS, certain governmental agencies and BSC have conducted environmental investigations at and near the Premises, the scope, result and impact of each of which are described more fully in SCHEDULE A herein; and

WHEREAS, BSC seeks to impose conditions, covenants and restrictions on the Premises for the purpose of promoting, benefitting, preserving and protecting the health and safety of the public and the environment all as related to the foregoing.

NOW, THEREFORE, (i) BSC, on behalf of itself, its successors and assigns, hereby declares and (ii) each and every person or entity who shall be an owner of the Premises or any part thereof, hereby covenants and agrees on behalf of itself, its successors and assigns, that the Premises or any part thereof shall be held, transferred, sold, conveyed, occupied and developed subject to the following conditions, covenants and restrictions:

1. The Premises or any part thereof shall be limited to industrial use only, which shall include manufacturing, assembling, warehousing, and related railroad, port and shipping activities, together with office space and other facilities including laboratories incidental to such uses, but incidental uses such as day care centers, nursery schools or other facilities that are designed or intended to be primarily for use or occupancy by multiple numbers of persons under the age of eighteen (18) years shall not be permitted.

2. No wells for the extraction or use of water from beneath the surface of the Premises or any part thereof shall be installed, built, permitted or utilized on the Premises or any part thereof for any purpose whatsoever; provided, however, that BSC may install, use, operate and maintain monitoring wells and treatment wells, including the extraction and treatment of water therefrom, solely for the purpose of monitoring, treating or remediating such water; and provided, further, that any other owner of the Premises or any

part thereof may install, use, operate and maintain monitoring wells and treatment wells, including the extraction and treatment of water therefrom, on the part of the Premises so owned by such owner, solely for the purpose of monitoring, treating or remediating such water.

3. Any activity or use not specifically permitted hereby or any activity prohibited pursuant hereto shall be forbidden.

A. Purpose.

It is the intent of BSC by means of said conditions, covenants and restrictions to promote, benefit, preserve and protect the health and safety of the public and the environment by preventing any activity or use not specifically permitted above or any activity prohibited pursuant to paragraphs 1 and 2 above.

B. Conditions, Covenants and Restrictions to Run with the Premises.

Said conditions, covenants and restrictions shall run with the Premises and every part thereof and shall bind all owners and occupiers of the Premises or any part thereof, and their respective successors and assigns; all parties claiming by, through, or under them or any of them shall be taken to hold, agree and covenant with all owners of the Premises or any part thereof, and their respective successors and assigns and each of them, to conform to and observe said conditions, covenants and restrictions.

C. Enforceability.

Said conditions, covenants and restrictions shall inure to the benefit of and be enforceable by BSC and by each and every person or entity, including BSC,

who shall be an owner of the Premises or any part thereof, and their respective successors and assigns, and shall also benefit BSC, its successors and assigns, for so long as BSC shall (i) own any property either adjacent or proximal to the Premises or any part thereof or (ii) be responsible under any law, ordinance, rule or regulation for the presence of hazardous wastes or hazardous constituents or both upon or within the Premises or any part thereof or in said property adjacent or proximal to the Premises or any part thereof but said conditions, covenants and restrictions shall not give rise, by implication or otherwise, to a reciprocal condition, covenant or restriction burdening or binding upon the other lands or any part thereof of BSC benefitted hereby, by actions at law or by suits in equity. As it may be impossible to measure monetarily the damages which may accrue to the beneficiaries hereunder by reason of a violation of this Declaration, any beneficiary hereunder shall be entitled to relief by way of injunction or specific performance, as well as any other relief available at law or in equity, to enforce the provisions hereof.

The failure of any beneficiary hereunder to enforce any provision of this Declaration shall in no event be construed as a waiver of the right of that beneficiary or any other beneficiary hereunder to do so thereafter, as to the same or a similar violation occurring prior or subsequent thereto. No liability shall attach to BSC or any subsidiary or other affiliate of BSC (or any officer, director, employee, member, agent, committee or committee member of any of them) or to any other beneficiary hereunder

(excepting, however, the subject owner in breach) for failure to enforce the provisions of this Declaration.

If BSC or any other beneficiary hereunder successfully brings an action to extinguish a breach or otherwise enforce the provisions of this Declaration, the costs of such action, including legal fees, shall become a binding, personal obligation of the owner in breach.

D. Amendments and Termination.

Any amendment or termination of this Declaration affecting any part of the Premises shall require the written consent of all owners of the Premises or any part thereof, which consent shall not be unreasonably withheld, and of BSC, or its successors or assigns, whose consent may be withheld in its sole discretion.

Any amendment or termination of this Declaration shall not become effective until the instrument evidencing such change has been duly recorded in the Erie County Clerk's Office.

Neither this Declaration nor any amendment to this Declaration shall be interpreted as permitting any action or thing prohibited by the applicable laws, ordinances, rules or regulations of any governmental authority having jurisdiction over the part of the Premises affected or by specific restrictions imposed by any other instrument relating to the Premises or to such part of the Premises.

No change of conditions or circumstances shall operate to amend this Declaration, and this Declaration may be amended only in the manner provided herein.

The determination by any court of competent jurisdiction that any provision of this Declaration is unenforceable invalid or void shall not affect the enforceability or validity of any other provision hereof.

IN WITNESS WHEREOF, BSC has executed this Declaration as of the day and year first above written.

ATTEST:

BETHLEHEM STEEL CORPORATION,
by

Assistant Secretary

Vice President