

TABLE 1.1

**SUMMARY OF TARGET RISK AND HAZARD LEVEL EXCEEDANCES IN SOIL**  
**FEASIBILITY STUDY REPORT**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Receptors with Cumulative Risk &gt;10<sup>-4</sup> and/or HI &gt;1.0</i>	<i>Human Health Exposure Route</i>	<i>Major Contributors</i>	<i>Receptors with Cumulative Risk ≥ 10<sup>-6</sup> and/or HI &gt;1.0</i>	<i>Human Health Exposure Route</i>	<i>Major Contributors</i>
Residential Area 1	None	N/A	N/A	Future Resident Future Commercial Worker Future Utility Worker Current/Future Trespasser Future Recreational User	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic Pentachlorophenol
Residential Area 2	Future Resident	Indoor Air Inhalation of Vapors	Benzene	Future Resident Future Commercial Worker Future Utility Worker Future Recreational User  Future Commercial Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)  Indoor Air Inhalation of Vapors	Arsenic  Benzene
Residential Area 3	None	N/A	N/A	Future Resident Future Commercial Worker Future Utility Worker Current/Future Trespasser Future Recreational User	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic
Residential Area 4	Future Resident	Indoor Air Inhalation of Vapors	Benzene	Future Resident Future Commercial Worker Future Utility Worker Current/Future Trespasser Future Recreational User  Future Resident  Future Commercial Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)  Indoor Air Inhalation of Vapors  Indoor Air Inhalation of Vapors	Benzo(a)pyrene Dibenz(a,h)anthracene Arsenic Total PCBs  Benzene Ethylbenzene Xylene Mercury  Benzene Ethylbenzene Mercury
Waterfront Plaza	None	N/A	N/A	Future Commercial Worker Future Utility Worker Current/Future Trespasser Future Recreational User	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic
Mixed Residential/ Commercial Area 1	None	N/A	N/A	Future Resident Future Commercial Worker Future Utility Worker Future Recreational User  Future Resident	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)  Indoor Air Inhalation of Vapors	Arsenic  Tetrachloroethene

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<i>Redevelopment Area</i>	<i>Receptors with Cumulative Risk &gt;10<sup>-4</sup> and/or HI &gt;1.0</i>	<i>Human Health Exposure Route</i>	<i>Major Contributors</i>	<i>Receptors with Cumulative Risk ≥10<sup>-6</sup> and/or HI &gt;1.0</i>	<i>Human Health Exposure Route</i>	<i>Major Contributors</i>
Mixed Residential/ Commercial Area 2	Future Resident	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic	Future Resident Future Commercial Worker Future Utility Worker Future Construction Worker Current/Future Trespasser Future Recreational User  Future Resident  Future Commercial Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)   Indoor Air Inhalation of Vapors  Indoor Air Inhalation of Vapors	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Dibenz(a,h)anthracene Arsenic Thallium  Benzene Ethylbenzene Tetrachloroethene Mercury  Benzene Ethylbenzene
Commercial Area 1	None	N/A	N/A	Future Commercial Worker Future Utility Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic
Commercial Area 2	None	N/A	N/A	Current/Future Trespasser Future Commercial Worker Future Utility Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)	Arsenic
Commercial Area 3	None	N/A	N/A	Future Commercial Worker Future Utility Worker  Future Commercial Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)  Indoor Air Inhalation of Vapors	Arsenic  Benzene Mercury
Commercial Area 4	None	N/A	N/A	Future Commercial Worker Future Utility Worker Current/Future Trespasser Future Recreational User  Future Commercial Worker	Direct Contact (Incidental Ingestion Dermal Contact, and Ambient Air Inhalation)  Indoor Air Inhalation of Vapors	Arsenic Total PCBs  Benzene Tetrachloroethene

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**SUMMARY OF POTENTIAL APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)**  
**FEASIBILITY STUDY REPORT**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<b>Regulation</b>	<b>Citation</b>	<b>Description</b>	<b>ARAR/TBC</b>	<b>Comments</b>
<b>FEDERAL</b>				
Toxic Substances Control Act	40 CFR 761	Establishes storage, treatment and disposal requirements for PCB remediation wastes and for non-porous and porous surfaces contaminated with PCBs. Determines PCB cleanup level for soil using self-implementing, performance-based, or risk-based criteria; cleanup levels based on future land use.	ARAR  ARAR	Sampling and disposal requirements may be applicable to investigation-derived waste (IDW) and/or equipment evaluated  PCB cleanup levels for PCB remediation waste may be applicable  40 CFR 761.61(a)(8) requires deed restrictions requiring maintenance of caps for high occupancy areas with remaining contamination between 1-10 mg/kg. 40 CFR 761.61(a)(7) includes the cap requirements for high occupancy areas with contamination remaining between 1-10 mg/kg.
Clean Air Act	40 CFR 50 and 52	Establishes requirements for constituent emission rates in accordance with National Ambient Air Quality Standards.	ARAR	May be considered for remedial alternatives that include relocation of materials. State criteria may also apply.
	42 U.S.C. 7401 et seq.	Provides guidelines with respect to minimizing the harmful effects of fugitive dust and airborne contaminants that result from excavation, construction, and other removal activities. Establishes primary and secondary ambient air quality standards for emissions of chemicals and particulate matter.	ARAR	May be considered for remedial alternatives that include excavation/removal of residual/soil.
U.S. DOT Placarding and Handling	40 CFR 264.227 49 CFR 171	Transportation and handling requirements for materials containing PCBs with concentrations of 20 mg/kg or more.	ARAR	Applicable for the MW-16 area.
National Historic Preservation Act	16 USC 470, as amended	Establishes a program for the preservation of historical and archaeological sites. Created the National Register of Historic Places, list of National Historic Landmarks, and State Historic Preservation Offices.	ARAR	The Michigan Paper Company Historic District was listed in the National Register of Historic Places on September 8, 2011. Portions of the Site buildings have been designated as historical structures.
<b>STATE</b>				
Michigan Act 451, Part 201 - Environmental Remediation and Rules Promulgated Thereunder	MCL 324.20118(2) MCL 324.20120a MAC 299.5705	Requires that a remedial action shall provide for response activity that will satisfy cleanup criteria.	ARAR	The remedial action implemented must meet generic or Site-specific cleanup criteria.
	MCL 324.20120a MAC 299.5708	If the target detection limit or background concentration is greater than the risk-based cleanup criteria, the target detection limit or background concentration shall be used instead of the risk-based cleanup criterion.	ARAR	Applicable to all environmental media and may be used to gauge the success of the remedial action.
	MCL 324.2017a MCL 324.20114	Requirements for owner of a facility, such as preventing exacerbation and exercising due care.	ARAR	Applicable if materials are consolidated on-Site or if there is a release of materials above the PRGs from the Site.

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<b>STATE (CONTINUED)</b>				
Michigan Act 451, Part 201 - Environmental Remediation and Rules Promulgated Thereunder	MCL 324.20120c	Requirements for relocation of excavated soil	ARAR	Application for consolidation alternative Due to the presence of COCs above the Part 201 Residential Cleanup Criteria, property cannot be transferred without notification of land use restrictions that apply to the Site. All actions leaving COCs in place or cleanup that does not achieve unrestricted/residential use must include deed restrictions on activities that may interfere with the integrity of the remedial action and on activities that may result in unacceptable exposure.
	MCL 324.20116	Restrictions on transfer of real property designated as a facility. Requirement that if residential criteria are not met, land use restrictions must be provided. Actions required upon approval of remedial action plans.	ARAR	
	MCL 324.20120a(16)			
	MCL 324.20120b			
	MAC 299.5524			
	MCL 324.20118, et al. MAC 299.5532(11)	Required elements of remedial action plans (remedial design documents).	ARAR	Primary requirements can be met in remedial design documents by including plans identifying points of compliance for evaluating the effectiveness of the remedial action.
	MCL 324.20120c	Required action if contaminated soil is moved off-Site or relocated within the site.	ARAR	Material disposed off Site must be properly characterized to determine if it is subject to the requirements of Part 111 (Hazardous Waste Management). Required approval for soil relocation can be attained through MDEQ approval of a Remedial Design.
	MAC 299.5520	Objectives of response activities, determination (or nullification) that a response activity is complete. Part 201 requires evaluation of the cumulative risk and the cumulative risk may not exceed a carcinogenic risk of 10 <sup>-5</sup> or a hazard index of 1.	ARAR	Upon completion of remedial actions, the PRP is required to demonstrate all requirements are achieved. The cumulative risk at each site area may not exceed a carcinogenic risk of 10 <sup>-5</sup> or a hazard index of 1.
	MAC 299.51003-51005 MCL 324.20120a(4) MCL 324.20120b		ARAR	
	MAC 299.5522 MAC 299.51017	Liabe parties must provide notice to the department and adjacent land owners in certain situations, such as if hazardous substances emanate beyond the property boundarv.	ARAR	Applicable if there is a release (above criteria) from the Site or if Generic Residential Cleanup Criteria are exceeded and contamination is believed to be migrating off-Site.
Michigan Act 451, Part 111 - Hazardous Waste Management and Rules Promulgated Thereunder	MCL 324.11101-11153 MAC 299.9101 -11107	Establishes requirements for hazardous waste generators, transporters, and treatment/storage/disposal facilities.	ARAR	Used for the characterization and identification of hazardous waste, and identification of appropriate treatment and disposal.
Michigan Act 451, Part 31 - Water Resources Protection and Rules Promulgated Thereunder	MCL 324.3109b	States that remedial actions that satisfy Part 201 satisfy this section.	ARAR	Applicable to remedial alternatives where Part 31 requirements are met.
Michigan Act 451, Part 91 - Soil Erosion and Sedimentation Control	MCL 324.9112 MCL 324.9116 MAC 323.1701-1714	Requirements for owners of land undergoing an earth change. Establishes rules prescribing soil erosion and sedimentation control plans, procedures, and measures.	ARAR	For any remedial action involving an earth change, liabe parties must implement and maintain soil erosion and sedimentation control measures. Substantive requirements of permit must be satisfied.

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<b>STATE (CONTINUED)</b>				
Michigan Act 451, Part 55 - Air Pollution Control and Rules Promulgated Thereunder	MAC 336.1101-2706	Establishes rules prohibiting the emission of air contaminants in quantities which cause injurious effects to human health, animal life, plant life or significant economic value, and/or property.	ARAR	Applicable for remedial alternatives that would generate air emissions (e.g., dust during excavation, soil stabilization, or compaction). For certain remedial alternatives, air emissions must comply with substantive requirements of permits and monitoring would be required.
Michigan Public Act 300 of 1949, as amended. Michigan Vehicle Code	MCL 257.716, 257.722, et seq MAC 257.101, et seq	Rules governing the reduction of maximum axle loads during springtime frost periods.	ARAR	Remedial action and construction may require heavy loads of equipment, fill dirt, PCB- containing media, etc. to be transported over roadways; however, this is not allowed during frost periods.
Michigan Public Act 306 of 1969, as amended – Well Construction Code	MCL 24.233, 24.263, and 333.12714	Establishes rules for well installation and abandonment.	ARAR	Applicable to wells that are abandoned or wells that may be installed as part of groundwater monitoring activities.
Michigan Act 451, Part 115 - Solid Waste Management and Rules Promulgated Thereunder	MCL 324.11501-11504 MCL 324.11507 MCL 324.11540 MAC 299.4101-4106a MAC 299.4301 (3)(d) MAC 299.4305 MAC 299.4307 MAC 299.4308  MAC 299.4306   MAC 299.4912  MAC 299.4913 MAC 299.4915 MAC 299.4916-4921	Establishes rules for methods of solid waste disposal and for design/operational standards for disposal areas.   Landfill location restrictions and liner design standards.  Water quality performance standards.  Requirements for natural soil barriers.  Requirements for final cover materials. Construction Quality Control Program	ARAR   ARAR  ARAR  ARAR  ARAR	May apply for on-Site remedial actions that rely on solid waste to remain on-Site.   Not applicable because the Site is not a new disposal area. However, location restrictions and liner design standards may be considered for alternatives that include on-Site consolidation. The cap design must ensure that all requirements for the protection of surface and groundwater under Part 31 (and rules) are met. A design that keeps the final cover from being inundated is capable of limiting erosion and infiltration to the extent necessary to protect human health and the environment. Natural soil barriers (or augments) may be evaluated by the specifications in this rule to help determine if the barriers are adequate to prevent lateral flow of groundwater into and out of the waste. Covers must meet the specifications in the rules. Substantive portions of construction quality control must be met in Remedial Design and Remedial Action.

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<b>LOCAL</b>				
Public Safety - Excavations	Chapter 9-3 - Plainwell Code of City Ordinances	Requires that any open excavation be surrounded by fencing to protect the public.	ARAR	Any remedial action involving excavations will require implementation of proper engineering controls to protect the public.
Soil Erosion and Sedimentation Control	Allegan County Ordinance No. 1013.1	Control soil erosion and sedimentation with respect to earth change activities within the County.	ARAR	For any remedial action involving an earth change, liable parties must implement and maintain soil erosion and sedimentation control measures. Substantive requirements of permit must be satisfied.

