



February 21, 2012

Ms. Ann Kolata
Senior Redevelopment Specialist
Department of Community & Economic Development
227 W. Jefferson Blvd., Suite 1200
South Bend, Indiana 46601

Re: Summary of Environmental Data Collected from Lot 3 Located at the Southwest Corner of Ignition Park (Studebaker Area A), South Bend, Indiana (the Site); SBI064.400.0002.DOC.

Dear Ms. Kolata:

Hull & Associates, Inc. (Hull) is pleased to present the City of South Bend (the City) with the attached summary of historical environmental data collected from the referenced Site. Specifically, the information attached pertains to a parcel of land generally located in the southwest portion of Ignition Park, southeast of the intersection of Cotter and Kendall Streets. The proposed Lot 3 parcel is comprised of land formerly operated by the Studebaker Company and Norfolk Southern Railroad (NSRR). Hull understands that the City may be transferring ownership of this parcel of the Site. The general boundaries of the parcel to be occupied by the purchaser, based on a drawing provided to Hull by the City, are shown on Figure 1.

As you are aware, numerous phases of Environmental Site Assessments (ESAs) have been conducted at the Site. The following environmental studies that have been conducted by Hull within the boundaries of Lot 3:

- Phase I Environmental Site Assessment of the South Bend Area A Properties Located South of Sample Street, East of Prairie Avenue, North of Conrail, and West of Franklin Street, South Bend, Indiana 46601; January 2001;
- Report for an Initial Phase II Environmental Site Assessment for the South Bend Area A Properties; February 2002;
- Phase I Environmental Site Assessment for the Norfolk Southern Railroad and Eckler-Lahey Properties, South Bend, Indiana 46601; March 2004 (Updated January 2007); and
- Letter Report Documenting Phase II Environmental Site Assessment Activities at the Eckler-Lahey and Norfolk Southern Corporation Railroad Properties Located at 1406 South Franklin Street and Adjacent to/West of that Property, South Bend, Indiana; January 2007.

Copies of these reports are available upon request.

Environmental data collected at the Site during those ESAs are summarized in the attached documents as follows:

1. Table 1: Summary of Detected Analytes in Soils in Comparison to the Indiana Department of Environmental Management (IDEM) Risk Integrated System of Closure (RISC) Commercial/Industrial Default Closure Levels (IDCLs) and Voluntary Remediation Program (VRP) 1996 Nonresidential Cleanup Goals;
2. Table 2: Summary of Detected Analytes in Groundwater in Comparison to IDEM RISC IDCLs and VRP 1996 Nonresidential Cleanup Goals; and
3. Figure 2: Summary of Detected Analytes in Soils in Comparison to IDEM RISC IDCLs.

A summary figure of detected analytes in soils in comparison to VRP 1996 Nonresidential Cleanup Goals was not prepared because no data collected at this parcel exceed those cleanup goals. A summary figure of detected analytes in groundwater was not prepared because no data collected at this parcel exceed RISC IDCLs or VRP Nonresidential Cleanup Goals.

Note that the only areas where soils exceed IDEM RISC IDCLs are within the top one foot of soil at sampling locations HA-3 and GB-19 and, given their locations within former rail beds, may have been removed during removal of the former railroad tracks in these areas. Regardless of whether those soils have been removed or not, the following comments regarding the potential exposure pathway upon which the RISC default closure levels are based are noteworthy:

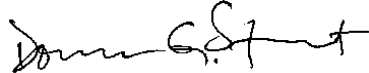
- The default closure level of 5.8 mg/kg for arsenic is based on the migration to groundwater exposure pathway. Since the City prohibits the installation of water supply wells within City limits, the groundwater exposure pathway is effectively rendered incomplete. The next applicable potentially complete exposure pathway at the site is the direct contact exposure pathway. If engineering controls (e.g., structures, or parking lots) prohibiting the exposure to soils in the vicinity of sampling points HA-3 and GB-19 are in place as part of any future redevelopment, the direct contact exposure pathway can also be considered effectively incomplete. Additionally, it is Hull's assumption, given the amount of grade change (i.e., cut/fill activities) that has occurred at adjacent parcels, that the shallow soils in the vicinity of HA-3 and GB-19 are likely to be removed from the Site. Therefore, the detection of arsenic at concentrations exceeding the RISC IDCL at these two locations is likely not problematic for any future redevelopment at Lot 3.
- The default closure level of 1.5 mg/kg for benzo(a)pyrene is based on the direct contact exposure pathway. As stated above, if engineering controls prohibiting the exposure to soils in the vicinity of sampling point HA-3 are in place as part of any future redevelopment, or if shallow soils in the vicinity of HA-3 are removed from the Site, the direct contact exposure pathway can be considered effectively incomplete. Therefore, the detection of benzo(a)pyrene at a concentration exceeding the RISC IDCL at this location is likely not problematic for any future redevelopment at Lot 3.
- The default closure level of 230 mg/kg for lead is based on the migration to groundwater exposure pathway. As stated above, the groundwater exposure pathway is effectively incomplete at Lot 3. Therefore, the detection of lead at

