

CSID 58

**SITE HAZARD ASSESSMENT  
WORKSHEET 1  
SUMMARY SCORE SHEET**

Site Name/Location (Street, City, County, Section/Township/Range, TCP ID Number):

BSB Diversified/Hexcel Corporation  
8202 S 200<sup>th</sup> ST  
Kent, WA 98032  
King County  
T-22N, R-4E, Sec-1  
Facility Site ID: 2105  
Longitude: 122° 13' 49"  
Latitude: 47° 13' 22"  
Site assessed for August 17, 2004 update

Site Description (Include management areas, substances of concern, and quantities):

The BSB Diversified/Hexcel Corporation (BSB/Hexcel) site located at 8202 S 200<sup>th</sup> Street, Kent, is a combination of three large properties that cover an area of approximately twenty-one acres. The properties are located in an area that is a mix of commercial, industrial and a few residential properties. They are bordered to the north, west and south by other commercial businesses and to the east by 84<sup>th</sup> Avenue S. Municipal sewer and water systems serve the area. The City of Renton and City of Kent municipal water systems are served by several large groundwater wells. Six of these wells are within a two-mile radius of the BSB/Hexcel properties.

The BSB/Hexcel properties are made up of two major site areas. The Hexcel property contains several very large buildings used for offices, manufacturing and storage. Except for some small lawn and planting areas the sites are completely covered with concrete or asphalt. The BSB property is now vacant except for a vapor extraction system. There are some concrete slabs on the site along with soil, gravel and small areas of asphalt. Prior to 1988, all of the properties contained operations related to the manufacturing of parts for the aerospace industry.

The entire BSB/Hexcel site area is made up of seven parcels described as Parcels A-G. From 1957 to 1985 the Hytek Finishes Company (Hytek) and its predecessor, Heath Plating, operated a metal finishing and electroplating plant on Parcels E and G. The Hytek/Heath Plating plant was located on Parcel E, and wastes were treated and stored in a waste treatment area on Parcel G. The waste treatment area contained a sludge lagoon, treatment tanks, a wastewater holding lagoon, sludge drying areas and chemical storage areas. Waste products from Hytek/Heath Plating included a wide variety of chlorinated compounds. In 1985, the Environmental Protection Agency (EPA) terminated interim status at the facility. In 1987, BSB purchased the Hytek Finishes Company.

In 1988, BSB/Hytek sold Parcels A-D, and F to the Phoenix Washington Corporation. The Phoenix Washington Corporation was renamed the Heath Tecna Aerospace Company (Heath Tecna). In 1989, Parcel E was transferred by BSB/Hytek to Heath Tecna. In 1989, BSB then sold Hytek. BSB retained ownership of Parcel G. In 1996, Hexcel obtained Parcels A-F. Of the original seven parcels that were owned by BSB/Hytek, five are currently owned by Hexcel (Parcels A-E) which operates a composite products manufacturing facility for the aerospace industry and one is owned by BSB (Parcel G). In 2003, Hexcel sold Parcel F to another manufacturing company.

Between 1987 and 1988, the surface impoundments for chemical storage were closed. In 1988, the EPA and the Washington State Department of Ecology (Ecology) issued a joint post-closure permit to Hytek which is currently in effect. Even though BSB sold Hytek in 1989, BSB retained the property covered by the post-closure permit and is responsible for assuring that all post-closure permit requirements are being met. To fulfill the permit requirements, BSB has conducted extensive evaluation of the soil and groundwater in the area.

Analytical results from the evaluation and continued monitoring of the BSB/Hexcel properties shows that extensive contamination of the area exists. Groundwater beneath Parcel G is contaminated with chlorinated compounds including trichloroethylene (TCE), cis-1,2-dichloroethylene (1,2-DCE) and vinyl chloride. Groundwater flow in the area generally runs in a north-northeasterly direction from Parcel G and under the Hexcel Parcels A-E. Groundwater beneath the Hexcel Parcels is also contaminated with chlorinated compounds including 1,2-DCE and vinyl chloride. The table below shows some of the contaminant levels of the BSB/Hexcel properties that exceed their respective Model Toxics Control Act (MTCA) Method A cleanup levels and EPA Drinking Water Standards.