TABLE 2.2

**LIST OF PRELIMINARY REMEDIATION GOALS FOR COCs IN SOIL  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL MILL, INC. PROPERTY  
PLAINWELL, MICHIGAN**

**Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria<sup>(1)</sup>**

		Statewide	Residential	Non-Residential	Groundwater	Residential	Non-Residential	Residential	Non-Residential
		Default	Drinking	Drinking	Surface Water	Soil Volatilization	Soil Volatilization	Infinite Source	Non-Residential
		Background	Water	Water	Interface	to Indoor Air	to Indoor Air	Volatile Soil	Volatile Soil
			Protection	Protection	Protection <sup>(2)</sup>	Inhalation	Inhalation	Inhalation	Inhalation
<b>Volatile Organic Compounds (VOCs)</b>		<b>Units</b>							
Benzene	mg/kg	--	0.1	0.1	4	1.6	8.4	13	45
Ethylbenzene	mg/kg	--	1.5	1.5	0.36	87	460	720	2400
Methylene chloride	mg/kg	--	0.1	0.1	30	45	240	210	700
Tetrachloroethene	mg/kg	--	0.1	0.1	1.2	11	21	170	210
Toluene	mg/kg	--	16	16	5.4	330	610	2800	3300
1,1,1-Trichloroethane	mg/kg	--	4	4	1.8	250	460	3800	4500
Trichloroethene	mg/kg	--	0.1	0.1	4	1	1.9	11	14
1,2,4-Trimethylbenzene	mg/kg	--	2.1	2.1	0.57	4300	8000	21000	25000
Xylenes (total)	mg/kg	--	5.6	5.6	0.82	6300	12000	46000	54000
<b>Semi-Volatile Organic Compounds (SVOCs)</b>									
Benzo(a)anthracene	mg/kg	--	NLL	NLL	NLL	NLV	NLV	NLV	NLV
Benzo(a)pyrene	mg/kg	--	NLL	NLL	NLL	NLV	NLV	NLV	NLV
Benzo(b)fluoranthene	mg/kg	--	NLL	NLL	NLL	ID	ID	ID	ID
Carbazole	mg/kg	--	9.4	39	1.1	NLV	NLV	NLV	NLV
4-Chloro-3-methylphenol	mg/kg	--	5.8	16	0.28	NLV	NLV	NLV	NLV
Dibenz(a,h)anthracene	mg/kg	--	NLL	NLL	NLL	NLV	NLV	NLV	NLV
Dibenzofuran	mg/kg	--	ID	ID	1.7	2000	3600	130	160
Fluoranthene	mg/kg	--	730	730	5.5	1000000	1000000	740000	890000
Fluorene	mg/kg	--	390	890	5.3	580000	1000000	130000	150000
Indeno(1,2,3-cd)pyrene	mg/kg	--	NLL	NLL	NLL	NLV	NLV	NLV	NLV
2-Methylnaphthalene	mg/kg	--	57	170	4.2	2700	4900	1500	1800
4-Methylphenol	mg/kg	--	7.4	20	1	NLV	NLV	NLV	NLV
Naphthalene	mg/kg	--	35	100	0.73	250	470	300	350
Pentachlorophenol	mg/kg	--	0.022	0.022	26.5	NLV	NLV	NLV	NLV
Phenanthrene	mg/kg	--	56	160	2.1	2800	5100	160	190
2,4,6-Trichlorophenol	mg/kg	--	2.4	9.4	0.33	NLV	NLV	NLV	NLV
<b>Polychlorinated Biphenyls (PCBs)<sup>(3)</sup></b>									
Total PCBs	mg/kg	--	NLL	NLL	NLL	NLL	3000	16000	240

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<b>Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria<sup>(1)</sup></b>										
	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Soil Saturation	
	Finite VSIC for	Finite VSIC for	Finite VSIC for	Finite VSIC for	Particulate	Particulate	Direct	Direct	Concentration	
	5 Meter Source	5 Meter Source	2 Meter Source	2 Meter Source	Soil Inhalation	Soil Inhalation	Contact	Contact	Screening Levels	
	Thickness	Thickness	Thickness	Thickness						
<b>Volatile Organic Compounds (VOCs)</b>										
	<b>Units</b>									
Benzene	mg/kg	--	0.1	0.1	230	380000	470000	180	840	400
Ethylbenzene	mg/kg	--	1.5	1.5	6500	10000000	13000000	22000	71000	140
Methylene chloride	mg/kg	--	0.1	0.1	4000	6600000	8300000	1300	5800	2300
Tetrachloroethene	mg/kg	--	0.1	0.1	1100	2700000	1200000	200	930	88
Toluene	mg/kg	--	16	16	36000	27000000	12000000	50000	160000	250
1,1,1-Trichloroethane	mg/kg	--	4	4	31000	67000000	29000000	500000	1000000	460
Trichloroethene	mg/kg	--	0.1	0.1	58	130000	59000	110	660	500
1,2,4-Trimethylbenzene	mg/kg	--	2.1	2.1	600000	82000000	36000000	32000	100000	110
Xylenes (total)	mg/kg	--	5.6	5.6	130000	290000000	130000000	410000	1000000	150
<b>Semi-Volatile Organic Compounds (SVOCs)</b>										
Benzo(a)anthracene	mg/kg	--	NLL	NLL	NLV	ID	ID	20	80	--
Benzo(a)pyrene	mg/kg	--	NLL	NLL	NLV	1500	1900	2	8	--
Benzo(b)fluoranthene	mg/kg	--	NLL	NLL	ID	ID	ID	20	80	--
Carbazole	mg/kg	--	9.4	39	NLV	62000	78000	530	2400	--
4-Chloro-3-methylphenol	mg/kg	--	5.8	16	NLV	ID	ID	4500	15000	--
Dibenz(a,h)anthracene	mg/kg	--	NLL	NLL	NLV	ID	ID	2	8	--
Dibenzofuran	mg/kg	--	ID	ID	160	6700	2900	ID	ID	--
Fluoranthene	mg/kg	--	730	730	880000	9300000	4100000	46000	130000	--
Fluorene	mg/kg	--	390	890	150000	9300000	4100000	27000	87000	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	NLL	NLL	NLV	ID	ID	20	80	--
2-Methylnaphthalene	mg/kg	--	57	170	1800	670000	290000	8100	26000	--
4-Methylphenol	mg/kg	--	7.4	20	NLV	6700000	2900000	11000	36000	--
Naphthalene	mg/kg	--	35	100	350	200000	88000	16000	52000	--
Pentachlorophenol	mg/kg	--	0.022	0.022	NLV	100000	130000	90	320	--
Phenanthrene	mg/kg	--	56	160	190	6700	2900	1600	5200	--
2,4,6-Trichlorophenol	mg/kg	--	2.4	9.4	NLV	1000000	1300000	710	3300	--
<b>Polychlorinated Biphenyls (PCBs)<sup>(3)</sup></b>										
Total PCBs	mg/kg	--	NLL	NLL	7900	28000	5200	6500	4	16

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**Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria<sup>(1)</sup>**

		Statewide	Residential	Non-Residential	Groundwater	Residential	Non-Residential	Residential	Non-Residential
		Default	Drinking	Drinking	Surface Water	Soil Volatilization	Soil Volatilization	Infinite Source	Non-Residential
		Background	Water	Water	Interface	to Indoor Air	to Indoor Air	Volatile Soil	Volatile Soil
			Protection	Protection	Protection <sup>(2)</sup>	Inhalation	Inhalation	Inhalation	Inhalation
<b>Metals</b>									
Aluminum	mg/kg	6900	1	1	--	NLV	NLV	NLV	NLV
Antimony	mg/kg	--	4.3	4.3	94	NLV	NLV	NLV	NLV
Arsenic	mg/kg	5.8	4.6	4.6	4.6	NLV	NLV	NLV	NLV
Barium	mg/kg	75	1300	1300	950	NLV	NLV	NLV	NLV
Cadmium	mg/kg	1.2	6	6	6.15	NLV	NLV	NLV	NLV
Chromium	mg/kg	18	30	30	3.3	NLV	NLV	NLV	NLV
Cobalt	mg/kg	6.8	0.8	2	2	NLV	NLV	NLV	NLV
Copper	mg/kg	32	5800	5800	135	NLV	NLV	NLV	NLV
Iron	mg/kg	12000	6	6	--	NLV	NLV	NLV	NLV
Lead	mg/kg	21	700	700	8780	NLV	NLV	NLV	NLV
Magnesium	mg/kg	--	8000	22000	--	NLV	NLV	NLV	NLV
Manganese	mg/kg	440	1	1	105	NLV	NLV	NLV	NLV
Mercury	mg/kg	0.13	1.7	1.7	0.05	48	89	52	62
Selenium	mg/kg	0.41	4	4	0.4	NLV	NLV	NLV	NLV
Silver	mg/kg	1	4.5	13	0.1	NLV	NLV	NLV	NLV
Sodium	mg/kg	--	4600	7000	--	NLV	NLV	NLV	NLV
Thallium	mg/kg	--	2.3	2.3	4.2	NLV	NLV	NLV	NLV
Vanadium	mg/kg	--	72	990	430	NLV	NLV	NLV	NLV
Zinc	mg/kg	47	2400	5000	303	NLV	NLV	NLV	NLV
<b>General Chemistry</b>									
Cyanide (total)	%	0.39	4	4	0.1	NLV	NLV	NLV	NLV
Cyanide (total)	mg/kg	0.39	4	4	0.1	NLV	NLV	NLV	NLV
Nitrate (as N)	mg/kg	--	200	200	ID	NLV	NLV	NLV	NLV
Phosphorus	mg/kg	--	1300	4800	EE	NLV	NLV	NLV	NLV

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<b>Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria<sup>(1)</sup></b>										
		Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential	Soil Saturation
		Finite VSIC for	Finite VSIC for	Finite VSIC for	Finite VSIC for	Particulate	Particulate	Direct	Direct	Concentration
		5 Meter Source	5 Meter Source	2 Meter Source	2 Meter Source	Soil Inhalation	Soil Inhalation	Contact	Contact	Screening Levels
		Thickness	Thickness	Thickness	Thickness					
<b>Metals</b>										
Aluminum	mg/kg	6900	1	1	NLV	ID	ID	50000	370000	--
Antimony	mg/kg	--	4.3	4.3	NLV	13000	5900	180	670	--
Arsenic	mg/kg	5.8	4.6	4.6	NLV	720	910	7.6	37	--
Barium	mg/kg	75	1300	1300	NLV	330000	150000	37000	130000	--
Cadmium	mg/kg	1.2	6	6	NLV	1700	2200	550	2100	--
Chromium	mg/kg	18	30	30	NLV	330000	150000	790000	1000000	--
Cobalt	mg/kg	6.8	0.8	2	NLV	13000	5900	2600	9000	--
Copper	mg/kg	32	5800	5800	NLV	130000	59000	20000	73000	--
Iron	mg/kg	12000	6	6	NLV	ID	ID	160000	580000	--
Lead	mg/kg	21	700	700	NLV	100000	44000	400	900	--
Magnesium	mg/kg	--	8000	22000	NLV	6700000	2900000	1000000	1000000	--
Manganese	mg/kg	440	1	1	NLV	3300	1500	25000	90000	--
Mercury	mg/kg	0.13	1.7	1.7	62	20000	8800	160	580	--
Selenium	mg/kg	0.41	4	4	NLV	130000	59000	2600	9600	--
Silver	mg/kg	1	4.5	13	NLV	6700	2900	2500	9000	--
Sodium	mg/kg	--	4600	7000	NLV	ID	ID	1000000	1000000	--
Thallium	mg/kg	--	2.3	2.3	NLV	13000	5900	35	130	--
Vanadium	mg/kg	--	72	990	NLV	ID	ID	750	5500	--
Zinc	mg/kg	47	2400	5000	NLV	ID	ID	170000	630000	--
<b>General Chemistry</b>										
Cyanide (total)	%	0.39	4	4	NLV	250	250	12	250	--
Cyanide (total)	mg/kg	0.39	4	4	NLV	250	250	12	250	--
Nitrate (as N)	mg/kg	--	200	200	NLV	ID	ID	ID	ID	--
Phosphorus	mg/kg	--	1300	4800	NLV	67000	29000	1000000	1000000	--

**Notes:**

-- No criterion promulgated under Part 201

NLV - Hazardous substance is not likely to volatilize under most conditions.

ID - Insufficient data to develop criterion

NLL - Hazardous substance is not likely to leach under most soil conditions.

mg/kg - milligrams per kilogram

<sup>(1)</sup> MDEQ (Michigan) Generic soil cleanup criteria for residential and nonresidential category, administrative rule R 299.48 effective

<sup>(2)</sup> Carbonate Hardness of 307 mg/L and pH of 7.97 were used to calculate site-specific

GSI Protection Criteria, as applicable.

<sup>(3)</sup> Footnote T, Footnotes for Generic Cleanup Criteria Tables, administrative rule R 299.49, effective December 30, 2013, refers the reader to TSCA for the determination of the applicability of TSCA, which is incorporated by reference into the Part 201 rules. Footnote T provides for alternatives to compliance with the TSCA requirements if TSCA cleanup levels are not applicable. See Table 2.3 for TSCA cleanup levels.

TABLE 2.3

**LIST OF PRELIMINARY REMEDIATION GOALS FOR PCBs IN SOIL  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL MILL, INC. PROPERTY  
PLAINWELL, MICHIGAN**

		<b>Toxic Substances Control Act <sup>(1,3)</sup></b>	<b>Toxic Substances Control Act <sup>(2,3)</sup></b>
<b><i>Polychlorinated Biphenyls (PCBs)</i></b>			
Aroclor-1016 (PCB-1016)	mg/kg	1	10
Aroclor-1221 (PCB-1221)	mg/kg	1	10
Aroclor-1232 (PCB-1232)	mg/kg	1	10
Aroclor-1242 (PCB-1242)	mg/kg	1	10
Aroclor-1248 (PCB-1248)	mg/kg	1	10
Aroclor-1254 (PCB-1254)	mg/kg	1	10
Aroclor-1260 (PCB-1260)	mg/kg	1	10
Total PCBs	mg/kg	1	10

**Notes:**

<sup>(1)</sup> Toxic Substances Control Act (TSCA) Criterion for bulk PCB remediation waste in High Occupancy Areas without further conditions (40 CFR 761.61(a)(4)(i)).

<sup>(2)</sup> Toxic Substances Control Act (TSCA) Criterion for bulk PCB remediation waste in High Occupancy Areas with restrictions (40 CFR 761.61(a)(4)(i)).

<sup>(3)</sup> Footnote T, Footnotes for Generic Cleanup Criteria Tables, administrative rule R 299.49, effective December 30, 2013, refers the reader to TSCA for the determination of the applicability of TSCA, which is incorporated by reference into the Part 201 rules. Footnote T provides for alternatives to compliance with the TSCA requirements if TSCA cleanup levels are not applicable. See Table 2.3 for TSCA cleanup levels.