Ms. Ann Kolata
February 21, 2012
SBI064.400.0002
Page 3

concentrations exceeding the RISC IDCL in the vicinity of sampling points HA-3 and GB-19 is likely not problematic for any future redevelopment at Lot 3.

We trust this information meets your needs at this time. Should you require any additional information please don't hesitate to contact me at (800) 241-7173.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas G. Stuart". The signature is fluid and cursive, with the first name "Douglas" being more prominent and the last name "Stuart" following in a similar style.

Douglas G. Stuart, CHMM
Senior Project Manager

Attachments: Tables and Figures

TABLES

**LOT 3 OF IGNITION PARK
CITY OF SOUTH BEND, INDIANA**

TABLE 1

**SUMMARY OF DETECTED ANALYTES IN SOIL COMPARED TO IDEM 1996 VRP CLEANUP GOALS
AND RISC COMMERCIAL/INDUSTRIAL DEFAULT CLOSURE LEVELS**

Soil Boring	Sample Identification	Sample Date	Sample Depth	Analyte Type	Compound	Results	Units	RISC Default or Direct Contact Closure Level - Commercial/ Industrial Land Use	1996 VRP Tier II Cleanup Goals - Nonresidential - Surface or Subsurface Soils ^{a,b}
HSB-013	SBI037:HSB013:S020040	10/20/2006	2.0' to 4.0'	Metals	Arsenic	4.36	mg/kg	5.8	438
					Barium	64.3	mg/kg	10,000	10,000
					Chromium	11.5	mg/kg	120 ^c	7300
					Lead	8.74	mg/kg	230	NS ^d
				SVOCs	All Analytes	<RL	mg/kg	NA	NA
					All Analytes	<RL	mg/kg	NA	NA
HA-3	SBI002:HA-3:S000010:412	7/31/2001	0.0' to 1.0'	Metals	Arsenic	114	mg/kg	5.8	612
					Barium	454	mg/kg	10,000	10,000
					Chromium	13.2	mg/kg	120	10,000
					Lead	278	mg/kg	230	1,000
					Mercury	0.188	mg/kg	32	87.6
				SVOCs	Acenaphthylene	1.0	mg/kg	180	NA
					Anthracene	1.86	mg/kg	2,000	10,000
					Benzo(a)anthracene	2.83	mg/kg	15	79.45
					Benzo(a)pyrene	3.1	mg/kg	1.5	7.94
					Benzo(k)fluoranthene	1.91	mg/kg	150	794.52
					Chrysene	3.19	mg/kg	1,500	7,945.21
					Dibenzofuran	0.914	mg/kg	65	NA
					Fluoranthene	3.77	mg/kg	2,000	10,000
					Indeno(1,2,3-cd)pyrene	0.584	mg/kg	15	79.45
					Naphthalene	1.30	mg/kg	170	10,000
					Phenanthrene	5.44	mg/kg	170	NA
					Pyrene	4.38	mg/kg	2,000	10,000
					GB-19	SBI002:GB-19:S000010:412	8/8/2001	0.0' to 1.0'	Metals
Barium	456	mg/kg	10,000	10,000					
Cadmium	2	mg/kg	77	NA					
Chromium	22.4	mg/kg	120	10,000					
Lead	429	mg/kg	230	1,000					
SVOC	Mercury	0.588	mg/kg	32					122.4
	Benzo(a)pyrene	0.313	mg/kg	2					7.94
	Benzo(b)fluoranthene	0.993	mg/kg	15					79.45
	Chrysene	0.527	mg/kg	1,500					7,945.21
	Fluoranthene	0.722	mg/kg	2,000					10,000
	Phenanthrene	0.421	mg/kg	170					NA
	Pyrene	0.681	mg/kg	2,000					10,000

Notes:

- ^a - IDEM VRP Resource Guide, July 1996 and IDEM VRP Lead Policy Document Number W-0048.
- ^b - Surface soil is from 0 to to two feet below ground surface. Subsurface soil is beneath two feet.
- ^c - Assumes hexavalent chromium.
- ^d - NS - no lead VRP standard exists for subsurface soils.

