

Petroleum Contaminated Soil (PCS) - July 2008

WHAT IS PCS?

Generally speaking, petroleum-contaminated soils (PCS) are generated when gasoline, diesel and used oil are released into the environment. PCS is defined in the Arizona Revised Statutes (A.R.S.) § 49-851.A.3 as soils excavated for storage, treatment or disposal containing benzene, toluene, ethylbenzene, total xylenes, acenaphthylene, anthracene, benzene (A) anthracene, benzo (B) flouranthene, benzo (K) flouranthene, chrysene, dibenz (A, H) anthracene, flouranthene, flourene, indenopyrene, naphthalene or pyrene in concentrations in excess of levels determined by the Arizona Department of Environmental Quality (ADEQ) director pursuant to A.R.S. § 49-152 to protect public health and the environment.

Special Waste PCS

PCS is considered **Special Waste PCS** when soil that is excavated for storage, treatment or disposal contains regulated contaminants listed in A.R.S. § 49-851.A.3 at levels above non-residential soil remediation levels (SRLs). It is designated a special waste above the non-residential level because its treatment, storage, transportation or disposal has the potential to cause adverse effects on public health and the environment.

As of February 1998, the Department determined that the non-residential SRLs are to be followed by PCS handlers for the protection of human health and the environment as set forth in A.R.S. § 49-152 for the 17 constituents listed in the statute.

Solid Waste PCS

PCS excavated for storage, treatment or disposal containing the regulated contaminants (listed in the attached table) is considered a **Solid Waste** only when the contaminants are above the residential SRLs, but below or at the non-residential SRLs. These soils are exempt from PCS rules except for the waste determination requirements and are subject to solid waste regulations found in Arizona Administrative Code (A.A.C.) Title 18, Ch. 8, Art. 16.

Soil exempt from PCS rules

When the levels of regulated contaminants (listed in the attached table) are below or at the residential SRLs in excavated soil, they are EXEMPT from PCS rules except for the waste determination requirements. These soils are exempt from regulation as a solid waste provided that the applicable requirements under A.R.S. § 49-701.02 are met.

I'VE GENERATED PCS – NOW WHAT DO I DO?

Pursuant to A.A.C. R18-13-1604, a generator of excavated PCS must determine if the soil is special waste PCS, solid waste PCS, or non-regulated soil through laboratory analysis by an Arizona certified laboratory or by using generator knowledge. It is recommended that the generator manages the PCS as special waste until a proper waste determination has been conducted.

If laboratory analysis is used, the waste determination shall be performed in accordance with a site-specific written sampling plan using:

- a. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," Third Edition, Chapter Nine, Sampling Plan.
- b. ADEQ's Petroleum Contaminated Soil sampling plan. The sampling plan is available on our Web site: www.azdeq.gov/environ/waste/solid/special.html

I HAVE SPECIAL WASTE PCS – NOW WHAT DO I DO?

- Obtain a Special Waste Generator ID Number (A.A.C. R18-13-1302)
- Complete the "Generator" section of a Special Waste Manifest prior to off-site consignment (A.A.C. R18-13-1302)
- Only use a registered Special Waste Shipper (A.A.C. R18-13-1303)
- Dispose of the Special Waste at a registered storage, disposal, or treatment facility permitted by ADEQ (A.A.C. R18-13-1613)

- Store Special Waste PCS less than 90 days prior to shipment to a storage, disposal or treatment facility (A.A.C. R18-13-1612)
- Keep records at least 3 years (A.A.C. R18-13-1305)

- A written record of monthly inspections of the tank or container for leaks and deterioration and any corrective actions must be kept.

HOW SHOULD SPECIAL WASTE PCS BE STORED?

- Each Special Waste PCS storage area, tank or container used for storage or accumulation of PCS must be labeled as followed:

CAUTION: CONTAINS PETROLEUM
CONTAMINATED SOIL
GENERATOR NAME:
GENERATOR ID#:
ACCUMULATION START DATE:

Special Waste PCS stored in piles:

- Must comply with the facility design requirements listed in A.A.C. R18-13-1609, including a containment system with a clay, synthetic, concrete or asphalt liner.
- Piles must be covered and managed to control wind dispersal of the Special Waste PCS.
- A written record of weekly inspections of the Special Waste PCS piles must be kept, documenting any corrective actions for the run-on and run-off control system, wind dispersal system, and of any leachate collection and control systems.

Special Waste PCS stored in tanks and containers:

- Any tank or container used for storage of Special Waste PCS must be leak-proof, and made of, or lined with, material that will not react with the Special Waste PCS.
- The tank or container must be closed at all times unless Special Waste PCS is being added or removed, and not opened, handled or stored in a manner that will lead to rupture or leaks.

ADEQ ADDITIONAL INFORMATION:

Solid Waste Inspections and Compliance Unit
(602)771-4673 or
Toll-free at (800) 234-5677 Ext. 771-4673
Hearing impaired persons may call our TDD line at
(602) 771-4829.
Web site: www.azdeq.gov

SPECIAL WASTE CONSTITUENTS (A.R.S. § 49-851A.3)	REGULATED CONTAMINANTS	SOLID WASTE PCS >RESIDENTIAL SRLs (IN PPM, MG/KG)	SPECIAL WASTE PCS >NON-RESIDENTIAL SRLs (IN PPM, MG/KG)
BTEX EPA Method 8260 or 8021	Benzene	0.65	1.4
	Toluene	650	650
	Ethylbenzene	400	400
PAHS Polynuclear aromatic hydrocarbons Commonly found in diesel and lubricant oil EPA Method 8310	Total Xylenes	270	420
	Acenaphthylene	3,700	29,000
	Anthracene	22,000	240,000
	Benz[A]anthracene	6.9	21
	Benzo[A]pyrene	0.69	2.1
	Benzo[B]fluoranthene	6.9	21
	Benzo[K]fluoranthene	69	210
	Cyrysene	680	2,000
	Dibenz[A,H]anthracene	0.69	2.1
	Fluoranthene	2,300	22,000
Fluorene	2,700	26,000	
Indenopyrene	6.9	21	
Naphthalene	56	190	
Pyrene	2,300	29,000	