TABLE 2.4

**SUMMARY OF RISK-BASED CONCENTRATIONS FOR ARSENIC IN SOIL**  
**FEASIBILITY STUDY REPORT**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

Chemical of Potential Concern (COPC)	Units	Risk-Based Concentration for Soil, $RBC_{soil}^{(1)}$						Minimum $RBC_{soil}$		
		Trespasser	Recreational User	Resident	Commercial Worker	Utility Worker	Construction Worker	Residential <sup>(2)</sup>	Commercial <sup>(3)</sup>	Commercial+Recreational <sup>(4)</sup>
<b>TARGET CANCER RISK = <math>1.0 \times 10^{-4}</math>; TARGET HAZARD QUOTIENT = 1.0</b>										
Arsenic	$\mu\text{g/g}$	1,258 HQ	178 HQ	36 HQ	267 Cancer	280 HQ	1,028 Cancer	36	267	178
<b>TARGET CANCER RISK = <math>1.0 \times 10^{-5}</math>; TARGET HAZARD QUOTIENT = 1.0</b>										
Arsenic	$\mu\text{g/g}$	196 Cancer	32 Cancer	6.4 Cancer	27 Cancer	280 HQ	103 Cancer	6.4	27	27
<b>TARGET CANCER RISK = <math>1.0 \times 10^{-6}</math>; TARGET HAZARD QUOTIENT = 1.0</b>										
Arsenic	$\mu\text{g/g}$	20 Cancer	3.2 Cancer	0.64 Cancer	2.7 Cancer	44 Cancer	10.3 Cancer	5.8 <sup>(5,6)</sup>	5.8 <sup>(5,6)</sup>	5.8 <sup>(5,6)</sup>

**Notes:**

<sup>(1)</sup> The basis of the calculated RBCs is provided below the RBC value: HQ = the RBC value is based on a hazard quotient; Cancer = the RBC value is based on cancer risk.

<sup>(2)</sup>  $RBC_{soil}$  for the residential areas include all receptors.

<sup>(3)</sup>  $RBC_{soil}$  for the commercial areas include all receptors, except residents and recreational users.

<sup>(4)</sup>  $RBC_{soil}$  for the commercial+recreational areas include all receptors, except residents.

<sup>(5)</sup> 5.8  $\mu\text{g/g}$  is the Part 201 State Default Background Level for arsenic. The minimum calculated RBC is below background; therefore, the value was substituted with background.

<sup>(6)</sup> Part 201 Cleanup criteria, updated 12/30/12 pursuant to 1994 PA 451 as amended.

TABLE 2.5

**SUMMARY OF RISK-BASED CONCENTRATIONS FOR POLYCHLORINATED BIPHENYLS IN SOIL  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<i>Chemical of Potential Concern (COPC)</i>	<i>Units</i>	<i>Risk-Based Concentration for Soil, RBC<sub>soil</sub></i>						<i>Minimum RBC<sub>soil</sub></i>		
		<i>Trespasser</i>	<i>Recreational User</i>	<i>Resident</i>	<i>Commercial Worker</i>	<i>Utility Worker</i>	<i>Construction Worker</i>	<i>Residential<sup>(1)</sup></i>	<i>Commercial<sup>(2)</sup></i>	<i>Commercial+Recreational<sup>(3)</sup></i>
<b>TARGET CANCER RISK = 1.0 x 10<sup>-4</sup>; TARGET HAZARD QUOTIENT = 1.0</b>										
Total PCBs	µg/g	35	21	4.2	13	9.1	55	4.2	9.1	9.1
<b>TARGET CANCER RISK = 1.0 x 10<sup>-5</sup>; TARGET HAZARD QUOTIENT = 1.0</b>										
Total PCBs	µg/g	35	12	2.5	9.1	9.1	38	2.5	9.1	9.1
<b>TARGET CANCER RISK = 1.0 x 10<sup>-6</sup>; TARGET HAZARD QUOTIENT = 1.0</b>										
Total PCBs	µg/g	6.2	1.2	0.25	0.91	9.1	3.8	0.25 <sup>(4,5)</sup>	0.91 <sup>(4,5)</sup>	0.91 <sup>(4,5)</sup>

**Notes:**

<sup>(1)</sup> RBC<sub>soil</sub> for the residential areas include all receptors.

<sup>(2)</sup> RBC<sub>soil</sub> for the commercial areas include all receptors, except residents and recreational users.

<sup>(3)</sup> RBC<sub>soil</sub> for the commercial+recreational areas include all receptors, except residents.

<sup>(4)</sup> Comparison for this risk-based concentration during the development of the alternatives was substituted with the TSCA Criterion of 1 mk/kg for Bulk PCB Remediation Waste in High Occupancy Areas without further conditions (40 CFR 761.61(a)(4)(i)).

TABLE 2.6

**FINAL ECOLOGICAL PRELIMINARY REMEDIATION GOALS  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<i>Constituent</i>	<i>95% UCL Concentration (mg/kg)</i>	<i>Avian PRG (mg/kg)</i>	<i>Mammalian PRG (mg/kg)</i>	<i>Final Ecological PRG (mg/kg)</i>	<i>95% UCL &lt; Final Ecological PRG</i>	<i>Risk Management Required to Meet RAO</i>
<i>Semi-Volatile Organic Constituents (SVOCs)</i>						
Carbazole	0.083	---	0.672	0.672	Yes	No
<i>Polycyclic Aromatic Hydrocarbons (PAHs)</i>						
High Molecular Weight PAHs	19.9	69.6	59.6	59.6	Yes	No
<i>Inorganic Constituents</i>						
Cadmium	0.95	23.0	2.01	2.01		
Copper	143	634	6,334	634	Yes	No
Lead	181	140 <sup>a</sup> /812 <sup>b</sup>	7,212	140 <sup>a</sup> /812 <sup>b</sup>	Yes	Yes
Mercury	1.53	3.19	76.8	3.19	Yes	No
Selenium	0.74	---	9.09	9.09	Yes	No
Zinc	333	1,705	9,142	1,705	Yes	No

**Notes:**

PRG - Preliminary Remediation Goal

RAO - Remedial Action Objective

UCL - Upper Confidence Limit

mg - milligram

kg - kilogram

<sup>a</sup>- Lower end PRG based on LOAEL of 8.75 mg/kg-day<sup>b</sup>-Upper end PRG based on LOAEL of 42.7 mg/kg-day

TABLE 3.1

**GENERAL RESPONSE ACTIONS - SOIL REMEDIAL ALTERNATIVES**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

GENERAL RESPONSE ACTION	Soil Remedial Alternative 1	Soil Remedial Alternative 2B	Soil Remedial Alternative 2C	Soil Remedial Alternative 3A	Soil Remedial Alternative 3B	Soil Remedial Alternative 3C	Soil Remedial Alternative 3D
NO ACTION	✓						
INSTITUTIONAL CONTROLS		✓	✓		✓	✓	✓
CONTAINMENT/CONSOLIDATION		✓	✓				
EXCAVATION		✓	✓	✓	✓	✓	✓
OFF SITE DISPOSAL		✓	✓	✓	✓	✓	✓
ENGINEERING CONTROLS		✓	✓		✓	✓	✓
TREATMENT							

TABLE 3.2

**COMPARISON OF EXCAVATION VOLUMES BY SOIL REMEDIAL ALTERNATIVE  
FEASIBILITY STUDY REPORT  
PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<b>REDEVELOPMENT AREA</b>	<b>SOIL REMEDIAL ALTERNATIVES 2A AND 3A</b>	<b>SOIL REMEDIAL ALTERNATIVES 2B AND 3B</b>	<b>SOIL REMEDIAL ALTERNATIVES 2C AND 3C</b>	<b>SOIL REMEDIAL ALTERNATIVES 2D AND 3D</b>
RESIDENTIAL AREA 1	4,905	910	935	2,730
RESIDENTIAL AREA 2	3,585	25	620	3,550
RESIDENTIAL AREA 3	1,895	1,495	1,895	4,320
RESIDENTIAL AREA 4	10,535	5,340	9,390	9,965
WATERFRONT PLAZA	0	0	0	0
MIXED RESIDENTIAL/COMMERCIAL AREA 1	1,060	40	70	205
MIXED RESIDENTIAL/COMMERCIAL AREA 2	7,916	5,800	6,395	6,963
COMMERCIAL AREA 1	2,215	12	12	165
COMMERCIAL AREA 2	2,455	0	12	1,645
COMMERCIAL AREA 3	5,765	0	0	3,845
COMMERCIAL AREA 4	16,115	7,185	7,185	15,375
<b>TOTAL VOLUME (CUBIC YARDS)</b>	<b>56,446</b>	<b>20,807</b>	<b>26,514</b>	<b>48,763</b>

**Notes:**

PRGs utilized to determine excavation areas are presented in the FS Report and Tables 2.2 through 2.5.

TABLE 3.3

COMPARISON OF CRITERIA UTILIZED BY ALTERNATIVE FOR EACH REDEVELOPMENT AREA  
 FEASIBILITY STUDY REPORT  
 PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

REDEVELOPMENT AREA	LAND USE DESIGNATION	SOIL REMEDIAL ALTERNATIVES 2A AND 3A	SOIL REMEDIAL ALTERNATIVES 2B AND 3B	SOIL REMEDIAL ALTERNATIVES 2C AND 3C	SOIL REMEDIAL ALTERNATIVES 2D AND 3D
RESIDENTIAL AREA 1	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
RESIDENTIAL AREA 2	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
RESIDENTIAL AREA 3	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
RESIDENTIAL AREA 4	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
WATERFRONT PLAZA	NON-RESIDENTIAL	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	9.1 mg/kg for PCBs <sup>(5)</sup>	9.1 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4)</sup>
				27 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>

TABLE 3.3

COMPARISON OF CRITERIA UTILIZED BY ALTERNATIVE FOR EACH REDEVELOPMENT AREA  
 FEASIBILITY STUDY REPORT  
 PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

REDEVELOPMENT AREA	LAND USE DESIGNATION	SOIL REMEDIAL ALTERNATIVES 2A AND 3A	SOIL REMEDIAL ALTERNATIVES 2B AND 3B	SOIL REMEDIAL ALTERNATIVES 2C AND 3C	SOIL REMEDIAL ALTERNATIVES 2D AND 3D
MIXED RESIDENTIAL/ COMMERCIAL AREA 1	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
MIXED RESIDENTIAL/ COMMERCIAL AREA 2	RESIDENTIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	2.5 mg/kg for PCBs <sup>(5)</sup>	1 mg/kg for PCBs <sup>(4, 12)</sup>
				6.4 mg/kg for Arsenic <sup>(6)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
COMMERCIAL AREA 1	NON-RESIDENTIAL/ COMMERCIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	10 mg/kg for PCBs <sup>(13)</sup>
				27 mg/kg for Arsenic <sup>(11)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
COMMERCIAL AREA 2	NON-RESIDENTIAL/ COMMERCIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	10 mg/kg for PCBs <sup>(13)</sup>
				27 mg/kg for Arsenic <sup>(11)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>
COMMERCIAL AREA 3	NON-RESIDENTIAL/ COMMERCIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	10 mg/kg for PCBs <sup>(13)</sup>
				27 mg/kg for Arsenic <sup>(11)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>

TABLE 3.3

**COMPARISON OF CRITERIA UTILIZED BY ALTERNATIVE FOR EACH REDEVELOPMENT AREA  
FEASIBILITY STUDY REPORT  
PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

REDEVELOPMENT AREA	LAND USE DESIGNATION	SOIL REMEDIAL ALTERNATIVES 2A AND 3A	SOIL REMEDIAL ALTERNATIVES 2B AND 3B	SOIL REMEDIAL ALTERNATIVES 2C AND 3C	SOIL REMEDIAL ALTERNATIVES 2D AND 3D
COMMERCIAL AREA 4	NON-RESIDENTIAL/ COMMERCIAL	Part 201 Generic Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 2, 3)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>	Part 201 Generic Non-Residential Cleanup Criteria <sup>(1, 3, 7)</sup>
		1 mg/kg for PCBs <sup>(4)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	9.1 mg/kg for PCBs <sup>(10)</sup>	10 mg/kg for PCBs <sup>(13)</sup>
				27 mg/kg for Arsenic <sup>(11)</sup>	5.8 mg/kg for Arsenic <sup>(8, 9)</sup>

**Notes:**

<sup>(1)</sup> MDEQ (Michigan) Cleanup Criteria Requirements for Response Activity, Administrative Rules R299.1 to R299.50 effective December 30, 2013 pursuant to 1994 PA 451 as amended. Does not include comparison to Residential/Non-Residential Drinking Water Protection Criteria or Groundwater-Surface Water Interface Protection Criteria.

<sup>(2)</sup> All parameters except PCBs.

<sup>(3)</sup> List of specific PRGs presented in Table 2.2 for COCs.

<sup>(4)</sup> PRG presented in Table 2.3. TSCA Criterion for bulk PCB remediation waste in High Occupancy Areas without further conditions.

<sup>(5)</sup> PRG presented in Table 2.5. Residential Risk-Based Concentration for PCBs in soil with a Target Cancer Risk of  $10^{-5}$ .

<sup>(6)</sup> PRG presented in Table 2.4. Residential Risk-Based Concentration for arsenic in soil with a Target Cancer Risk of  $10^{-5}$ .

<sup>(7)</sup> All parameters except PCBs and arsenic.

<sup>(8)</sup> PRG presented in Table 2.4. Risk-Based Concentration for arsenic in soil with a Target Cancer Risk of  $10^{-6}$ .

<sup>(9)</sup> State Default Background Level. The minimum calculated RBC is below background; therefore, the value was substituted with background.

<sup>(10)</sup> PRG presented in Table 2.5. Non-Residential/Commercial Risk-Based Concentration for PCBs in soil with a Target Cancer Risk of  $10^{-5}$ .

<sup>(11)</sup> PRG presented in Table 2.4. Non-Residential/Commercial Risk-Based Concentration for arsenic in soil with a Target Cancer Risk of  $10^{-5}$ .

<sup>(12)</sup> PRG presented in Table 2.5. Residential Risk-Based Concentration for PCBs in soil with a Target Cancer Risk of  $10^{-6}$ . The minimum calculated RBC is below the TSCA Criterion of 1 mg/kg for Bulk PCB Remediation Waste in High Occupancy Areas without further conditions (40 CFR 761.61(a)(4)(i)); therefore, the value was substituted with this value.

<sup>(13)</sup> PRG presented in Table 2.3 TSCA Criterion for bulk PCB remediation waste in High Occupancy Areas with further conditions.

