

Data Source: Soil and Groundwater Pollution Remediation Web of Taiwan

<http://sgw.epa.gov.tw/public/En/index.htm>

Remediation Sites→7.4

Brief Description for the Remediation Sites Nationwide

No	Hsien/City	The Name of the Site	Site Category	Site Area (square meter)	Soil Pollutant	Groundwater Pollutant	Enlisting Condition	Enlisted Date
1	Tainan City	An-shuen Plant of China Petrochemical Development Corp. in Tainan County	Plant	170,000		-	Declared as Remediation Site	March 19, 2004
2	Kaohsiung City	Zone of Storage Tank P-37 in Kaohsiung Oil Refinery Plant of Chinese Petroleum Corp. in Kaohsiung City	Storage tank	16,000			Declared as Remediation Site	March 19, 2004
3	Taoyuan County	Former Taoyuan Plant of RCA Taiwan in Taoyuan County	Plant	80,818	-		Declared as Remediation Site	March 19, 2004
4	Miaoli County	Toufen Plant of Taiwan VCM Corp. in Miaoli County	Plant	50,000	Vinyl chloride, 1,2-Dichloroethane, Trichloroethylene, Chloromethane, 1,1-Dichloroethylene (, Tetrachloroethylene, Benzene		Declared as Remediation Site	March 27, 2006
5	Tainan County	Jianan Gas Station in Tainan County	Gas station	1,239	-		Declared as Remediation Site	October 19, 2004

6	Tainan County	Yu-lin Electroplating Plant in Tainan County	Plant	1,055			Declared as Remediation Site	September 9, 2005
7	Pingtung County	Land numbered 1438 and 1439 in Sinan Section, Wandan Township, Pingtung County	Illegally disposal site	5,857	Cadmium,Chromate,Copper,Nickel,Lead,Zinc		Declared as Remediation Site	May 5, 2006

A total of seven listed Remediation Sites are as follows: An-shuen Plant of China Petrochemical Development Corp. in Tainan County, Zone of Storage Tank P-37 in Kaohsiung Oil Refinery Plant of Chinese Petroleum Corp. Former Taoyuan Plant of RCA Taiwan in Taoyuan County, Jianan Gas Station in Tainan County, Yu-lin Electroplating Plant in Tainan County, Toufen Plant of Taiwan VCM Corp. in Miaoli County, and Land numbered 1438 and 1439 in Sinan Section, Wandan Township, Pingtung County.

I. An-shuen Plant of China Petrochemical Development Corp. in Tainan County

The site occupies 17 hectares of land and used to belong to the Taiwan Alkali Industrial Corp. (TAIC), which was established in 1941 and shutdown in June 1982. At that time all manufacturing equipment was dismantled and the building was leveled. The Taiwan Alkali Industrial Corp. then merged with the China Petrochemical Development Corp. in 1983. The plant used to produce sodium pentachlorophenol in the late 60's, but ceased the production later in order to comply with the regulation. In 2001, the results of site investigation showed that the concentration of dioxins in soils exceeded the Soil Pollution Control Standard. Therefore, this site was listed as a Pollution Control Site on April 11, 2002.

On March 19, 2004, the area including this plant and the bush area located in the east side of Secondary No. 9 Road was listed as a Soil Pollution Remediation Site because the concentrations of dioxins and mercury exceeded the Soil Pollutant Control Standards. In addition, a fence was built around the bush area located in the east side of Secondary No. 9 Road to prevent public access. The consulting firms hired by the Tainan County Government have completed the projects related to the following tasks: excavating contaminated soil and backfilling, planning the treatment of seawater storage pond, and contingency plan for the Pollution Control Region.

II. Zone of Storage Tank P-37 in Kaohsiung Oil Refinery Plant of Chinese Petroleum Corp. in Kaohsiung City

The site occupies 1.6 hectares of land and includes four tanks - P-36 (under demolishing), P-37 (already demolished), P-58 (already demolished), and P-59 (under demolishing). Since the concentrations of TPH (Total Petroleum Hydrocarbons) exceeded the Soil Pollution Control Standard and the concentrations of benzene surpass the Groundwater Pollution Control Standard, the site was listed as a Soil and Groundwater Pollution Control Site on October 14, 2003. Later this site was listed as a Soil and Groundwater Remediation Site on March 19, 2004.