	1,2-DCE (ppb)	Vinyl chloride (ppb)
Groundwater Contamination Levels	1130	673
MTCA Method A Cleanup Level	N/A	0.2
EPA Drinking Water Standard	70.0	2.0

N/A=not available

Once these analytical results were obtained they were forwarded to the Washington State Department of Ecology (Ecology). Due to the fact that the contamination levels exceeded the MTCA Method A cleanup levels, BSB Diversified was added to Ecology's Integrated Site Information System (ISIS) list on March 1, 1988, and Hexcel Corporation on April 2, 2004.

Carsten Thomsen of Public Health-Seattle & King County (PHSKC) conducted a site hazard assessment (SHA) visit on May 5, 2004. A property representative, Katherine Garrison, Environmental Engineer for Hexcel, provided commentary about history and current applications of the site during an inspection of the property. Due to the fact that there is extensive past and continuing monitoring of groundwater at the BSB/Hexcel property and the site is currently under an EPA and Ecology post-closure permit and cleanup action it was not deemed necessary to conduct further sampling of the site.

On the basis of this SHA, completed by the PHSKC's Environmental Health Division, this site will be scored for the surface water, groundwater and air routes.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site): N/A

**ROUTE SCORES:**

Surface Water/Human Health: 26.1

Surface Water/Environ.: 45.3

Air/Human Health: 19.0

Air/Environmental: 27.8

Ground Water/Human Health: 63.9

**OVERALL RANK: 1**

WORKSHEET 2  
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source:2

Trichloroethylene (TCE)  
cis 1,2-dichloroethylene (1,2-DCE)  
Vinyl chloride

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A  
cleanup standards.

List those management units to be considered for scoring: Source:2,3

Surface soil contamination.

Explain basis for choice of unit to be used in scoring. Source:3

Surface soil is exposed to weather with no containment.

2. AIR ROUTE

List those substances to be considered for scoring: Source:2

Trichloroethylene (TCE)  
cis 1,2-dichloroethylene (1,2-DCE)  
Vinyl chloride

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A  
cleanup standards.

List those management units to be considered for scoring: Source:2.3

Surface soil contamination.

Explain basis for choice of unit to be used in scoring. Source:3

Surface soil is exposed to weather with no containment.

WORKSHEET 2  
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source:2

Trichloroethylene (TCE)  
cis 1,2-dichloroethylene (1,2-DCE)  
Vinyl chloride

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A  
cleanup standards.

List those management units to be considered for scoring: Source:2,3

Analytically confirmed groundwater contamination.

Explain basis for choice of unit to be used in scoring.

Groundwater is contaminated with no containment.

**WORKSHEET 3  
SURFACE WATER ROUTE**

**1.0 SUBSTANCE CHARACTERISTICS**

1.1 Human Toxicity

Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/l)	Val.	(mg/kg-bw)	Val.	(mg/kg/day)	Val.	WOE	PF*	Val.
1.TCE	5.0	8	2402	3	ND	-	B2	0.011	4
2.1,2-DCE	70.0	6	ND	-	0.01	3	ND	ND	-
3.vinyl chloride	2.0	8	500	5	ND	-	A	2.30	7

\*Potency Factor

Source:1  
Highest Value:8  
(Max.=10)  
+2 Bonus Points?  
Final Toxicity Value:10  
(Max.=12)

1.2 Environmental Toxicity

- (x) Freshwater  
( ) Marine

Substance	Acute Water Quality Criteria		Non-human Mammalian Acute Toxicity		Source: 1	Value:8 (Max.=10)
	(ug/l)	Value	(mg/kg)	Value		
1.TCE	45000	2	2404 (mus)	3		
2.1,2-DCE	11600	2	ND	-		
3.vinyl chloride	2	8	500 (rat)	5		

