

Figure U-7  
Sediment Invertebrate Risk Summary  
Based on Maximum Detected Concentrations

Study Area	Sediment Invertebrates																							
	SW	SW	STW	STW	ASP	ASP	P13	P13	P18	P18	PA5	PA5	RCF	RCF	NDR	NDR	ADR	ADR	UCD	UCD	LCD	LCD	BKG	BKG
CPEC	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ	Low HQ	High HQ
<b>Inorganics</b>																								
Barium																								
Chromium	<1	2	<1	<1	<1	<1	<1	<1	<1	1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1
Copper	<1	2	<1	1	<1	1	<1	<1	<1	2	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	2	<1	<1	<1	<1	<1	<1	<1
Mercury	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Molybdenum																								
Nickel	4	8	3	7	3	7	2	4	2	5	4	8	1	3	<1	1	<1	1	<1	2	<1	2	1	2
Selenium	4	6	2	4	2	4	<1	1	4	6	2	3	<1	1	<1	1	<1	<1	<1	<1	<1	1	<1	1
Thallium																								
Tin																								
Zinc	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Herbicides</b>																								
2,4-Dichlorophenoxybutyric acid (2,4-DB)																								
Dichlorprop		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1
MCPP		1550		500		<1		<1		1550		1000		500		<1		<1		<1		<1		<1
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>																								
Total LMW PAH	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total HMW PAH	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Polychlorinated Biphenyls (PCBs)</b>																								
Aroclor 1260	<1	2	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum of PCB Congeners	<1	3	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	3										
<b>Pesticides</b>																								
4,4'-DDD	<1	2	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,4'-DDE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,4'-DDT	<1	2	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total DDT	<1	4	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Chlordane, alpha	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Endosulfan I	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	1
Endosulfan II	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1
Endosulfan sulfate	<1	9	<1	9	<1	<1	<1	<1	<1	<1	<1	<1	<1	9	<1	<1	<1	1	<1	<1	<1	<1	<1	<1
Endrin	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Heptachlor	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Kepon		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1
<b>Volatile Organic Compounds (VOCs)</b>																								
1,1-Dichloroethane		90		21		<1		<1		<1		90		21		<1		<1		<1		<1		<1
1,2-Dichloroethane																								
Acetone	1	7	1	7									1	7	<1	<1	<1	<1				<1	<1	<1
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				<1	<1	<1
Carbon disulfide		6		6		<1		6		1		2		2		<1		<1						<1
Diisopropyl ether																								
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				<1	<1	<1
Freon 113 (1,1,2-trichloro-1,2,2-trifluoroethane)																								
Methyl ethyl ketone		<1		<1										<1		<1		<1		<1		<1		<1
Methyl isobutyl ketone (MIBK)		<1		<1										<1		<1		<1		<1		<1		<1
Methylcyclopentane																								
Methylene chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				<1	<1	<1
Propanal																								
Tetrahydrofuran																								
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				<1	<1	<1

Notes:

Not evaluated
Low or High HQ < 1
High HQ ≥ 1
Low HQ ≥ 1
Low HQ > 10

CPEC = Constituent of Potential Ecological Concern  
 HQ = Hazard Quotient  
 LMW PAH = Low Molecular Weight Polycyclic Aromatic Hydrocarbons  
 HMW PAH = High Molecular Weight Polycyclic Aromatic Hydrocarbons  
 NOAEL = No Observed Adverse Effect Level  
 LOAEL = Lowest Observed Effect Level  
 TRV = Toxicity Reference Value  
 Low HQ is based on LOAEL TRV; High HQ is based on NOAEL TRV.

Study Areas:

SW = Sitewide  
 SWP = Sitewide Including Ponds (Ponds 18 and A-5)  
 ADB = Administration Building Area  
 BTA = Burial Trench Area  
 CDA = Central Drainage Area  
 FPP = Former Ponds and Pads  
 LQT = Liquid Treatment Area  
 MSA = Maintenance Shed Area  
 ROS = Remaining On-site Areas  
 RCRA = RCRA Canyon  
 RWA = Roadway Areas  
 WCS = West Canyon Spray Area  
 ASP = A-Series Pond  
 P13 = Pond 13  
 P18 = Pond 18  
 PA5 = Pond A-5  
 RCF = RCF Pond  
 STW = Stormwater Ponds (Pond 13, A-Series Pond, and RCF Pond)  
 NDR = North Drainage  
 ADR = A Drainage  
 BDR = B Drainage  
 UCD = Upper C Drainage  
 LCD = Lower C Drainage  
 BKG = Background