PRIMARY SOURCE	release mechanism	SECONDARY SOURCE	release mechanism	TERTIARY SOURCE	release mechanism	EXPOSURE ROUTE	RECEPTOR CHARACTERIZATION: POTENTIALLY EXPOSED RECEPTORS (HUMAN HEALTH - BASELINE CONDITIONS)										
							OU1 Parcels (excluding Quarry Pond)				Quarry Pond		Properties outside OU1			GMR / floodplain	
							Residents [1]	Site Workers	Temporary Workers	Trespassers	Temporary Workers	Trespassers	Residents / workers	Temporary Workers	Trespassers	Recreation users	Temporary Workers
PORTIONS OF SURFACE AND SUBSURFACE FILL MATERIAL CONTENTS (within OU1)	direct contact					INCIDENTAL INGESTION DERMAL CONTACT	--	X	X	X	na	na	na	na	na	na	na
	waste decomposition/ volatilization	SUBSURFACE GAS / VAPOR	subsurface migration	INDOOR AIR	dispersion	INHALATION OF VAPORS (and accumulation of explosive gas)	--	X	--	--	--	--	X	--	--	--	--
			discharge to atmosphere	AMBIENT AIR	dispersion	INHALATION OF VAPORS		X	X	X	X	X	X	X	X	X	X
	volatilization/ wind erosion	AMBIENT AIR/ FUGITIVE DUST	dispersion			INHALATION OF VAPORS/ PARTICULATES	--	X	X	X	X	X	X	X	X	X	X
			dispersion/deposition	SURFACE DEPOSITION	direct contact	INCIDENTAL INGESTION DERMAL CONTACT	--	X	X	X	X	X	X	X	X	X	X
	storm water runoff	SURFACE WATER i.e., intermittent drainage pathways	direct contact			INCIDENTAL INGESTION DERMAL CONTACT	--	X	X	X	na	na	X	X	X	X	X
		SEDIMENTS i.e., intermittent drainage pathways	direct contact			INCIDENTAL INGESTION DERMAL CONTACT	--	X	X	X	na	na	X	X	X	X	X
	storm water runoff	PONDS i.e., existing intermittent ponds (Large Pond and Small Pond)	water circulation	SURFACE WATER	direct contact volatilization	INCIDENTAL INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	X	X	X	na	na	na	na	na	na	na
			sedimentation	SEDIMENT	direct contact	INCIDENTAL INGESTION DERMAL CONTACT		X	X	X	na	na	na	na	na	na	na
			recharge to gw	GROUNDWATER see below													
	storm water runoff	QUARRY POND	water circulation	SURFACE WATER	direct contact volatilization	INCIDENTAL INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	na	na	na	X	X	na	na	na	na	na
			sedimentation	SEDIMENT	direct contact	INCIDENTAL INGESTION DERMAL CONTACT	--	na	na	na	X	X	na	na	na	na	na
			direct contact	FISH	direct contact	INGESTION	--	na	na	na	na	X	na	na	na	na	na
			recharge to gw	GROUNDWATER see below													
	infiltration / leaching	GROUNDWATER	migration to water wells			INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	X	--	--	--	--	X	--	--	--	--
			migration/discharge	SURFACE WATER Quarry Pond	direct contact volatilization	INCIDENTAL INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	na	na	na	X	X	na	na	na	na	na
			migration/discharge	SURFACE WATER Great Miami River	direct contact volatilization	INCIDENTAL INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	na	na	na	na	na	na	na	na	X	X
			volatilization and subsurface migration	INDOOR AIR	dispersion	INHALATION OF VAPORS	--	X	--	--	--	--	X	--	--	--	--
			volatilization to atmosphere	AMBIENT AIR	dispersion	INHALATION OF VAPORS	--	X	X	X	--	--	X	X	X	X	X
			direct contact			INCIDENTAL INGESTION DERMAL CONTACT INHALATION OF VAPORS	--	X	X	X	--	--	X	X	X	X	X

LEGEND

--	incomplete exposure pathway e.g., due to absence of exposure route and/or receptor
na	not applicable due to spatial separation
[1]	Respondents intend to put institutional controls, in the form of an environmental covenant in place for relevent parts of OU1, which would restrict residential use.
X	potentially complete exposure pathway to be evaluated/addressed as part of OU1
X	pathway to be addressed as part of vapor intrusion studies (and subject to RI findings)
X	potentially complete exposure pathway to be evaluated for areas outside of OU1

figure 3.1a

CONCEPTUAL SITE MODEL - HUMAN HEALTH
RI/FS WORK PLAN
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

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