1.3 Substance Quantity: unknown Source: 2 Value:1  
Explain basis: \_\_\_\_\_ (Max.=10)

**2.0 MIGRATION POTENTIAL**

- 2.1 Containment: none Source: 2 Value:10  
Explain basis: discharge with no containment (Max.=10)
- 2.2 Surface Soil Permeability: silt-sand mixture Source: 2 Value:3  
(Max.=7)
- 2.3 Total Annual Precipitation: 33.8 inches Source: 4 Value:3  
(Max.=5)
- 2.4 Max. 2-Yr/24-hour Precipitation: 1-2 inches Source: 4 Value:2  
(Max.=5)
- 2.5 Flood Plain: not in flood plain Source: 7 Value:0  
(Max.=2)
- 2.6 Terrain Slope: <2 % Source: 3 Value:1  
(Max.=5)

**WORKSHEET 3**  
**SURFACE WATER ROUTE**

**3.0 TARGETS**

- 3.1 Distance to Surface Water: <1000 ft. Source: 3 Value: 10  
(Max.=10)
- 3.2 Population Served within 2 miles (See WARM Scoring  
Manual Regarding Direction): pop.= = 0 Source: 5 Value: 0  
(Max.=75)
- 3.3 Area Irrigated within 2 miles 0.75 no. acres=1300  
(Refer to note in 3.2.): 0.75 =0.75( )= 27 Source: 6 Value: 27  
(Max.=30)
- 3.4 Distance to Nearest Fishery Resource: 2000 ft. Source: 7 Value: 9  
(Max.=12)
- 3.5 Distance to, and Name(s) of, Nearest Sensitive  
Environment(s) 2000 ft. Source: 7 Value: 9  
Unnamed salmonoid creek (Max.=12)

**4.0 RELEASE**

Explain basis for scoring a release to surface water: no confirmed release Source: 2 Value: 0  
(Max.=5)

**WORKSHEET 4  
AIR ROUTE**

**1.0 SUBSTANCE CHARACTERISTICS**

1.1 Introduction (WARM Scoring Manual) - Please review before scoring

1.2 Human Toxicity

Substance	Air Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/m <sup>3</sup> )	Val.	(mg/m <sup>3</sup> )	Val.	(mg/kg/day)	Val.	WOE	PF*	Val.
1.TCE	0.8	10	15583(man)	3	ND	-	B2	0.017	4
2.1,2-DCE	2630.7	1	65000(mus)	3	ND	-	ND	ND	-
3.vinyl chloride	0.023	10	460123(rat)	1	ND	-	ND	ND	-

\*Potency Factor

Source:1  
Highest Value:10  
(Max.=10)  
+2 Bonus Points?Y  
Final Toxicity Value:12  
(Max.=12)

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility

Vapor Pressure(s) (mmHg): 1=4; 2=4; 3=4 Source:1  
Value:4  
(Max.=4)

1.3.2 Particulate Mobility

Soil type: sandy loam Source:3  
Erodibility: 86 Value:1  
Climatic Factor: 1-10 (Max.=4)

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals **Final Matrix Value:24**  
(Max.=24)

1.5 Environmental Toxicity/Mobility Source:1

Substance	Non-human Mammalian Acute		(Table A-7)		
	Inhal. Toxicity (mg/m <sup>3</sup> )	Value	Mobility (mmHg)	Value	Matrix Value
1.1,2-DCE	65000	3	>10	4	6
2.vinyl chloride	460123	1	>10	4	2

Highest Environmental Toxicity/Mobility Matrix Value  
(From Table A-7) equals **Final Matrix Value:6**  
(Max.=24)