**TABLE 4.1**  
**SUMMARY OF SOIL REMEDIAL ALTERNATIVES**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

REMEDIAL ALTERNATIVE	SUMMARY OF ALTERNATIVE	PRELIMINARY REMEDIATION GOALS (PRG) <sup>(1)</sup>	Arsenic Specific PRG		PCB Specific PRG		Estimated Excavation Volume (Cubic Yards)	Arsenic Impacted Soils Left In Place Under Buildings <sup>(3)</sup> (Cubic Yards)	Soils Consolidated On Site - Cubic Yards	Soil or Aggregate Used for Capping <sup>(4)</sup> Cubic Yards	Estimated Total Cost <sup>(5)</sup>
			Residential mg/kg	Commerical <sup>(2)</sup> mg/kg	Residential mg/kg	Commerical <sup>(2)</sup> mg/kg					
Soil Alternative - No Action	No Action	None	NA	NA	NA	NA	None	NA	None	None	\$0
<b>Soil Alternative 2A - Excavation, Consolidation, Capping, and Off-Site Disposal To Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria</b>	Excavation and off-Site disposal with consolidation and capping to Part 201 Generic Residential Cleanup Criteria for all parameters except for PCBs. Excavation and off-Site disposal to TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without Further Restrictions)	Meet Part 201 Generic Residential Cleanup Criteria and TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions)	7.6	7.6	1	1	56,446	NA	Will not achieve RAOs	NA	NC
<b>Soil Alternative 2B - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Land Use and PCB Risk-Based Criteria</b>	Excavation and off-Site disposal with consolidation and capping to Part 201 Generic Residential and Non-Residential Cleanup Criteria, based on land use established in redevelopment plan for Site. Alternative utilizes the iterative approach for arsenic and Residential and Commercial Risk-Based Criteria for PCBs	Meet Part 201 Generic Residential and Non-Residential Cleanup Criteria, and PCB Residential and Commercial Risk-Based Criteria (developed based on 10 <sup>-5</sup> risk level)	7.6	37	2.5	9.1	20,807	95	3,668	2,300 general fill <sup>(3)</sup> 475 gravel	\$4,462,820
<b>Soil Alternative 2C - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria</b>	Excavation and off-Site disposal with consolidation and capping to Part 201 Generic Residential and Non-Residential Cleanup Criteria, and Residential and Commerical Criteria for arsenic and PCBs with a 10 <sup>-5</sup> Risk Level and 1.0 Hazard Quotient for both arsenic and PCBs. The iterative approach was utilized when evaluating the arsenic exceedances.	Meet Part 201 Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic with Iterative Approach, and PCB Residential and Commercial Risk-Based Criteria (developed based on 10 <sup>-5</sup> risk level)	6.4	27	2.5	9.1	26,514	185	4,700	3,050 general fill <sup>(3)</sup> 610 gravel	\$4,998,195
<b>Soil Alternative 2D - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria</b>	Excavation and off-Site disposal with consolidation and capping to Part 201 Generic Residential and Non-Residential Cleanup Criteria, the Part 201 State Default Background Level for arsenic Site-wide with iterative approach, and TSCA Cleanup Level for Bulk Remediation Waste in High Occupancy Areas (without Further Restrictions for Residential/Mixed Areas and with Further Conditions for Commercial Areas).	Meet Part 201 generic Residential and Non-Residential Cleanup Criteria, 10 <sup>-6</sup> Risk Level for Arsenic with Iterative Approach, and TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions for Residential/Mixed Areas and with further conditions for Commercial Areas)	5.8	5.8	1	10	48,763	800	Will not achieve RAOs	NA	NC

**TABLE 4.1**  
**SUMMARY OF SOIL REMEDIAL ALTERNATIVES**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

REMEDIAL ALTERNATIVE	SUMMARY OF ALTERNATIVE	PRELIMINARY REMEDIATION GOALS (PRG) <sup>(1)</sup>	Arsenic Specific PRG		PCB Specific PRG		Estimated Excavation Volume (Cubic Yards)	Arsenic Impacted Soils Left In Place Under Buildings <sup>(3)</sup> (Cubic Yards)	Soils Consolidated On Site - Cubic Yards	Soil or Aggregate Used for Capping <sup>(4)</sup> Cubic Yards	Estimated Total Cost <sup>(5)</sup>
			Residential mg/kg	Commerical <sup>(2)</sup> mg/kg	Residential mg/kg	Commerical <sup>(2)</sup> mg/kg					
<b>Soil Alternative 3A - Excavation and Off-Site Disposal to Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria</b>	Excavation and off-Site disposal to Part 201 Generic Residential Cleanup Criteria for all parameters except for PCBs. Excavation and off-Site disposal to TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without Further Restrictions)	Meet Part 201 Generic Residential Cleanup Criteria and TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions)	7.6	7.6	1	1	56,446	NA	NA	NA	\$9,424,482
<b>Soil Alternative 3B - Excavation and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk-Based Criteria</b>	Excavation and off-Site disposal to Part 201 Generic Residential and Non-Residential Cleanup Criteria, based on land use established in redevelopment plan for Site. Alternative utilizes the iterative approach for arsenic and Residential and Commercial Risk-Based Criteria for PCBs	Meet Part 201 Generic Residential and Non-Residential Cleanup Criteria, and PCB Residential and Commercial Risk-Based Criteria (developed based on 10 <sup>-5</sup> risk level)	7.6	37	2.5	9.1	20,807	95	NA	NA	\$4,363,857
<b>Soil Alternative 3C - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria</b>	Excavation and off-Site disposal to Part 201 Generic Residential and Non-Residential Cleanup Criteria, and Residential and Commercial Criteria for arsenic and PCBs with a 10 <sup>-5</sup> Risk Level and 1.0 Hazard Quotient for both arsenic and PCBs. The iterative approach was utilized when evaluating the arsenic exceedances.	Meet Part 201 Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic with Iterative Approach, and PCB Residential and Commercial Risk-Based Criteria (developed based on 10 <sup>-5</sup> risk level)	6.4	27	2.5	9.1	26,514	185	NA	NA	\$4,875,232
<b>Soil Alternative 3D - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria</b>	Excavation and off-Site disposal to Part 201 Generic Residential and Non-Residential Cleanup Criteria, the Part 201 State Default Background Level for arsenic Site-wide with iterative approach, and TSCA Cleanup Level for Bulk Remediation Waste in High Occupancy Areas (without Further Restrictions for Residential/Mixed Areas and with Further Conditions for Commercial Areas).	Meet Part 201 generic Residential and Non-Residential Cleanup Criteria, 10 <sup>-6</sup> Risk Level for Arsenic with Iterative Approach, and TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions for Residential/Mixed Areas and with further conditions for Commercial Areas)	5.8	5.8	1	10	48,763	800	NA	NA	\$7,477,202

**Notes:**

<sup>(1)</sup> VOCs, SVOCs and metals (except arsenic) were evaluated against the Part 201 Generic Residential Cleanup Criteria for Residential Areas 1 through 4, Waterfront Plaza and Mixed Residential/Commercial Areas 1 and 2 for all scenario

VOCs, SVOCs and metals (except arsenic) were evaluated against the Part 201 Generic Non-Residential Cleanup Criteria for Commercial Areas 1 through 4 for all scenarios

The calculated value for the RBC for arsenic at the 10-6 risk level with a hazard index of 1.0 was below the Part 201 State Default Background Level (SDBL) of 5.8 mg/kg; therefore, the SDBL was substituted for the calculated value for the purposes of this evaluation.

<sup>(2)</sup> Commerical value presented represents the minimum calculated risk-based criteria for all receptors that could potentially be present within that area (i.e. trespasser, commerical worker, utility worker, and construction worker)

<sup>(3)</sup> Arsenic cleanup levels based on Alternative specific criteria. Volume of soil indicated in table is representative of soils that would conceptually remain in place using the concrete slabs as an engineering control. See Table 4.1A, 4.1B and 4.1C for a comparison of sample locations included in the iterative approach (Appendix A) that will not be excavated under each Alternative.

<sup>(4)</sup> General fill could include of existing gravel material in proposed consolidation area south of the main Mill buildings

<sup>(5)</sup> Total estimated cost includes 30-year NPV at 7 percent.

NA - Not applicable

NC - Not calculated

**ALTERNATIVES 2B AND 3B  
SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET THE PART 201 GENERIC CLEANUP CRITERIA (DIRECT CONTACT) FOR ARSENIC  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Proposed Soil Excavation Sample Locations</i>	<i>Soil Locations Left In Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration µg/g</i>	<i>Arsenic RBC µg/g</i>
Residential Area 1	SB-104 (5-7) ft BGS	-	92 J	7.6
	SB-104 (8-10) ft BGS	-	29 J	
Residential Area 2	SB-105 (1-3) ft BGS	-	17.5	7.6
	SB-125 (0-1) ft BGS	-	13.5	
Residential Area 3	MW-15 (0-2) ft BGS	-	19.9	7.6
	SB-134 (1.5-3.5) ft BGS	-	20.3	
	SB-136 (8-10) ft BGS	-	21.1	
	SB-137 (8-10) ft BGS	-	26.4	
	SB-139 (0-1) ft BGS	-	12.5	
	SB-140 (0-1) ft BGS	-	12.1	
	SB-140 (8-10) ft BGS	-	19/15	
Residential Area 4	DG4 (0-1.5) ft BGS	-	16	7.6
	SB-301 (0-1) ft BGS	-	21.6	
	SB-301 (5.5-7.5) ft BGS	-	55.8 J/14.2 J	
	TP-314 (6-8) ft BGS	-	25	
Mixed Residential/Commercial Area 1	TP-306 (0.5-1.5) ft BGS	-	20	7.6
	TP-306 (6-7) ft BGS	-	--/20	
Mixed Residential/Commercial Area 2	MW-19 (0-2) ft BGS	-	18	7.6
	SB-208 (0-1) ft BGS	-	30.8	
	SB-209 (0-1) ft BGS	-	21.9	
	SB-216 (0-4) ft BGS	-	19	
	-	SB-230 (0-1) ft BGS	24.3 J	
	-	SB-231 (0-1) ft BGS	17.6	
	-	SB-232 (0-1) ft BGS	49.6 J	
	-	SB-232 (6-8) ft BGS	804 J	
	-	SB-234 (0-1) ft BGS	15.9	
	-	SB-235 (3-5) ft BGS	28.8	
	-	SB-236 (0-1) ft BGS	13.2	
	SB-237 (0-1) ft BGS	-	39.6	
	SB-237 (2-4) ft BGS	-	57.9	
	SB-238 (0-1) ft BGS	-	39.3	
	SB-238 (2-4) ft BGS	-	49.7/46.7	
	-	SB-240 (0-1) ft BGS	12.6 J	
	-	SB-241 (0-1) ft BGS	13.6 J	
	-	SB-244 (0-1) ft BGS	13.6 J	
	-	SB-244 (4-6) ft BGS	18.4 J	
	SB-246 (3-4) ft BGS	-	21.8	
	SB-303 (0-2) ft BGS	-	12.8	
	SB-312 (0-1) ft BGS	-	95.4	
	SB-2010 (0-1) ft BGS	-	12.5	
	SB-2010 (7-9) ft BGS	-	17.5	
	SB-2013 (0-1) ft BGS	-	31.4	
	TP-340 (0-1) ft BGS	-	18.7	
	TP-340 (3-4) ft BGS	-	18.1	
	TP-342 (0-1) ft BGS	-	102	
	TP-342 (3.5-4) ft BGS	-	17.7	
	TP-343 (0-1) ft BGS	-	25.3	
	TP-343 (3-4) ft BGS	-	19.6	
	TP-344 (1-3) ft BGS	-	16.6	
TP-344 (4-6) ft BGS	-	28.3		

**ALTERNATIVE 2C AND 3C**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET THE ARSENIC RBC BASED ON A CANCER RISK =  $10^{-5}$  AND HAZARD QUOTIENT = 1**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Proposed Soil Excavation Locations</i>	<i>Soil Locations Left in Place Under a Concrete Building Slab</i>	<i>Arsenic Concentration <math>\mu\text{g/g}</math></i>	<i>Arsenic RBC <math>\mu\text{g/g}</math></i>
Residential Area 1	SB-102 (0-1 ft BGS)	-	16.2	6.4
	SB-104 (3-5) ft BGS	-	25.3 J	
	SB-104 (5-7) ft BGS	-	92 J	
	SB-104 (8-10) ft BGS	-	29 J	
	SB-118 (7.5-9.5) ft BGS	-	21 J	
	SB-132 (0-1 ft BGS)	-	13.4	
	SB-132 (8-10) ft BGS	-	16.7	
Residential Area 2	SB-105 (0-1) ft BGS	-	9.6	6.4
	SB-105 (1-3) ft BGS	-	17.5	
	SB-124 (0-1) ft BGS	-	8.4 J	
	SB-124 (7-9) ft BGS	-	8.9 J	
	SB-125 (0-1) ft BGS	-	13.5	
	SB-126 (7.5-9.5) ft BGS	-	9.4	
Residential Area 3	MW-15 (0-2) ft BGS	-	19.9	6.4
	MW-15 (4-6) ft BGS	-	11.9	
	SB-134 (1.5-3.5) ft BGS	-	20.3	
	SB-136 (8-10) ft BGS	-	21.1	
	SB-137 (0-1) ft BGS	-	8.7	
	SB-137 (8-10) ft BGS	-	26.4	
	SB-139 (0-1) ft BGS	-	12.5	
	SB-140 (0-1) ft BGS	-	12.1	
	SB-140 (8-10) ft BGS	-	19/15	
	SB-141 (0-1) ft BGS	-	8.5	
Residential Area 4	DG4 (0-1.5) ft BGS	-	16	6.4
	SB-301 (0-1) ft BGS	-	21.6	
	SB-301 (5.5-7.5) ft BGS	-	55.8 J/14.2 J	
	TP-310 (8-10) ft BGS	-	16.4	
	TP-311 (0-1) ft BGS	-	13.9	
	TP-314 (0-1) ft BGS	-	12.1	
	TP-314 (6-8) ft BGS	-	25	
Waterfront Plaza/Commercial Area 2	TP-321 (0-1) ft BGS	-	34.7	27
Mixed Residential/Commercial Area 1	TP-303 (6-8) ft BGS	-	15	6.4
	TP-306 (0.5-1.5) ft BGS	-	20	
	TP-306 (6-7) ft BGS	-	--/20	

