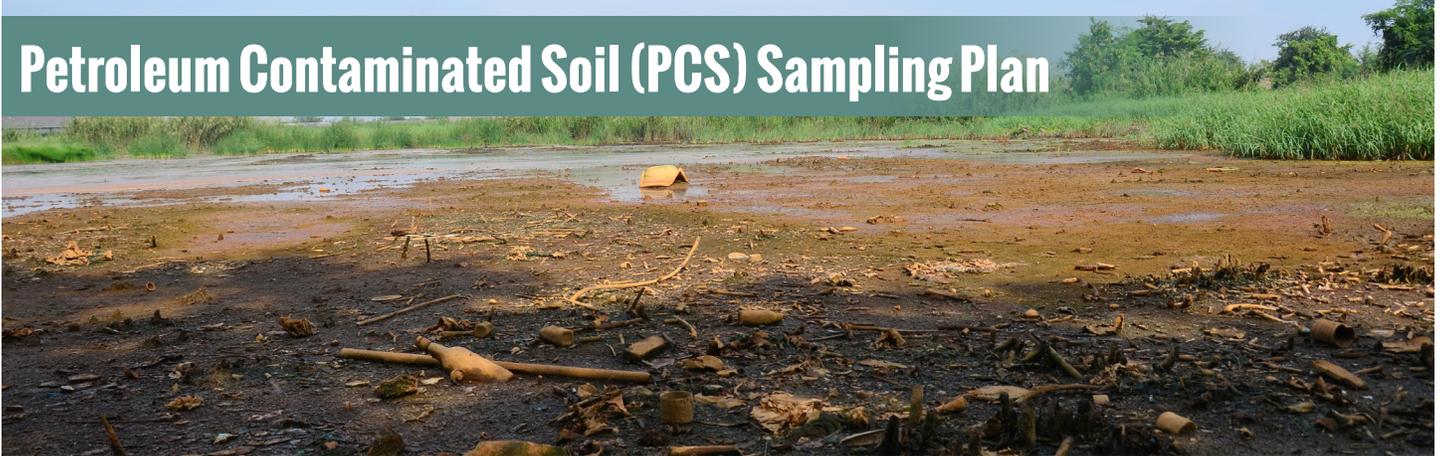


Petroleum Contaminated Soil (PCS) Sampling Plan



Excavated petroleum contaminated soils must be characterized prior to treatment or disposal in order to demonstrate that the selected treatment or disposal method is both necessary and appropriate. The following guidelines should be employed for determining the appropriate number of samples to characterize the soils (Table 1). If soils are being taken to a fixed disposal or fixed treatment facility, additional sampling requirements may need to be followed.

Discreet samples, in intervals of two, may be combined into a composite sample in the laboratory for the sample extract to save on the cost of analyses. For example, 4 discreet samples can be combined in the laboratory to create 2 composite samples. Volatile Organic Compound (VOC) samples should be composited after the extraction process has been performed using an aliquot of the extract.

Discreet samples should be collected from the soil by pushing or driving a clean split-spoon type sampler lined with clean sleeves composed of an inert material such as Teflon, stainless steel, or brass. Sample collection should be conducted in accordance with industry standards.

Table 1: Number of Samples

Soil Volume (cubic yards)	Number of Samples
1-10	2, one from each half
11-20	3, one from each third
21-100	4, one from each quarter
101-500	One sample for each 25 cubic yards, not to exceed 10 samples
>500	one sample for each 50 yards

Completely filled sleeves should be immediately sealed following these steps:

1. Completely cover the ends with a Teflon patch
2. Covering the Teflon patch with a foil patch
3. Covering both patches with tight-fitting plastic caps
4. Sealing the caps by wrapping with custody seals or non-contaminating tape around the sleeve, overlapping the lower edge of the cap

The sample should be immediately labeled, placed in a sealable plastic bag, and stored at 39.2° Fahrenheit (4° C).

Alternative sampling methods may be used if a written sampling plan is submitted to ADEQ for review and approval.

The samples should be submitted to a fixed-based or mobile analytical laboratory licensed by the Arizona Department of Health Services (ADHS) to perform appropriate analyses. A properly completed chain-of-custody document should accompany all samples.

The soil sample preservation and extraction for VOCs should be conducted in accordance with ADEQ Policy 0170.00 "Implementation of EPA Method 5035" – Soil Preparation for EPA Methods 8015B, 8021B, and 8260B. Petroleum contaminated soil sampling can be considered "UST/Tank sampling" with regards to Policy 170, allowing the collection of bulk samples. Samples should be analyzed for constituents and laboratory methods indicated in Table 2. If the test results are above Non-residential SRLs, verify the waste will not need to be classified as hazardous waste.

Contact information

For questions, please contact the Solid Waste Unit at 602-771-4673.

For additional information, please visit <https://azdeq.gov/TSIPFAQ>.

Table 2: Contaminant Levels for PCS

Special Waste Constituents A.R.S. § 49-851(A)(3)	Regulated Contaminants	Non-Regulated Soil	Solid Waste PCS	PCS as Special Waste
		< Residential SRLs (in ppm.mg/kg)	≥ Residential SRLs (in ppm, mg/kg)	≥ Non-Residential SRLs (in ppm, mg/kg)
BTEX EPA Method 8260 or 8021	Benzene	< 0.65	≥ 0.65	≥ 1.4
	Toluene	< 650	≥ 650	≥ 650
	Ethylbenzene	< 400	≥ 400	≥ 400
	Total Xylenes	< 270	≥ 270	≥ 420
PAHS Polynuclear aromatic hydrocarbons Commonly found in diesel and lubricant oil EPA Method 8310	Acenaphthylene	< 3,700	≥ 3,700	≥ 29,000
	Anthracene	< 22,000	≥ 22,000	≥ 240,000
	Benz(A)anthracene	< 6.9	≥ 6.9	≥ 21
	Benzo(A)pyrene	< 0.69	≥ 0.69	≥ 2.1
	Benzo(B)fluoranthene	< 6.9	≥ 6.9	≥ 21
	Benzo(K)fluoranthene	< 69	≥ 69	≥ 210
	Chrysene	< 680	≥ 680	≥ 2,200
	Dibenz(A,H)anthracene	< 0.69	≥ 0.69	≥ 2.1
	Fluoranthene	< 2,300	≥ 2,300	≥ 22,000
	Fluorene	< 2,700	≥ 2,700	≥ 26,000
Indenopyrene	< 6.9	≥ 6.9	≥ 21	
Naphthalene	< 56	≥ 56	≥ 190	
Pyrene	< 2,300	≥ 2,300	≥ 29,000	

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language interpretation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting Ian Bingham, Title VI Nondiscrimination Coordinator at 602-771-4322 or Bingham.Ian@azdeq.gov. Teleprinter services are available by calling 7-1-1 at least 48 hours in advance to make necessary arrangements.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y/o para personas con discapacidades. Las solicitudes de servicios de interpretación de idiomas, interpretación ASL, subtítulos de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación contactando a Ian Bingham, Coordinador de Anti-Discriminación del Título VI al 602-771-4322 o Bingham.Ian@azdeq.gov. Los servicios de teleimpresores están disponibles llamando al 7-1-1 con al menos 48 horas de anticipación para hacer los arreglos necesarios.