

33124

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Robert Lemmer, Geologist Supervisor, Solid Waste

FROM : Dave Ann Pennington, Geologist, Solid Waste

DATE : July 3, 1997

SUBJECT : Sunray Tontitown's Analytical Results from the April 30, 1997 Sampling Event

Parameters tested were metals, inorganics, and volatiles. The following is a summary of the April 30, 1997 analytical data.

MW-1

Total Dissolved Solids (TDS) 622 mg/l SDWS 500 mg/l
Turbidity 21 NTU's EPA's Guidance Document Recommends 5 NTU's
Iron 3930 ug/l SDWS 300 ug/l
Manganese 6230 ug/l SDWS 50 ug/l
Vinyl Chloride 9 ug/l MCL 2 ug/l
Chloroethane 5 ug/l MCL n/a
trans-1,2-Dichloroethene 1 ug/l MCL 100 ug/l
1,1-Dichloroethane 20 ug/l MCL n/a
cis-1,2-Dichloroethene 7 ug/l MCL 70 ug/l
Benzene 3 ug/l MCL 5 ug/l
Trichloroethene 1 ug/l MCL 5 ug/l
1,4-Dichlorobenzene 10 ug/l MCL 75 ug/l

MW-2R

Iron 484 ug/l SDWS 300 ug/l

MW-3

Iron 5300 ug/l SDWS 300 ug/l
Manganese 4200 ug/l SDWS 50 ug/l
Vinyl Chloride 3 ug/l MCL 2 ug/l
Carbon Disulfide 3 ug/l MCL n/a
1,1-Dichloroethane 0.8 ug/l MCL n/a
Trichloroethene 0.6 ug/l MCL 5 ug/l

MW-4

Turbidity 96 NTU's EPA Guidance Document Recommends 5 NTU's
Iron 56600 ug/l SDWS 300 ug/l
Manganese 19900 ug/l SDWS 50 ug/l
Vinyl Chloride 2 ug/l MCL 2 ug/l
1,1-Dichloroethane 4 ug/l MCL n/a
cis-1,2-Dichloroethene 5 ug/l MCL 70 ug/l
Benzene 2 ug/l MCL 5 ug/l
Toluene 1 ug/l MCL 1000 ug/l

MW-5

Turbidity 31 NTU's EPA Guidance Document Recommends 5 NTU's
Trichlorofluoromethane 5 ug/l MCL n/a
1,1-Dichloroethane 6 ug/l MCL n/a
cis-1,2-Dichloroethene 2 ug/l MCL 70 ug/l
1,1,1-Trichloroethane 2 ug/l MCL 200 ug/l
Trichloroethene 2 ug/l MCL 5 ug/l
Tetrachloroethene 5 ug/l MCL 5 ug/l

MW-6

Cadmium 10.6 ug/l MCL 5 ug/l
Manganese 433 ug/l SDWS 50 ug/l
Vinyl Chloride 4 ug/l MCL 2 ug/l
Trichlorofluoromethane 2 ug/l MCL n/a
Carbon Disulfide 3 ug/l MCL n/a
1,1-Dichloroethane 3 ug/l MCL n/a
cis-1,2-Dichloroethene 1 ug/l MCL 70 ug/l
1,1,1-Trichloroethane 0.9 ug/l MCL 200 ug/l
Trichloroethene 1 ug/l MCL 5 ug/l
Tetrachloroethene 2 ug/l MCL 5 ug/l

MW-7

Manganese 1900 ug/l SDWS 50 ug/l
Vinyl Chloride 1 ug/l MCL 2 ug/l
Carbon Disulfide 6 ug/l MCL n/a
1,1-Dichloroethane 4 ug/l MCL n/a
cis-1,2-Dichloroethene 8 ug/l MCL 70 ug/l

MW-8

Manganese 66 ug/l SDWS 50 ug/l

MW-9

Carbon Disulfide 2 ug/l MCL n/a
Bromodichloromethane 1 ug/l MCL 100 ug/l

MW-10

Sampled

MW-11

Sampled

MW-12

Manganese 63 ug/l SDWS 50 ug/l

MCL - Maximum Contaminant Level
SDWS - Secondary Drinking Water Standards

Vinyl Chloride exceeded its MCL in monitoring wells MW-1, MW-3, and MW-6. The Vinyl Chloride level reported for monitoring well MW-4 matched its MCL level of 2 ug/l. Vinyl Chloride is primarily used to make polyvinyl chloride plastic. Some of the vinyl chloride found in the environment is believed to come from the breakdown of other compounds such as trichloroethene, trichloroethane, and tetrachloroethene. Vinyl chloride has been used as a propellant in spray cans. Vinyl chloride is also a component of tobacco smoke, Vinyl chloride is listed by the Department of Health and Human Services as a known human carcinogen (Memorandum by Robert Lemmer dated August 2, 1996).

The tetrachloroethene level reported for monitoring well MW-5 matched its MCL level of 5 ug/l. Tetrachloroethene is commonly used as a drycleaning fluid.

The iron concentrations in monitoring wells MW-1, MW-2R, MW-3, and MW-4 exceeded the Secondary Drinking Water Standard. The manganese concentrations in monitoring wells MW-1, MW-3, MW-4, MW-6, MW-7, MW-8, and MW-12 exceeded the Secondary Drinking Water Standard. The total dissolved solids concentration in monitoring well MW-1 exceeded the Secondary Drinking Water Standard. Secondary Drinking Water Standards are associated with the aesthetic qualities of drinking water.