**ALTERNATIVE 2C AND 3C**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET THE ARSENIC RBC BASED ON A CANCER RISK =  $10^{-5}$  AND HAZARD QUOTIENT = 1**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Proposed Soil Excavation Locations</i>	<i>Soil Locations Left in Place Under a Concrete Building Slab</i>	<i>Arsenic Concentration <math>\mu\text{g/g}</math></i>	<i>Arsenic RBC <math>\mu\text{g/g}</math></i>	
Mixed Residential/Commercial Area 2	MW-19 (0-2) ft BGS	-	18	6.4	
	SB-208 (0-1) ft BGS	-	30.8		
	SB-209 (0-1) ft BGS	-	21.9		
	SB-216 (0-4) ft BGS	-	19		
	-	SB-218 (2.5-4.5) ft BGS	15.1 J		
	SB-220 (0-1) ft BGS	-	12.3 J		
	SB-222 (1.5-3.5) ft BGS	-	15.7		
	SB-223 (1-4) ft BGS	-	15.7		
	-	SB-230 (0-1) ft BGS	24.3 J		
	-	SB-231 (0-1) ft BGS	17.6		
	-	SB-232 (0-1) ft BGS	49.6 J		
	-	SB-232 (6-8) ft BGS	804 J		
	-	SB-234 (0-1) ft BGS	15.9		
	-	SB-235 (0.5-1.5) ft BGS	12.1		
	-	SB-235 (3-5) ft BGS	28.8		
	-	SB-236 (0-1) ft BGS	13.2		
	SB-237 (0-1) ft BGS	-	39.6		
	SB-237 (2-4) ft BGS	-	57.9		
	SB-238 (0-1) ft BGS	-	39.3		
	SB-238 (2-4) ft BGS	-	49.7/46.7		
	-	SB-240 (0-1) ft BGS	12.6 J		
	-	SB-241 (0-1) ft BGS	13.6 J		
	-	SB-243 (0-1) ft BGS	9.9 J		
	-	SB-244 (0-1) ft BGS	13.6 J		
	-	SB-244 (4-6) ft BGS	18.4 J		
	SB-246 (3-4) ft BGS	-	21.8		
	SB-303 (0-2) ft BGS	-	12.8		
	SB-304 (0-2) ft BGS	-	12.1		
	SB-306 (0-1) ft BGS	-	11.4		
	SB-308 (3-5) ft BGS	-	16.3		
	SB-310 (0-1) ft BGS	-	10.3		
	SB-312 (0-1) ft BGS	-	95.4		
	SB-2010 (0-1) ft BGS	-	12.5		
	SB-2010 (7-9) ft BGS	-	17.5		
	SB-2011 (3.4-4.75) ft BGS	-	15.7		
	SB-2013 (0-1) ft BGS	-	31.4		
	TP-340 (0-1) ft BGS	-	18.7		
	TP-340 (3-4) ft BGS	-	18.1		
	TP-342 (0-1) ft BGS	-	102		
	TP-342 (3.5-4) ft BGS	-	17.7		
	TP-343 (0-1) ft BGS	-	25.3		
	TP-343 (3-4) ft BGS	-	19.6		
	TP-344 (1-3) ft BGS	-	16.6		
TP-344 (4-6) ft BGS	-	28.3			
CTP-4 (4-) ft BGS	-	14.8			

**ALTERNATIVE 3D**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET PART 201 STATEWIDE DEFAULT BACKGROUND LEVEL FOR ARSENIC**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Soil Locations Excavated</i>	<i>Soil Locations Left in Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration <math>\mu\text{g/g}</math></i>	<i>Arsenic RBC <math>\mu\text{g/g}</math></i>		
Residential Area 1	SB-101 (6.8-8.8) ft BGS	-	15	5.8		
	SB-102 (0-1) ft BGS	-	16.2			
	SB-103 (0-1) ft BGS	-	10.6 J			
	SB-104 (3-5) ft BGS	-	25.3 J			
	SB-104 (5-7) ft BGS	-	92 J			
	SB-104 (8-10) ft BGS	-	29 J			
	SB-109 (8-10) ft BGS	-	14			
	SB-118 (7.5-9.5) ft BGS	-	21 J			
	SB-120 (0-1) ft BGS	-	14 J/11 J			
	SB-132 (0-1) ft BGS	-	13.4			
	SB-132 (8-10) ft BGS	-	16.7			
	Residential Area 2	SB-105 (0-1) ft BGS	-		9.6	5.8
		SB-105 (1-3) ft BGS	-		17.5	
SB-105 (3-5) ft BGS		-	7.3/7.9			
SB-105 (8-10) ft BGS		-	7.8			
SB-124 (0-1) ft BGS		-	8.4 J			
SB-124 (7-9) ft BGS		-	8.9 J			
SB-125 (0-1) ft BGS		-	13.5			
SB-126 (7.5-9.5) ft BGS		-	9.4			
SB-129 (6-8) ft BGS		-	7.5			
SB-129 (8-10) ft BGS		-	7.2			
Residential Area 3	MW-15 (0-2) ft BGS	-	19.9	5.8		
	MW-15 (4-6) ft BGS	-	11.9			
	SB-134 (0-1) ft BGS	-	5.9			
	SB-134 (1.5-3.5) ft BGS	-	20.3			
	SB-135 (0-1) ft BGS	-	6.6			
	SB-136 (8-10) ft BGS	-	21.1			
	SB-137 (0-1) ft BGS	-	8.7			
	SB-137 (8-10) ft BGS	-	26.4			
	SB-138 (0-1) ft BGS	-	6.2			
	SB-139 (0-1) ft BGS	-	12.5			
	SB-140 (0-1) ft BGS	-	12.1			
	SB-141 (0-1) ft BGS	-	8.5			
	SB-140 (8-10) ft BGS	-	19/15			
SB-141 (0-1) ft BGS	-	8.5				
Residential Area 4	DG4 (0-1.5) ft BGS	-	16	5.8		
	SB-5 (2.5-3.5) ft BGS	-	12			
	SB-301 (0-1) ft BGS	-	21.6			
	SB-301 (5.5-7.5) ft BGS	-	55.8 J/14.2 J			
	SB-302 (6.8-8.8) ft BGS	-	12.1			
	SB-321 (0-1) ft BGS	-	7.2/8.1			
	TP-309 (0-1) ft BGS	-	6.4			
	TP-310 (8-10) ft BGS	-	16.4			
	TP-311 (0-1) ft BGS	-	13.9			
	TP-312 (0-1) ft BGS	-	9.7			
	TP-314 (0-1) ft BGS	-	12.1			
	TP-314 (6-8) ft BGS	-	25			

**ALTERNATIVE 3D**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET PART 201 STATEWIDE DEFAULT BACKGROUND LEVEL FOR ARSENIC**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Soil Locations Excavated</i>	<i>Soil Locations Left in Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration μg/g</i>	<i>Arsenic RBC μg/g</i>	
Waterfront Plaza/Commercial Area 2	TP-321 (0-1) ft BGS	-	34.7	5.8	
Mixed Residential/Commercial Area 1	TP-306 (0.5-1.5) ft BGS	-	20	5.8	
	SB-334 (8-10) ft BGS	-	10.7 J		
	SB-336 (8-10) ft BGS	-	10.3 J		
	SB-339 (8-10) ft BGS	-	11.2 J		
	TP-303 (6-8) ft BGS	-	15		
	TP-306 (6-7) ft BGS	-	--/20		
Mixed Residential/Commercial Area 2	MW-19 (0-2) ft BGS	-	18	5.8	
	CTP-4 (4-) ft BGS	-	14.8		
	SB-208 (0-1) ft BGS	-	30.8		
	SB-208 (4-6) ft BGS	-	9.5		
	SB-209 (0-1) ft BGS	-	21.9		
	SB-210 (3-5) ft BGS	-	9.8		
	-	SB-214 (3.5-5.5) ft BGS	-		12.0 J
	SB-216 (0-4) ft BGS	-	19		
	-	SB-218 (2.5-4.5) ft BGS	-		15.1 J
	-	SB-219 (0-1) ft BGS	-		9.8
	SB-220 (0-1) ft BGS	-	12.3 J		
	SB-222 (1.5-3.5) ft BGS	-	15.7		
	SB-223 (1-4) ft BGS	-	15.7		
	-	SB-230 (0-1) ft BGS	-		24.3 J
	-	SB-231 (0-1) ft BGS	-		17.6
	-	SB-232 (0-1) ft BGS	-		49.6 J
	-	SB-232 (6-8) ft BGS	-		804 J
	-	SB-233 (0-1) ft BGS	-		8.5 J
	-	SB-234 (0-1) ft BGS	-		15.9
	-	SB-235 (0.5-1.5) ft BGS	-		12.1
	-	SB-235 (3-5) ft BGS	-		28.8
	-	SB-236 (0-1) ft BGS	-		13.2
	SB-237 (0-1) ft BGS	-	39.6		
	SB-237 (2-4) ft BGS	-	57.9		
SB-238 (0-1) ft BGS	-	39.3			
SB-238 (2-4) ft BGS	-	49.7/46.7			
-	SB-240 (0-1) ft BGS	-	12.6 J		
-	SB-241 (0-1) ft BGS	-	13.6 J		

**ALTERNATIVE 3D**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET PART 201 STATEWIDE DEFAULT BACKGROUND LEVEL FOR ARSENIC**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Soil Locations Excavated</i>	<i>Soil Locations Left in Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration <math>\mu\text{g/g}</math></i>	<i>Arsenic RBC <math>\mu\text{g/g}</math></i>
Mixed Residential/Commercial Area 2	-	SB-243 (0-1) ft BGS	9.9 J	
	-	SB-244 (0-1) ft BGS	13.6 J	
	-	SB-244 (4-6) ft BGS	18.4 J	
	SB-246 (3-4) ft BGS	-	21.8	
	-	SB-254 (0-4) ft BGS	12.1	
	SB-303 (0-2) ft BGS	-	12.8	
	SB-304 (0-2) ft BGS	-	12.1	
	SB-306 (0-1) ft BGS	-	11.4	
	SB-308 (3-5) ft BGS	-	16.3	
	SB-308 (7.5-9.5) ft BGS	-	10.1	
	SB-310 (0-1) ft BGS	-	10.3	
	SB-311 (0-1) ft BGS	-	8.6	
	SB-312 (0-1) ft BGS	-	95.4	
	SB-2010 (0-1) ft BGS	-	12.5	
	SB-2010 (7-9) ft BGS	-	17.5	
	SB-2011 (3.4-4.75) ft BGS	-	15.7	
	SB-2013 (0-1) ft BGS	-	31.4	
	TP-339 (0-1) ft BGS	-	9.0	
	TP-340 (0-1) ft BGS	-	18.7	
	TP-340 (3-4) ft BGS	-	18.1	
	TP-342 (0-1) ft BGS	-	102	
	TP-342 (3.5-4) ft BGS	-	17.7	
	TP-343 (0-1) ft BGS	-	25.3	
	TP-343 (3-4) ft BGS	-	19.6	5.8
	TP-344 (1-3) ft BGS	-	16.6	
	TP-344 (4-6) ft BGS	-	28.3	
Commercial Area 1	SB-133 (0-1) ft BGS	-	10.0	5.8
	SB-144 (7-9) ft BGS	-	10.6/5.0	
	SS-103 (0-2) ft BGS	-	8.6	
	SS-105 (0-2) ft BGS	-	8.7	
	SS-106 (0-2) ft BGS	-	8.8/8.9	
Commercial Area 2	TP-316 (0-1) ft BGS	-	16.4 J	5.8
	TP-324 (9-10) ft BGS	-	12.8 J/16.5 J	
	TP-325 (0-1) ft BGS	-	13.9 J	
	TP-321 (0-1) ft BGS	-	34.7	
	TP-325 (8-10) ft BGS	-	21.4 J	
-	SB-331 (8-10) ft BGS	-	46.9 J	5.8
Commercial Area 3	SB-248 (0-1) ft BGS	-	8.5 J	5.8
	SB-248 (0.5-1.5) ft BGS	-	9.4	
	TP-304 (5-7) ft BGS	-	11.1	
	TP-305 (0.5-1.5) ft BGS	-	16	
	TP-307 (0.5-1.5) ft BGS	-	16/18	
	TP-307 (2-3) ft BGS	-	13	
	TP-337 (2-4) ft BGS	-	13.3	
	TP-338 (8-10) ft BGS	-	15.6	

**ALTERNATIVE 3D**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET PART 201 STATEWIDE DEFAULT BACKGROUND LEVEL FOR ARSENIC**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Soil Locations Excavated</i>	<i>Soil Locations Left in Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration μg/g</i>	<i>Arsenic RBC μg/g</i>	
Commercial Area 4	MW-16 (0-2) ft BGS	-	8.9	5.8	
	MW-16 (8-10) ft BGS	-	11.6		
	MW-17 (8-10) ft BGS	-	29.6		
	MW-17 (0-2) ft BGS	-	7.8/8.6		
	SB-201 (0-1) ft BGS	-	9.1 J		
	SB-201 (2-4) ft BGS	-	13.3 J		
	SB-202 (0-1) ft BGS	-	9.8 J		
	SB-202 (2-4) ft BGS	-	20.0 J		
	SB-203 (0-1) ft BGS	-	9.8 J		
	SB-203 (2-4) ft BGS	-	17.6 J/13 J		
	SB-204 (0-1) ft BGS	-	8.9 J		
	SB-204 (2-4) ft BGS	-	10.5 J		
	-	SB-245 (0-1) ft BGS	-		16.4 J
	-	SB-249 (0-1) ft BGS	-		9.9 J
	-	SB-263 (0-1) ft BGS	-		8.6
	-	SB-263 (3-5) ft BGS	-		10.4
	-	SB-264 (0-1) ft BGS	-		12.8
	-	SB-265 (0-1) ft BGS	-		31.6
	-	SB-265 (2-4) ft BGS	-		15.4
	-	SB-266 (1.4-2.4) ft BGS	-		7.5
	-	SB-267 (0-1) ft BGS	-		7.3
	-	SB-268 (0-1) ft BGS	-		7
	-	SB-270B (0-1) ft BGS	-		6.8 J
	-	SB-272 (1-3) ft BGS	-		10.1
	-	SB-274 (0-1) ft BGS	-		42.3
	-	SB-274 (2.5-4.5) ft BGS	-		9.5
	-	SB-275 (0-1) ft BGS	-		14.6
	-	SB-276 (0-1) ft BGS	-		9.1
	-	SB-277 (0-1) ft BGS	-		7.2
	-	SB-277 (3-5) ft BGS	-		8.8
	-	SB-278 (0-1) ft BGS	-		14.2
	-	SB-278 (3-5) ft BGS	-		7.6
	-	SB-279 (0-1) ft BGS	-		16.8
-	SB-279 (3-5) ft BGS	-	4.9 J/21.8 J		
-	SB-280 (0-1) ft BGS	-	75.4		
-	SB-280 (3-5) ft BGS	-	12.5		
-	SB-281 (0-1) ft BGS	-	17.2		
-	SB-282 (0-1) ft BGS	-	21.1		
-	SB-283 (0-1) ft BGS	-	16.4		
-	SB-284 (0-1) ft BGS	-	13.4		
-	SB-284 (2.5-4.5) ft BGS	-	10.6		
-	SB-285 (0-1) ft BGS	-	14.2		
-	SB-287 (0-1) ft BGS	-	7.8		
-	SB-289 (0-1) ft BGS	-	21.6 J		
-	SB-290 (0-1) ft BGS	-	36.0 J		
-	SB-292 (3-5) ft BGS	-	11.4/7.7		
-	SB-293 (0-1) ft BGS	-	8.3 J		
-	SB-294 (0-1) ft BGS	-	20.5		
-	SB-295 (0-1) ft BGS	-	7.7		

