

FACT SHEET

DIY Site Assessment

When purchasing a property it is important to check for potential contamination in the soil and groundwater.

This fact sheet will give you some useful hints to do the first steps yourself.

Step 1 Collect as much information from the local and regional council about the site.

Step 2 Collect anecdotal information by talking to neighbours, previous property owners, etc. who may point you to other people who 'know a lot about the area'. Libraries may have a collection of old photographs and if your property is in town you may be able to identify the type of business on it or next door.

Step 3 Take some soil samples with a spade. Take a fair number and take the samples from anywhere the soil looks different or where the vegetation is different and make several mixtures (called composites) of samples from similar areas, similar discolorations or vegetation distressed areas. Using the information on the other Fact Sheets select some broad analytical scans from an analytical laboratory (like Hill laboratory in Hamilton). Talk the requirement over with one of their service managers and send the composite samples to the lab. Do not composite more than 4 samples for metal analysis, however to screen for many of the other compounds,

Main contaminants to test for in step 3					
Compound group	Hill Lab code	Residential	Lifestyle block	Commercial	
Basic Metal suite	(MSSB)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Extensive Metals	(MSx)				<input checked="" type="checkbox"/>
Polycyclic Arom. Hydrocarbons	(PAHsc)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Semi volatile organics	(SVOCsc)				<input checked="" type="checkbox"/>
Cyanides	(CNtot)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Volatile organic compounds	(VOCsc)			<input checked="" type="checkbox"/>	
Oils (TPH)	(TPHOI)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PCB's	(PCBsc)			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pesticides	(OCNPsc)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Acidic herbicides	(AHBs)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PCP	(PCPsc)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Dioxin-Furan screen					<input checked="" type="checkbox"/>

Note not all samples require screening for all compound groups, cost can be reduced when some judgment is used, however this will cost consultant time. Metals can be expected any where, PAH: old tar paths tarred fences, waste burning, CN can be present in fill if site is near gasworks (light blueish), SVOCs: workshops, sheds, VOC fuel /solvent handling, Oils-PCB-PCP shed, waste area, wood storage, sheds; Dioxins: incinerator, waste burning, often when PCP is present. Be careful in selection, the lab screens above range in cost from \$ 70 to over \$ 1,000.

more can be composited as detection level is low compared to guideline levels. To assess if you have a potential problem you need to multiply the lab result with the number of samples you have used to make the composite to compare with the guideline levels. When all analysis results are low compared to the guideline values provided on the guideline tables on this website the likelihood your site has a serious surface contamination is small. Unfortunately this will not tell you anything about deeper contamination however when you have a shallow bore, or any other means to access groundwater take a sample from the up- and down-stream side of your property and send this to the laboratory to be scanned for volatile and semi-volatile compounds. Many will come up as smaller than detection level. Compare those with actual concentrations with the guideline tables provided, or if they are not yet available send us your question and attach as much information as possible (at least the pdf file of the lab results), a sketch of your property and where you have taken the samples.

Step 4 When contamination is established you will need professional advice. EPA can point you to an appropriate consultant in your area.