III. Former Taoyuan Plant of RCA Taiwan in Taoyuan County (RCA)

The site occupies 8.0818 hectares of land and listed as the Groundwater Pollution Control Site on April 26, 2002. The groundwater pollutants of this site are vinyl chloride, 1,1-dichloroethylene, 1,1-dichloroethane, cis-1,2-dichloroethylene, 1,1,1-trichloroethylene, trichloroethylene, and tetrachloroethylene. The suspected scope of pollution comprises this plant and the area around this plant about 500 meters (in between the Zhongshan Road and the Wenchung Road) . Later this site was listed as Groundwater Contamination Remediation site on March 19, 2004, and the scope of pollution comprises this plant and the area around this plant about 500 meters (in between the Wenchung Road of Taoyuan City and Chunghwa Road of Bade City) .

In April 2005, Taoyuan County Government approved the groundwater investigation and assessment report that was submitted by RCA. RCA submitted the remediation plan in June 2005. The Taoyuan County Environmental Protection Bureau convened two review meetings on September 9 and November 21, 2005, respectively. And RCA was demanded to provide a more specific reason for the remediation target, the contaminant removal rate and a residential assessment of health risks. In addition, RCA has to submit the revised plan , and implement such a plan after approval.

IV. Jianan Gas Station in Tainan

The site occupies 0.1239 hectares of land and. listed as the Pollution Control Site on July 15, 2002. Since the concentrations of benzene, toluene, and naphthalene in the groundwater exceeded Groundwater Control Standard, this site was listed as the Groundwater Remediation Site on October 19, 2004. So far, the soil and groundwater investigation and assessment have been completed and a remediation plan will be

submitted in accordance with the results of the investigation and assessment.

V. Yu-lin Electroplating Plant in Tainan

The site occupies 0.1055 hectares of land. Since the concentrations of nickel and cadmium exceeded the Groundwater Pollutant Control Standard, and the concentrations of cadmium surpassed the Soil Pollutant Control Standard, this site was listed as the Pollution Control Site on May 16, 2003. Later this site was listed as the Groundwater Remediation Site on September 9, 2005, since the cadmium concentration in the groundwater exceeded the Pollution Control Standard.

VI. Toufen Plant of Taiwan VCM Corp. in Miaoli County

The site occupies 5 hectares of land. Since the concentrations of vinyl chloride, 1,2-dichloroethane, trichloroethylene, and benzene exceeded the Groundwater Pollutant Control Standard, this site was listed as the Pollution Control Site on July 19, 2005 and listed as the Groundwater Pollution Control Region on December 8, 2005. Later this site was listed as the Groundwater Remediation Site on March 27, 2006 and the concentrations of vinyl chloride, 1,2-dichloroethane, trichloroethylene, chloromethane, 1,1-dichloroethylene, tetrachloroethylene, and benzene exceeded the Groundwater Pollutant Control Standard.

VII. Land numbered 1438 and 1439 in Sinan Section, Wandan Township, Pingtung County

The site is 7th remediation site and occupies 0.5857 hectares of land. This site was the wood storage pond in Gonghong Lumbering Co., and illegally backfilled with hazardous industrial waste. The Taiwan EPA proceeded with solid and groundwater investigation and contingency plan of illegally disposal site in year 2003 to 2005. The investigation found out the soil still contaminated with heavy metal pollutant like cadmium, chromate, copper, nickel, lead, zinc, and so on after removing and disposing of pollutants.

Taiwan EPA shows that the Pingtung County Government listed this site as Soil Pollution Control Region in December 13, 2005 and would manage the site according to the restriction regulation. Starting on the day of declaration, the land use and human activities within the pollution control regions will be all restricted by the Soil and Groundwater Pollution Control Site Management Regulation, and the land will be remediated based on the Soil and Groundwater Pollution Remediation Act. Such restriction along with the

remediation will protect public health and ensure the sustainable use of soil and groundwater resource. This site was listed as Pollution Remediation Site on May 5, 2006; the competent authority will investigate the scope of pollution and order the polluter or party whose related to the polluted land to submit a remediation plan according to the results of the investigation and assessment. If the polluter is unknown or nonexistent, then the County Government might establish the remediation plan and proceed the remediation according to the plan.