**ALTERNATIVE 3D**  
**SOIL BORINGS/LOCATIONS REQUIRING REMOVAL TO MEET PART 201 STATEWIDE DEFAULT BACKGROUND LEVEL FOR ARSENIC**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

<i>Redevelopment Area</i>	<i>Soil Locations Excavated</i>	<i>Soil Locations Left in Place Under Concrete Building Slabs</i>	<i>Arsenic Concentration <math>\mu\text{g/g}</math></i>	<i>Arsenic RBC <math>\mu\text{g/g}</math></i>	
Commercial Area 4	-	SB-297 (1-2) ft BGS	10.7		
	-	SB-298 (0-1) ft BGS	8.4 J		
	-	SB-299 (0-1) ft BGS	9.0 J		
	-	SB-299 (4-5) ft BGS	15.8 J		
	-	SB-2001 (0-1) ft BGS	7.3		
	-	SB-2002 (0-1) ft BGS	12.2 J		
	-	SB-2004 (0-1) ft BGS	8.6		
	-	SB-2005 (0-1) ft BGS	9		
	-	SB-2005 (2.5-4.5) ft BGS	9		
	-	SB-2008 (0-1) ft BGS	10.4		
	-	SB-2009 (1-2) ft BGS	17.4 J		
	-	SB-2009 (5-7) ft BGS	7.6 J		
		SB-2012 (0-1) ft BGS	-	8.5	
		TP-202 (0.5-1.5) ft BGS	-	16.2/11.2	
		TP-341 (0.5-1.5) ft BGS	-	20.1	
		BK5 (2.5-3) ft BGS	-	11	5.8
		NW Sidewall (1.5) ft BGS	-	60.8	
		NE Sidewall (2) ft BGS	-	65.6/49.4	
		SE Sidewall (1.5) ft BGS	-	50.7	
		SW Sidewall (2) ft BGS	-	31.5	
		SB-2040 (1.5-2.5) ft BGS	-	52.8	
		SB-2041 (1-2) ft BGS	-	69.4	
		SB-2042 (2-5) ft BGS	-	8.42	
		SB-2043 (2.5-2.7) ft BGS	-	13.3	
		TP-17 (7-) ft BGS	-	10.1	
		TP-18 (8-) ft BGS	-	9.7	
		TP-19 (8-) ft BGS	-	8	
		TP-20 (8.5-) ft BGS	-	11.7	
		TP-201 (1-2) ft BGS	-	11.7	
		TP-202 (0.5-1.5) ft BGS	-	16.2/11.2	
		TP-202 (8-10) ft BGS	-	11.7	
		TP-341 (0.5-1.5) ft BGS	-	20.1	

TABLE 4.2.A

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 1  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	PCBs and arsenic	Soil	None	Prevent unacceptable risks due to residential exposures.	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Residential Area 2	PCBs and arsenic	Soil	None	Prevent unacceptable risks due to residential exposures.	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Residential Area 4	PCBs, arsenic, benzene, benzo(a)pyrene, dibenzo(a,h)anthracene, and lead	Soil	None	Prevent unacceptable risks due to residential exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Waterfront Plaza	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Mixed Commercial Area 1	arsenic and manganese	Soil	None	Prevent unacceptable risks due to residential exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Mixed Commercial Area 2	PCBs, arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and lead	Soil	None	Prevent unacceptable risks due to residential exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Commercial Area 1	PCBs, arsenic and manganese	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None

TABLE 4.2.A

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 1  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None
Commercial Area 4	PCBs, arsenic, benzo(a)pyrene, lead, and manganese	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	None	Levels allowing for unrestricted or residential, or commercial/non-residential use will not be met by response activities	None

**Notes:**

Soil Remedial Alternative 1 is the "No Action" alternative.

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential Cleanup Criteria (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of PCBs, which were compared to the TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions).

TABLE 4.2.B

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.B

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to direct contact	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.B

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Waterfront Plaza	None	Soil	None	None	None	None	None
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.B

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Mixed Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.B

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 4	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	metals	Soil	Cap (liner, covered with soil and gravel, and/or pavement)	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction on movement of soil within the capped area.	IC required in perpetuity; levels allowing for unrestricted or residential use will not be met by response activities	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Riperian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 2B is Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria with Iterative Approach for Arsenic and PCB Residential and Commercial Risk-Based Criteria.

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of PCBs, which were compared to the Site-specific Risk-Based Criteria of 2.5 mg/kg and 9.1 mg/kg for residential and commercial receptors/land use, respectively. An iterative approach was applied for arsenic contamination above the Part 201 Generic Residential and Non-Residential Cleanup Criteria of 7.6 mg/kg and 37 mg/kg, respectively, based on land use.

<sup>(2)</sup> Figures 4.2, 4.3, and 4.4 present areas where engineering controls (i.e., engineered cap, building slab, and/or required depth of soil cover) are currently or are planned to be in place subsequent to redevelopment of the Site to address impacts above Part 201 Residential and/or Non-Residential Cleanup Criteria, based on land use, including the proposed consolidation/capped area in Commercial Area 4, and areas with arsenic remaining beneath a building slab or backfilled area. The extent of the areas requiring engineering controls will be determined during the Pre-Design Investigation; therefore, additional areas may require some type of cap or cover, consistent with ARARs.

TABLE 4.2.C

INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
 SOIL REMEDIAL ALTERNATIVE 2C  
 FEASIBILITY STUDY REPORT  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.C

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to direct contact	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.C

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX**  
**SOIL REMEDIAL ALTERNATIVE 2C**  
**FEASIBILITY STUDY REPORT**  
**FORMER PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Waterfront Plaza	None	Soil	None	None	None	None	None
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.C

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Mixed Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.C

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	metals	Soil	Cap (liner, covered with soil and gravel, and/or pavement)	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction on movement of soil within the capped area.	IC required in perpetuity; levels allowing for unrestricted or residential use will not be met by response activities	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.C

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 2C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Riperian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 2C is Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria,  $10^{-5}$  carcinogenic risk level and a hazard quotient of 1.0, with Iterative Approach for Arsenic, and PCB Residential and Commercial Risk-Based Criteria.

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of arsenic and PCBs, which for arsenic were compared to the Site-specific Risk-Based Criteria of 6.4 mg/kg and 27 mg/kg for residential and commercial receptors/land use, respectively, and for PCBs were compared to the Site-specific risk-based criteria of 2.5 mg/kg and 9.1 mg/kg for residential and commercial areas, respectively. An iterative approach was applied for arsenic contamination above the risk-based criteria based on land use.

<sup>(2)</sup> Figures 4.2, 4.3, and 4.4 present areas where engineering controls (i.e., engineered cap, building slab, and/or required depth of soil cover) are currently or are planned to be in place subsequent to redevelopment of the Site to address impacts above Part 201 Residential and/or Non-Residential Cleanup Criteria or Site-specific risk-based criteria, based on land use, including the proposed consolidation/capped area in Commercial Area 4, and areas with arsenic remaining beneath a building slab or backfilled area. The extent of the areas requiring engineering controls will be determined during the Pre-Design Investigation; therefore, additional areas may require some type of cap or cover, consistent with ARARs.

TABLE 4.2.D

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3A  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Residential Area 2	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Residential Area 3	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Residential Area 4	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Waterfront Plaza	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Mixed Commercial Area 1	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None
Mixed Commercial Area 2	None	Soil	None	Prevent unacceptable risks due to residential exposures	None	Not Applicable	None

TABLE 4.2.D

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3A  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 1	None	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	None	Not Applicable	None
Commercial Area 2	None	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	None	Not Applicable	None
Commercial Area 3	None	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	None	Not Applicable	None
Commercial Area 4	None	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	None	Not Applicable	None
Riparian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 3A is Excavation and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria and TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions)

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of PCBs, which were compared to the TSCA Cleanup Level for Bulk PCB Remediation Waste in High Occupancy Areas (without further restrictions).

TABLE 4.2.E

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.E

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to direct contact	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.E

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Waterfront Plaza	None	Soil	None	None	None	None	None
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.E

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Mixed Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.E

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3B  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Riparian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 3B is Excavation and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria,  $10^{-5}$  carcinogenic risk level and a hazard quotient of 1.0, with Iterative Approach for Arsenic, and PCB Residential and Commercial Risk-Based Criteria.

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of arsenic and PCBs, which for arsenic were compared to the Site-specific Risk-Based Criteria of 6.4 mg/kg and 27 mg/kg for residential and commercial receptors/land use, respectively, and for PCBs were compared to the Site-specific risk-based criteria of 2.5 mg/kg and 9.1 mg/kg for residential and commercial areas, respectively. An iterative approach was applied for arsenic contamination above the risk-based criteria based on land use.

<sup>(2)</sup> Figures 4.2, 4.3, and 4.4 present areas where engineering controls (i.e., engineered cap, building slab, and/or required depth of soil cover) are currently or are planned to be in place subsequent to redevelopment of the Site to address impacts above Part 201 Residential and/or Non-Residential Cleanup Criteria or Site-specific risk-based criteria, based on land use, including the proposed consolidation/capped area in Commercial Area 4, and areas with arsenic remaining beneath a building slab or backfilled area. The extent of the areas requiring engineering controls will be determined during the Pre-Design Investigation; therefore, additional areas may require some type of cap or cover, consistent with ARARs.

TABLE 4.2.F

INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
 SOIL REMEDIAL ALTERNATIVE 3C  
 FEASIBILITY STUDY REPORT  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.F

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to direct contact	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.F

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Waterfront Plaza	None	Soil	None	None	None	None	None
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.F

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Mixed Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.F

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3C  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 3	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	None	Prevent unacceptable risks due to non-residential/commercial exposures	Restriction of Land Use to Non-Residential/Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Riparian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 3C is Excavation and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria,  $10^{-5}$  carcinogenic risk level and a hazard quotient of 1.0, with Iterative Approach for Arsenic, and PCB Residential and Commercial Risk-Based Criteria.

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of arsenic and PCBs, which for arsenic were compared to the Site-specific Risk-Based Criteria of 6.4 mg/kg and 27 mg/kg for residential and commercial receptors/land use, respectively, and for PCBs were compared to the Site-specific risk-based criteria of 2.5 mg/kg and 9.1 mg/kg for residential and commercial areas, respectively. An iterative approach was applied for arsenic contamination above the risk-based criteria based on land use.

<sup>(2)</sup> Figures 4.2, 4.3, and 4.4 present areas where engineering controls (i.e., engineered cap, building slab, and/or required depth of soil cover) are currently or are planned to be in place subsequent to redevelopment of the Site to address impacts above Part 201 Residential and/or Non-Residential Cleanup Criteria or Site-specific risk-based criteria, based on land use, including the proposed consolidation/capped area in Commercial Area 4, and areas with arsenic remaining beneath a building slab or backfilled area. The extent of the areas requiring engineering controls will be determined during the Pre-Design Investigation; therefore, additional areas may require some type of cap or cover, consistent with ARARs.

TABLE 4.2.G

INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
 SOIL REMEDIAL ALTERNATIVE 3D  
 FEASIBILITY STUDY REPORT  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.G

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3D  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 3	arsenic	Soil	None	Prevent unacceptable risks due to direct contact	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Residential Area 4	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Waterfront Plaza	None	Soil	None	None	None	None	None

TABLE 4.2.G

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3D  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to residential exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Mixed Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to residential exposures	Any community gardens must be of raised bed construction, with no subsurface excavation permitted. All non-raised bed gardens (i.e., above final redeveloped grade) are prohibited.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.G

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3D  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 1	PCBs $\geq 1$ mg/kg and $\leq 10$ mg/kg to be designated as capped high occupancy areas	Soil	Capped and marked in accordance with 40 CFR 761	Prevent unacceptable risks due to residual concentrations and occupancy	Deed restriction consistent with capped high occupancy use as required by 40 CFR 761.61(a)(7) and (8) must be implemented whereby owner agrees to maintain the cap in perpetuity	IC needed in perpetuity unless additional remedial action taken to address concentrations of PCBs $\geq 1$ mg/kg and $< 10$ mg/kg	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 2	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential/commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.G

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3D  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 2	PCBs $\geq$ 1 mg/kg and $\leq$ 10 mg/kg to be designated as capped high occupancy areas	Soil	Capped and marked in accordance with 40 CFR 761	Prevent unacceptable risks due to residual concentrations and occupancy	Deed restriction consistent with capped high occupancy use as required by 40 CFR 761.61(a)(7) and (8) must be implemented whereby owner agrees to maintain the cap in perpetuity	IC needed in perpetuity unless additional remedial action taken to address concentrations of PCBs $\geq$ 1 mg/kg and $<$ 10 mg/kg	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential or commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 3	PCBs $\geq$ 1 mg/kg and $\leq$ 10 mg/kg to be designated as capped high occupancy areas	Soil	Capped and marked in accordance with 40 CFR 761	Prevent unacceptable risks due to residual concentrations and occupancy	Deed restriction consistent with capped high occupancy use as required by 40 CFR 761.61(a)(7) and (8) must be implemented whereby owner agrees to maintain the cap in perpetuity	IC needed in perpetuity unless additional remedial action taken to address concentrations of PCBs $\geq$ 1 mg/kg and $<$ 10 mg/kg	Deed Restriction (Planned)
Commercial Area 4	arsenic	Soil	None	Prevent unacceptable risks due to non-residential or commercial exposures	Restriction of Land Use to Non-Residential or Commercial Purposes	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)

TABLE 4.2.G

**INSTITUTIONAL CONTROLS RELATIONSHIP MATRIX  
SOIL REMEDIAL ALTERNATIVE 3D  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