WORKSHEET 4  
AIR ROUTE

1.6 Substance Quantity: unknown Source: 2 Value: 1  
Explain basis: \_\_\_\_\_ (Max.=10)

2.0 MIGRATION POTENTIAL

2.1 Containment: no cover/spill, discharge to ground Source: 3 Value: 10  
\_\_\_\_\_ (Max.=10)

3.0 TARGETS

3.1 Nearest Population: <1000 ft. Source: 3 Value: 10  
\_\_\_\_\_ (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive  
Environment(s) 2000 ft. Source: 7 Value: 6  
Cleveland park \_\_\_\_\_ (Max.=7)

3.3 Population within 0.5 miles: pop.=83 = 9 Source: 8 Value: 9  
\_\_\_\_\_ (Max.=75)

4.0 RELEASE

Explain basis for scoring a release to air: \_\_\_\_\_ Source: 2 Value: 0  
No confirmed release \_\_\_\_\_ (Max.=5)

**WORKSHEET 5  
GROUND WATER ROUTE**

**1.0 SUBSTANCE CHARACTERISTICS**

**1.1 Human Toxicity**

Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/l)	Val.	(mg/kg-bw)	Val.	(mg/kg/day)	Val.	WOE	PF*	Val.
1.TCE	5.0	8	2402	3	ND	-	B2	0.011	4
2.1,2-DCE	70.0	6	ND	-	0.01	3	ND	ND	-
3.vinyl chloride	2.0	8	500	5	ND	-	A	2.30	7

\*Potency Factor

Source:1  
Highest Value:8  
(Max.=10)  
+2 Bonus Points?  
**Final Toxicity Value:10**  
(Max.=12)

**1.2 Mobility (Use numbers to refer to above listed substances)**

Cations/Anions: 1= ; 2= ; 3= ; 4= ; 5= ; Source: 1 Value: 3  
(Max.=3)

OR

Solubility(mg/l): 1=3 ; 2=3 ; 3=3

**1.3 Substance Quantity:** unknown Source: 2 Value: 1  
Explain basis: \_\_\_\_\_ (Max.=10)

**2.0 MIGRATION POTENTIAL**

**2.1 Containment:** none Source: 2 Value: 10  
Explain basis: confirmed release to groundwater (Max.=10)

**2.2 Net Precipitation:** 24.4-5.2=19.2 inches Source: 4 Value: 2  
(Max.=5)

**2.3 Subsurface Hydraulic Conductivity:** silty sand Source: 2 Value: 3  
(Max.=4)

**2.4 Vertical Depth to Ground Water:** 0-25 ft./obs. rel Source: 2 Value: 8  
(Max.=8)

**3.0 TARGETS**

**3.1 Ground Water Usage:** public supply alt. Sources avail. Source: 5 Value: 4  
(Max.=10)

**3.2 Distance to Nearest Drinking Water Well:** 2600 ft Source: 2 Value: 3  
(Max.=5)

**3.3 Population Served within 2 Miles:** pop.= >10,000 Source: 2 Value: 100  
(Max.=100)

WORKSHEET 5  
GROUND WATER ROUTE

- 3.4 Area Irrigated by (Groundwater) Wells  
within 2 miles:  $\frac{0.75 \text{ no. acres} = 116}{0.75} = 0.75 (11) = 8$  Source: 6 Value: 8  
(Max.=100)
- 4.0 **RELEASE**  
Explain basis for scoring a release to ground water: analytically confirmed release Source: 2 Value: 5  
(Max.=5)

SOURCES USED IN SCORING

1. Washington ranking Method Toxicological Data-Base
2. BSB/Hexcel Site Reports: BSB O&M Inspection Report, 3/88; Kent Facility Source Area Investigation Report, IT Corp., 3/01; Interm Report Hexcel Facility Source Investigation, Hydro Geo Chem, Inc., 7/3/03.
3. Site Hazard Assessment, PHSKC, 06/04
4. Nation Weather Service Data
5. Washington State Dept. of Health Public Water Supply Listing
6. Washington State Water Use Data
7. Sensitive Areas Coverage, King Co. Geographic Information System Data
8. Census Data, 1990 census