<RL - Results are less than the analytical method reporting limit.

NA - No Cleanup Goal/Closure Level Available.

 - Analyte concentration exceeds applicable standard.

**LOT 3 OF IGNITION PARK
CITY OF SOUTH BEND, INDIANA**

TABLE 2

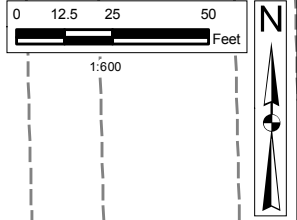
**SUMMARY OF DETECTED ANALYTES IN GROUNDWATER COMPARED TO IDEM 1996 VRP CLEANUP GOALS
AND RISC COMMERCIAL/INDUSTRIAL DEFAULT CLOSURE LEVELS**

Sampling Location	Sample Identification	Sample Date	Analyte Type	Compound	Results (ug/L)	RISC Default Closure Level - Commercial/Industrial Land Use (ug/L)	1996 VRP Tier II Cleanup Goals - Nonresidential - Groundwater
HSB-013	SBI037:HSB013:G102006	10/20/2006	VOCs	All Analytes	<RL	--	--
			SVOCs	All Analytes	<RL	--	--
MW-30D	SBI002:MW30D:G092001:523	9/20/2001	VOCs	All Analytes	<RL	--	--
MW-8S	SBI002:MW8S:G091701:523	9/17/2001	Metals	Barium	29.7	20,000	7,154
				Lead	8.5	42	150
			VOCs	All Analytes	<RL	--	--
MW-8D	SBI002:MW8D:G091701:523	9/17/2001	Metals	Barium	47.4	20,000	7,154
				Lead	5.7	42	150
			VOCs	All Analytes	<RL	--	--

Notes:

<RL - Results are less than the analytical method reporting limit.

FIGURES



S. KENDALL

HA-3

MW-8D
MW-8S

GB-19

MW-30S
MW-30D

HA-4

R.R. YARD
HOUSE

SCALE

GATE HOUSE

HSB-13

Note:
The boundary of Lot 3 as shown hereon
is approximate and shall not be construed
as an accurate property survey

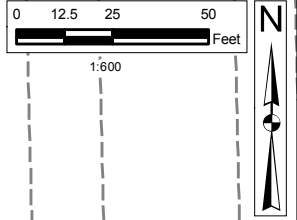
Legend	
	Approximate Site Boundary
Area A - 9/2002 Hull Soil Borings and Monitoring Wells	
	Soil Boring to 4 Feet (GB-#)
Area A - Pre-2002 Assessments	
	5/1995 Monitoring Wells Installed by APT, Inc. (TB-#,MW-#/S/D)
South Bend Foundry, Eckler-Lahey and Norfolk Southern Phase II ESA Sampling Locations	
	Shallow Soil Boring/Groundwater Sampling (HSB-#)

Hull
& associates, inc.

6435 Castleway West Dr. Phone: (800) 241-7173
Suite 119 Fax: (614) 793-9070
Indianapolis, IN 46250 www.hullinc.com

February 2012
Environmental Data Summary
Ignition Park: Lot 3
**Historical Soil and Groundwater
Sampling Locations**
South Bend, St. Joseph County, Indiana

Figure
1



HA-3	0-1'
Arsenic	114
Lead	278
Benzo(a)pyrene	3.1

MW-8D
MW-8S

GB-19	0-1'
Arsenic	34
Lead	429

MW-30S
MW-30D

S. KENDALL

R.R. YARD
HOUSE

SCALE

GATE HOUSE

HSB-13

Note:
The boundary of Lot 3 as shown hereon is approximate and shall not be construed as an accurate property survey

Legend	
	Approximate Site Boundary
Area A - 9/2002 Hull Soil Borings and Monitoring Wells	
	Soil Boring to 4 Feet (GB-#)
Area A - Pre-2002 Assessments	
	5/1995 Monitoring Wells Installed by APT, Inc. (TB-#,MW-#/S/D)
South Bend Foundry, Eckler-Lahey and Norfolk Southern Phase II ESA Sampling Locations	
	Shallow Soil Boring/Groundwater Sampling (HSB-#)

Hull
& associates, inc.

6435 Castleway West Dr. Phone: (800) 241-7173
Suite 119 Fax: (614) 793-9070
Indianapolis, IN 46250 www.hullinc.com

February 2012		Figure
Environmental Data Summary Ignition Park: Lot 3		2
Summary of Detected Analytes in Soil Exceeding IDEM RISC Standards (mg/kg)		
South Bend, St. Joseph County, Indiana		