Redevelopment Area	Contaminants Remaining <sup>(1)</sup>	Contaminated Media	Proposed Engineering Controls <sup>(2)</sup>	Cleanup Objective	Use Restriction/IC Objective	Conditions for Termination	IC Instruments (Planned or Implemented)
Commercial Area 4	arsenic	Soil	Existing building/slabs and/or appropriate soil/pavement cover	Prevent unacceptable risks due to non-residential or commercial exposures	Identify, including installation of appropriate permanent marker(s), that concentrations of arsenic at individual locations may exceed the Part 201 Generic Residential Cleanup Criteria and require that any disturbance of soil is conducted in accordance with a Soil Management Plan.	IC required in perpetuity unless additional remedial action taken to address concentrations of arsenic that exceed Part 201 Generic Residential Cleanup Criteria	Deed Restriction (Planned)
Commercial Area 4	PCBs $\geq 1$ mg/kg and $\leq 10$ mg/kg to be designated as capped high occupancy areas	Soil	Capped and marked in accordance with 40 CFR 761	Prevent unacceptable risks due to residual concentrations and occupancy	Deed restriction consistent with capped high occupancy use as required by 40 CFR 761.61(a)(7) and (8) must be implemented whereby owner agrees to maintain the cap in perpetuity	IC needed in perpetuity unless additional remedial action taken to address concentrations of PCBs $\geq 1$ mg/kg and $< 10$ mg/kg	Deed Restriction (Planned)
Riparian corridor along the Kalamazoo River	various constituents	Soil	None	Prevent unacceptable risks to ecological receptors	Restriction of Land Use; contingency for re-evaluation of ecological risk if re-development plan changes	IC required in perpetuity	Deed Restriction (Planned)

**Notes:**

Soil Remedial Alternative 3D is Excavation and Off-Site Disposal to Meet Part 201 Generic Residential and Non Residential Cleanup Criteria,  $10^{-6}$  carcinogenic risk level and a hazard quotient of 1.0, with Iterative Approach for Arsenic, and TSCA Cleanup Level for PCB Remediation Waste in High Occupancy Areas (without further restrictions in residential areas and with further restrictions in commercial areas)

<sup>(1)</sup> Contaminants remaining were identified based on comparison to the Part 201 Generic Residential and Non-Residential Cleanup Criteria based on land use (except Drinking Water Protection Criteria and Groundwater Surface Water Interface Criteria) for all parameters with the exception of arsenic and PCBs, which for arsenic were compared to the Statewide Default Background Level of 5.8 mg/kg for all receptors/land use, respectively, and for PCBs were compared to the TSCA levels of 1 mg/kg and 10 mg/kg for residential and commercial areas, respectively. An iterative approach was applied for arsenic contamination above the risk-based criteria based on land use.

<sup>(2)</sup> Figures 4.2, 4.3, and 4.4 present areas where engineering controls (i.e., engineered cap, building slab, and/or required depth of soil cover) are currently or are planned to be in place subsequent to redevelopment of the Site to address impacts above Part 201 Residential and/or Non-Residential Cleanup Criteria or Site-specific risk-based criteria, based on land use, including the proposed consolidation/capped area in Commercial Area 4, and areas with arsenic remaining beneath a building slab or backfilled area. The extent of the areas requiring engineering controls will be determined during the Pre-Design Investigation; therefore, additional areas may require some type of cap or cover, consistent with ARARs.

TABLE 5.1

SUMMARY OF ALTERNATIVES COST ANALYSIS  
 FEASIBILITY STUDY REPORT  
 PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

REMEDIAL ALTERNATIVE	SOIL ALTERNATIVE 1	SOIL ALTERNATIVE 2B	SOIL ALTERNATIVE 2C	SOIL ALTERNATIVE 3A
	NO ACTION	EXCAVATION AND OFF-SITE DISPOSAL WITH CONSOLIDATION AND CAPPING TO MEET PART 201 LAND USE AND PCB RISK-BASED LEVEL	EXCAVATION AND OFF-SITE DISPOSAL WITH CONSOLIDATION AND CAPPING TO MEET PART 201 LAND USE, 10 <sup>-5</sup> RISK LEVEL FOR ARSENIC AND PCB RISK-BASED LEVEL	EXCAVATION AND OFF-SITE DISPOSAL TO MEET PART 201 RESIDENTIAL CRITERIA AND TSCA UNRESTRICTED HIGH OCCUPANCY LEVEL
<b>CAPITAL COSTS</b>				
<b>A. Pre-Design Investigation</b>	\$0			
		1.0 Sampling and Analysis Plan \$33,200	1.0 Sampling and Analysis Plan \$33,200	1.0 Sampling and Analysis Plan \$33,200
		2.0 SAP Implementation \$108,100	2.0 SAP Implementation \$123,900	2.0 SAP Implementation \$245,500
		3.0 Contingency \$70,700	3.0 Contingency \$78,600	3.0 Contingency \$139,400
		4.0 Remedial Action Plan \$60,000	4.0 Remedial Action Plan \$60,000	4.0 Remedial Action Plan \$60,000
<b>Subtotal Pre-Design Costs</b>		<b>\$272,000</b>	<b>\$295,700</b>	<b>\$478,100</b>
<b>B. Construction</b>	\$0			
		1.0 Mobilization and Setup \$234,600	1.0 Mobilization and Setup \$270,000	1.0 Mobilization and Setup \$483,500
		2.0 Preparation and/or Demolition \$138,000	2.0 Preparation and/or Demolition \$139,400	2.0 Preparation and/or Demolition \$372,700
		3.0 Excavation \$279,900	3.0 Excavation \$293,100	3.0 Excavation \$981,200
		4.0 Transportation and Disposal \$1,543,370	4.0 Transportation and Disposal \$1,696,670	4.0 Transportation and Disposal \$2,895,765
		5.0 Consolidation of Soils on Site \$34,500	5.0 Consolidation of Soils on Site \$53,900	5.0 Restoration \$1,209,030
		6.0 Capping Soils On Site \$61,700	6.0 Capping Soils On Site \$96,500	6.0 Demobilization \$26,600
		7.0 Restoration \$400,325	7.0 Restoration \$485,525	
		8.0 Demobilization \$32,300	8.0 Demobilization \$32,300	
<b>Subtotal Construction Costs</b>	<b>\$0</b>	<b>\$2,724,695</b>	<b>\$3,067,395</b>	<b>\$5,968,795</b>
<b>C. Engineering and/or Oversight</b>	\$0			
		1.0 Institutional Controls \$50,000	1.0 Institutional Controls \$50,000	1.0 Institutional Controls \$50,000
		2.0 Engineering \$408,700	2.0 Engineering \$460,100	2.0 Engineering \$895,300
		3.0 Construction Oversight \$272,500	3.0 Construction Oversight \$306,700	3.0 Construction Oversight \$596,900
<b>Subtotal Engineering and Oversight Costs</b>	<b>\$0</b>	<b>\$731,200</b>	<b>\$816,800</b>	<b>\$1,542,200</b>
<b>Capital Costs</b>	<b>\$0</b>	<b>\$3,455,895</b>	<b>\$3,884,195</b>	<b>\$7,510,995</b>
<b>Contingency</b>	<b>\$0</b>	<b>\$863,974</b>	<b>\$971,049</b>	<b>\$1,877,749</b>
<b>Total Capital Costs</b>	<b>\$0</b>	<b>\$4,319,869</b>	<b>\$4,855,244</b>	<b>\$9,388,744</b>
<b>OPERATION, MAINTENANCE, &amp; MONITORING COSTS</b>				
<b>A. ANNUAL MONITORING AND MAINTENANCE</b>	\$0	\$9,600	\$9,600	\$2,400
<b>Contingency on OM &amp; M Costs - Years 1 - 30</b>		\$1,920	\$1,920	\$200
<b>Contingency on OM &amp; M Costs - Years 1 - 5</b>				
<b>Contingency on OM &amp; M Costs - Years 6-30</b>				
<b>OM &amp; M Costs</b>	<b>\$0</b>	<b>\$11,520</b>	<b>\$11,520</b>	<b>\$2,600</b>
<b>TOTAL CAPITAL COSTS</b>	<b>\$0</b>	<b>\$4,319,869</b>	<b>\$4,855,244</b>	<b>\$9,388,744</b>
<b>NET PRESENT VALUE OF OM &amp; M (30 YEARS @ 7% DISCOUNT RATE)</b>	<b>\$0</b>	<b>\$142,952</b>	<b>\$142,952</b>	<b>\$35,738</b>
<b>TOTAL COST</b>	<b>\$0</b>	<b>\$4,462,820</b>	<b>\$4,998,195</b>	<b>\$9,424,482</b>

TABLE 5.1

SUMMARY OF ALTERNATIVES COST ANALYSIS  
 FEASIBILITY STUDY REPORT  
 PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

REMEDIAL ALTERNATIVE	SOIL ALTERNATIVE 3B <i>EXCAVATION AND OFF-SITE DISPOSAL TO MEET PART 201 LAND USE AND PCB RISK-BASED LEVEL</i>	SOIL ALTERNATIVE 3C <i>EXCAVATION AND OFF-SITE DISPOSAL WITH CONSOLIDATION AND CAPPING TO MEET PART 201 LAND USE, 10<sup>-5</sup> RISK LEVEL FOR ARSENIC AND PCB RISK- BASED LEVEL</i>	SOIL ALTERNATIVE 3D <i>EXCAVATION AND OFF-SITE DISPOSAL TO MEET LAND USE FOR PART 201, 10<sup>-6</sup> RISK LEVEL FOR ARSENIC, AND TSCA HIGH OCCUPANCY CRITERIA</i>
<b>CAPITAL COSTS</b>			
<b>A. Pre-Design Investigation</b>			
	1.0 Sampling and Analysis Plan \$33,200	1.0 Sampling and Analysis Plan \$33,200	1.0 Sampling and Analysis Plan \$33,200
	2.0 SAP Implementation \$108,100	2.0 SAP Implementation \$123,900	2.0 SAP Implementation \$151,100
	3.0 Contingency \$70,700	3.0 Contingency \$78,600	3.0 Contingency \$92,200
	4.0 Remedial Action Plan \$60,000	4.0 Remedial Action Plan \$60,000	4.0 Remedial Action Plan \$60,000
	<b>Subtotal Pre-Design Costs</b> <u>\$272,000</u>	<b>Subtotal Pre-Design Costs</b> <u>\$295,700</u>	<b>Subtotal Pre-Design Costs</b> <u>\$336,500</u>
<b>B. Construction</b>			
	1.0 Mobilization and Setup \$226,200	1.0 Mobilization and Setup \$261,600	1.0 Mobilization and Setup \$374,200
	2.0 Preparation and/or Demolition \$138,000	2.0 Preparation and/or Demolition \$139,400	2.0 Preparation and/or Demolition \$158,200
	3.0 Excavation \$279,900	3.0 Excavation \$293,100	3.0 Excavation \$468,700
	4.0 Transportation and Disposal \$1,658,970	4.0 Transportation and Disposal \$1,851,070	4.0 Transportation and Disposal \$2,636,682
	5.0 Restoration \$400,325	5.0 Restoration \$485,525	5.0 Restoration \$989,518
	6.0 Demobilization \$26,600	6.0 Demobilization \$26,600	6.0 Demobilization \$26,600
		8.0 Demobilization	
	<b>Subtotal Construction Costs</b> <u>\$2,729,995</u>	<b>Subtotal Construction Costs</b> <u>\$3,057,295</u>	<b>Subtotal Construction Costs</b> <u>\$4,653,900</u>
<b>C. Engineering and/or Oversight</b>			
	1.0 Institutional Controls \$50,000	1.0 Institutional Controls \$50,000	1.0 Institutional Controls \$50,000
	2.0 Engineering \$409,500	2.0 Engineering \$458,600	2.0 Engineering \$698,100
	3.0 Construction Oversight \$273,000	3.0 Construction Oversight \$305,700	3.0 Construction Oversight \$465,400
	<b>Subtotal Engineering and Oversight Costs</b> <u>\$732,500</u>	<b>Subtotal Engineering and Oversight Costs</b> <u>\$814,300</u>	<b>Subtotal Engineering and Oversight Costs</b> <u>\$1,213,500</u>
	<b>Capital Costs</b> <u>\$3,462,495</u>	<b>Capital Costs</b> <u>\$3,871,595</u>	<b>Capital Costs</b> <u>\$5,867,400</u>
	<b>Contingency</b> <u>\$865,624</u>	<b>Contingency</b> <u>\$967,899</u>	<b>Contingency</b> <u>\$1,466,850</u>
	<b>Total Capital Costs</b> <u>\$4,328,119</u>	<b>Total Capital Costs</b> <u>\$4,839,494</u>	<b>Total Capital Costs</b> <u>\$7,334,250</u>
<b>OPERATION, MAINTENANCE, &amp; MONITORING COSTS</b>			
<b>A. ANNUAL MONITORING AND MAINTENANCE</b>	\$2,400	\$2,400	\$9,600
	Contingency on OM & M Costs - Years 1 - 30 \$200	Contingency on OM & M Costs - Years 1 - 30 \$200	Contingency on OM & M Costs - Years 1 - 30 \$1,920
	Contingency on OM & M Costs - Years 1 - 5		
	Contingency on OM & M Costs - Years 6-30		
	OM & M Costs <u>\$2,600</u>	OM & M Costs <u>\$2,600</u>	OM & M Costs <u>\$11,520</u>
	<b>TOTAL CAPITAL COSTS</b> <u>\$4,328,119</u>	<b>TOTAL CAPITAL COSTS</b> <u>\$4,839,494</u>	<b>TOTAL CAPITAL COSTS</b> <u>\$7,334,250</u>
<b>NET PRESENT VALUE OF OM &amp; M (30 YEARS @ 7% DISCOUNT RATE)</b>	<u>\$35,738</u>	<u>\$35,738</u>	<u>\$142,952</u>
<b>TOTAL COST</b>	<u>\$4,363,857</u>	<u>\$4,875,232</u>	<u>\$7,477,202</u>

