

US EPA ARCHIVE DOCUMENT

Appendix B

Analysis of Chronological COD Data

Unfortunately, the relative efficacy of leachate recirculation in enhancing waste degradation relative to conventionally operated landfills at full-scale is difficult to quantify, because of the lack of conventional/recirculation parallel operations. Recognizing this limitation, leachate COD data were gathered from the literature for conventional landfills. These data and their sources follow and are plotted in Figure B-1. The data are discussed in detail in Chapter 6.

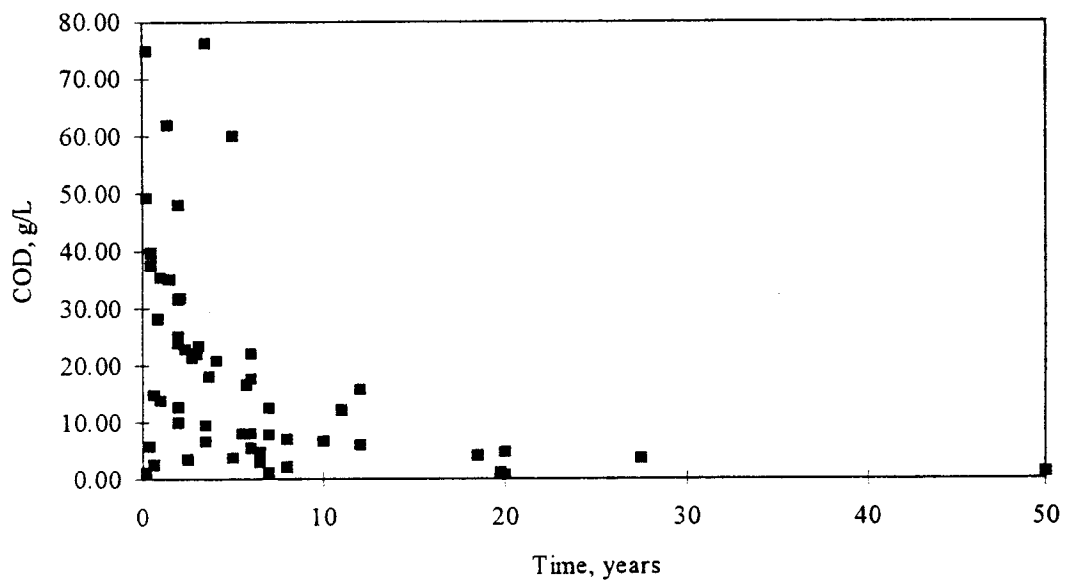


Figure B-1. Leachate COD from conventional landfills.

TABLE B-1. CONVENTIONAL LANDFILL COD DATA

Landfill Age, Years	COD, mg/l	Reference
0.25	49300	Chian and Dewalle, 1977
0.25	1180	Polk County, FL
0.4	5767	Wigh, 1979
0.5	39680	Hughes, <u>et al</u> , 1971
0.5	37500	Wigh, 1979
0.65	14891	Wigh, 1979
0.67	2556	Wigh, 1979
0.9	28115	Wigh, 1979
1	13800	Henry, <u>et al</u> , 1987
1	35350	Lema, <u>et al</u> , 1988
1.4	61991	Wigh, 1979
1.5	35000	Wigh, 1979
2	25000	Wigh, 1979
2	31600	Bekker and Kaspers, 1981
2	12602	SCS Engineers, 1976
2	48000	Lema, <u>et al</u> , 1988
2	23800	Robinson and Maris, 1985
2	10000	Lema, <u>et al</u> , 1988
2.1	31824	Wigh, 1979
2.35	22838	Wigh, 1979
2.5	3455	Johansen and Carlson, 1976
2.77	21388	Wigh, 1979
3	22000	Lema, <u>et al</u> , 1988
3.1	23407	Wigh, 1979
3.5	76300	Meichtry, 1971
3.5	6675	Reinhardt and Ham, 1973
3.68	18085	Wigh, 1979
4.1	20836	Wigh, 1979
5	60000	Harmsen, 1983
5	3800	Henry, <u>et al</u> , 1987
5.5	8000	Hughes, <u>et al</u> , 1971
5.75	16592	SCS Engineers, 1976
6	8000	Hughes, <u>et al</u> , 1971
6	5491	Ministry, 1961
6	22000	Lema, <u>et al</u> , 1988

Landfill Age, Years	COD, mg/l	Reference
6	17662	SCS Engineers, 1976
6.5	3042	Meichtry, 1971
6.5	4757	SCS Engineers, 1976
7	1200	Kelly, 1987
7	1250	Schultz and Kjeldsen, 1986
7	7789	SCS Engineers, 1978
8	7000	Harmsen, 1983
8	2100	Oman and Hynning, 1991
9	3000	Ehrig, 1983
10	6700	Schultz and Kjeldsen, 1986
11	12100	Schultz and Kjeldsen, 1986
12	6000	Schultz and Kjeldsen, 1986
12	15750	Schultz and Kjeldsen, 1986
18.5	4100	Lema, <u>et al</u> , 1988
19.75	1200	Lema, <u>et al</u> , 1988
20	4792	SCS Engineers, 1978
27.5	3631	SCS Engineers, 1978
50	1198	SCS Engineers, 1978

Appendix B. References

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