TABLE 5.2

**SUMMARY OF INDIVIDUAL ANALYSIS OF RETAINED REMEDIAL ALTERNATIVES  
FEASIBILITY STUDY REPORT  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<b>Alternative No. Description</b>	<b>Soil Remedial Alternative 1 No Action</b>	<b>Soil Remedial Alternative 2B Excavation, Consolidation, Capping, and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk-Based Criteria</b>	<b>Soil Remedial Alternative 2C Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-5</sup> Risk Level for Arsenic, and PCB Risk- Based Criteria</b>	<b>Soil Remedial Alternative 3A Excavation and Off-Site Disposal to Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria</b>	<b>Soil Remedial Alternative 3B Excavation and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk Based Criteria</b>	<b>Soil Remedial Alternative 3C Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-5</sup> Risk Level for Arsenic, and PCB Risk- Based Criteria</b>	<b>Soil Remedial Alternative 3D Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10<sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria</b>
<b>Overall Protection of Human Health and the Environment</b>	Not Protective	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal, consolidation, capping, and institutional controls	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal, consolidation, capping, and institutional controls	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal, and institutional controls	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal, and institutional controls	Protective: likelihood of exposure reduced/controlled through excavation and off-site disposal, and institutional controls
<b>Compliance with ARARs</b>	ARARs would not be met	Complies with ARARs	Complies with ARARs	Complies with ARARs	Complies with ARARs	Complies with ARARs	Complies with ARARs
<b>Long-Term Effectiveness and Permanence</b>	Low degree of long-term effectiveness and permanence	Effective and reliable with O&M with a good degree of certainty. Residual risk remains as a result of consolidated materials.	Effective and reliable with O&M with a good degree of certainty. Residual risk remains as a result of consolidated materials.	Effective and reliable with a good degree of certainty.	Effective and reliable with a good degree of certainty.	Effective and reliable with a good degree of certainty.	Effective and reliable with a good degree of certainty.
<b>Reduction of Toxicity, Mobility, or Volume Through Treatment</b>	No reduction in TMV through treatment	No reduction in TMV through treatment	No reduction in TMV through treatment	No reduction in TMV through treatment	No reduction in TMV through treatment	No reduction in TMV through treatment	No reduction in TMV through treatment
<b>Short-Term Effectiveness</b>	No additional risks posed to the community, workers, or the environment	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 13 weeks.	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 18 weeks.	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 48-50 weeks.	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 13 weeks.	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 18 weeks.	Low-level potential and manageable risks to the community (e.g., dust, noise, transportation, emissions) and workers, (e.g., exposure to contaminated media, occupational hazards). Estimated construction period of approximately 28 weeks.
<b>Implementability</b>	No approvals or services needed	Specialty contractors required for limited asbestos abatement on the outside of the former Mill Buildings, installation of containment to facilitate excavation along the Mill Race, liner installation, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Major technical, administrative, and schedule difficulties not expected. Obtaining backfill material from local sources that meet the arsenic PRGs for the Site may be difficult. Approvals required by property owners for implementation of deed restrictions and soil relocation. Approval from USEPA and MDEQ required for Soil Relocation Plan. Asbestos abatement notice potentially required for project.	Specialty contractors required for limited asbestos abatement, installation of containment to facilitate excavation along the Mill Race, liner installation, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Obtaining backfill material from local sources that meet the arsenic PRGs may be difficult. Major technical, administrative, and schedule difficulties not expected. Approvals required by property owners for implementation of deed restrictions and soil relocation. Approval from USEPA and MDEQ required for Soil Relocation Plan. Asbestos abatement notice potentially required for project.	Specialty contractors required for limited asbestos abatement within some of the former Mill buildings, installation of containment to facilitate excavation along the Mill Race, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Obtaining backfill material from local sources that meet the arsenic PRG may be difficult. Major technical, administrative, and schedule difficulties not expected. Approvals required by property owners for implementation of work. Asbestos abatement notice required.	Specialty contractors required for limited asbestos abatement on the outside of the former Mill buildings, installation of containment to facilitate excavation along the Mill Race, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Obtaining backfill material from local sources to meet the arsenic PRGs may be difficult. Major technical, administrative, and schedule difficulties not expected. Approvals required by property owners for implementation of deed restrictions and access to the property for remedial actions. Asbestos abatement notice potentially required for project.	Specialty contractors required for limited asbestos abatement on the outside of the former Mill buildings (adjacent to excavation areas), installation of containment to facilitate excavation along the Mill Race, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Obtaining backfill material from local sources to meet the arsenic PRGs may be difficult. Major technical, administrative, and schedule difficulties not expected. Approvals required by property owner for implementation of deed restrictions.	Specialty contractors required for limited asbestos abatement within some of the former Mill buildings, installation of containment to facilitate excavation along the Mill Race, structural evaluation of Site structures that may be effected by excavation activities and installation of shoring to maintain building foundation integrity may be required. Specialty contractors are available to conduct the work. No other special techniques, materials, or labor to construct. Major technical, administrative, and schedule difficulties not expected. Obtaining backfill material from local sources to meet the arsenic PRGs may be difficult. Approvals required by property owner for implementation of deed restrictions.
<b>Total Cost</b>	\$0	\$4,462,820	\$4,998,195	\$9,424,482	\$4,363,857	\$4,875,232	\$7,477,202

Notes:  
ARAR - Applicable or Relevant and Appropriate Requirement  
TMV - Toxicity, Mobility or Volume

**TABLE 5.3**  
**SUMMARY OF ALTERNATIVES EVALUATION**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

EVALUATION CRITERIA	Soil Alternative 1 - No Action	Soil Alternative 2B - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 2C - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3A - Excavation and Off-Site Disposal to Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria	Soil Alternative 3B - Excavation and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 3C - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3D - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria
<b>THRESHOLD CRITERIA</b>							
<b>Overall Protection of Human Health and the Environment</b>							
Human Health Protection (i.e. direct contact, soil ingestion, etc.)	No reduction in risk	Reduction in impacted material on Site through off-site disposal	See Alternative 2B	Reduction in impacted material on Site through off-site disposal	See Alternative 3A	See Alternative 3A	See Alternative 3A
		Cap reduces direct contact risk and soil ingestion risk	See Alternative 2B				
		Institutional controls in the form of deed restrictions including drinking water restrictions and a restrictive covenant prohibiting gardens/other than raised bed gardens at the Site.	See Alternative 2B	Institutional controls to restrict drinking water well installation / drinking water restrictions	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Engineering controls in the form of specific existing concrete slabs utilized to prevent direct contact with impacted soils remaining under the slabs.	See Alternative 2B	Soils above direct contract criteria will not remain following remedial action	See Alternative 2B	See Alternative 2B	See Alternative 2B
Environmental Protection	No reduction in risk	Potential migration of impacted soil is mitigated through off-site disposal, and consolidation with capping	See Alternative 2B	Potential migration of impacted soils is mitigated through off-site disposal	See Alternative 3A	See Alternative 3A	See Alternative 3A
		Engineering controls, in the form of specific existing concrete slabs, utilized to prevent migration of impacted soils remaining under the slabs.	See Alternative 2B	Alternative does not include utilization of concrete slabs as engineering controls	See Alternative 2B	See Alternative 2B	See Alternative 2B
<b>Compliance with ARARs</b>							
Compliance with ARARs	Does not meet ARARs	Meet ARARs	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Sampling and disposal requirements applicable to PCB impacted IDW	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Deed restrictions related to PCB impacted soils will not be necessary	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	Requires deed restrictions for high occupancy areas with PCBs between 1 mg/ kg and 10 mg/kg that will remain in place with a cap over the soils.
		VOCs, SVOCs, metals and other inorganics to Part 201 Land Use Criteria, PCBs to risk-based level based on land use	VOCs, SVOCs, metals and other inorganics except arsenic to Part 201 Land Use Criteria. Arsenic to risk based criteria based on land use. PCBs to risk-based level based on land use.	VOCs, SVOCs, metals and other inorganics to Part 201 Residential Criteria. PCBs to high occupancy unrestricted use.	See Alternative 2B	See Alternative 2C	VOCs, SVOCs, metals and other inorganics except arsenic to Part 201 Land Use Criteria. Arsenic to Residential Direct Contact Criteria. PCBs to unrestricted use in Residential Areas and high occupancy with further restrictions in Commercial Areas.
		U.S. DOT Placarding and Handling of PCBs greater than 20 mg/kg (within Commercial Area 4)	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Historical Buildings will not be demolished to achieve remediation objectives. Restoration of historical building components (as applicable for remedial action efforts) will follow the State Historic Preservation Office guidance.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Relocation of soils deemed eligible for on-site consolidation per MDEQ guidance	See Alternative 2B				
Restrictions on transfer of real property designated as a facility. Requirement that if residential criteria not met, land use restrictions must be provided (deed restriction on land use).	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B		

**TABLE 5.3**  
**SUMMARY OF ALTERNATIVES EVALUATION**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

EVALUATION CRITERIA	Soil Alternative 1 - No Action	Soil Alternative 2B - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 2C - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3A - Excavation and Off-Site Disposal to Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria	Soil Alternative 3B - Excavation and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 3C - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3D - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria
<b>Compliance with ARARs - continued</b>							
Compliance with ARARs	Does not meet ARARs	Remedial Action Plan will be approved by U.S. EPA	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Material disposed of off-site will be properly characterized for disposal	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Remedial action completion to achieve a cumulative risk below a carcinogenic risk of 10 <sup>-5</sup> or a hazard index of 1.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	Exceeds ARAR
		Remedial action will satisfy Act 451, Part 31	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Remedial action will implement soil erosion and sedimentation control measures	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Dust emissions will be monitored and mitigated during remedial action	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Asbestos emissions will be monitored and mitigated during abatement work.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Michigan Vehicle Code will be followed - project will be scheduled to avoid frost laws/periods of frost	See Alternative 2B	Michigan Vehicle Code will be followed- project could require a winter hiatus	See Alternative 2B	See Alternative 2B	Michigan Vehicle Code will be followed- project could require spring restoration
		Abandonment and installation of monitoring wells included in Alternative	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Cap over consolidated soils will follow Act 451, Part 115 design guidance although consolidated soil is not considered "solid waste" under MCL 324.20120c.	See Alternative 2B	Alternative does not include consolidation/capping	See Alternative 3A	See Alternative 3A	See Alternative 3A
The perimeter fence will be kept in place during remedial actions. Construction fence will be installed around open excavations.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B		
<b>PRIMARY CRITERIA</b>							
Long-term Effectiveness and Permanence	Existing risk will remain	Risk is reduced by removal of impacted soil to achieve the PRGs	See Alternative 2B	Risk is reduced by removal of impacted soil to achieve the PRGs	See Alternative 3A	See Alternative 3A	See Alternative 3A
		Risk eliminated for consolidated soils as long as cap is maintained.	See Alternative 2B				
		Cap is highly reliable if maintained.	See Alternative 2B				
5-year review would be required to ensure adequate protection of human health and the environment is maintained.	5-year review would be necessary. Impacted soils will remain on Site under engineering controls (cap and concrete slabs)	See Alternative 2B	5-year review would not be necessary	5-year review would be necessary. Impacted soils will remain on Site under engineering controls (concrete slabs)	See Alternative 3B	See Alternative 3B	
Reduction of Toxicity, Mobility, and Volume Through Treatment	Not relevant - no reduction in risk through treatment	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1
Community Protection	Risk to the community is not increased. The Site is enclosed with a perimeter fence (except for the River and Mill Race borders).	Temporary increase in dust, which would be controlled through application of water for dust suppression	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Temporary increase in construction traffic. Traffic would be routed through the west end of the Site minimizing impact to the community. Work hours and days would be restricted.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B

**TABLE 5.3**  
**SUMMARY OF ALTERNATIVES EVALUATION**  
**FEASIBILITY STUDY REPORT**  
**PLAINWELL, INC. MILL PROPERTY**  
**PLAINWELL, MICHIGAN**

EVALUATION CRITERIA	Soil Alternative 1 - No Action	Soil Alternative 2B - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 2C - Excavation, Consolidation, Capping, and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3A - Excavation and Off-Site Disposal to Meet Part 201 Residential and TSCA Unrestricted High Occupancy Criteria	Soil Alternative 3B - Excavation and Off-Site Disposal To Meet Part 201 Land Use and PCB Risk-Based Criteria	Soil Alternative 3C - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-5</sup> Risk Level for Arsenic, and PCB Risk-Based Criteria	Soil Alternative 3D - Excavation and Off-Site Disposal to Meet Land Use for Part 201, 10 <sup>-6</sup> Risk Level for Arsenic, and TSCA High Occupancy Criteria
<b>PRIMARY CRITERIA - continued</b>							
Worker Protection	No increase in risk to workers	Protection required against dermal contact and inhalation of impacted dust during soil remediation efforts.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Protection required against inhalation of asbestos fibers during asbestos abatement work.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
Environmental Impacts	Continued impact from existing conditions	Would consolidate arsenic impacted soils into Commercial Area 4. Effects would be negated by the installation of the cap system and cap monitoring and maintenance as necessary.	See Alternative 2B	No consolidation component to Alternative	See Alternative 3A	See Alternative 3A	See Alternative 3A
		Environment would be improved	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
Estimated Duration of Construction Effort	0 weeks	4 months	5 months	11 months	4 months	5 months	8 months
Implementability	No construction or operation	Verification samples would be utilized to determine compliance with the PRGs. Sampling can be conducted easily.	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B	See Alternative 2B
		Approximately 4,800 CY of additional soil could be added to capped area based on estimated capacity of consolidation area. Soil could be added to consolidation area with some additional effort to prepare a larger receiving area.	Approximately 3,800 CY of additional soil could be added to capped area based on estimated capacity of consolidation area. Soil could be added to consolidation area with some additional effort to prepare a larger receiving area.	Additional soil excavation within the buildings would be difficult due to existing interior structures, asbestos, thick concrete floors, stability of the structures/shoring requirements, and equipment limitations (size of equipment restrictions).	Additional excavation could be conducted if necessary based on the PDI.	See Alternative 3B	See Alternative 3B
		Monitoring of the cap (over consolidated soils) would be limited to surface observations such as subsidence.	See Alternative 2B	No monitoring required	No cap component to Alternative to monitor	See Alternative 3B	Monitoring of capped areas where PCBs remain in place above unrestricted high occupancy would be required. Monitoring effort is dependent on cap material and location within the Site.
		Monitoring of the concrete slabs within the existing buildings would be limited to surface observations.	See Alternative 2B	No monitoring required	See Alternative 2B	See Alternative 2B	See Alternative 2B
Total Cost	\$0	\$4,462,820	\$4,998,195	\$9,424,482	\$4,363,857	\$4,875,232	\$7,477,202
<b>MODIFYING CRITERIA</b>							
State Acceptance	To Be Determined	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1
Community Acceptance	To Be Determined	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1	See Alternative 1

Meets evaluation criteria with least amount of risk/complication.

Meets evaluation criteria with higher degree of risk/complication.

Does not meet evaluation criteria or would result in significant risk/complication.