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SUBJECT: Compilation of data for Doepke-Holliday.

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The data presented in Tables 4.3 through 4.6 "Summary of Detected Analytical Data..." were used to determine which data points exceeded either the Kansas Action Limits and/or MCLs. These data points are given in the following tables. The analytes in bold type represent data points which are above the limits, but were not reported as exceeding the limits in Table 4.8 "Exceedences of Regulatory Comparison Standards...". Also, it appears the document's authors only used the dissolved metal results to generate the table of exceedences, however, the review found some dissolved metals results which exceeded the limits, but do not appear in Table 4.8.

The data were also reviewed to determine whether any analytes had detection limits too high to compare with the action limits stated. Several instances were found. Virtually all non-detect data for vinyl chloride and all polyaromatic hydrocarbons (PAHs) are not adequate for comparison to the action limits specified. It should also be noted that some individual detection limits may be higher due to necessary dilutions. In all of these elevated detection limits situations, at least one other analyte was reported at very high concentrations.

It also appears some data is missing. Ethyl benzene and xylene in sample MW-5 and 1,2-dichloroethane, 1,2-dichloroethene, benzene, ethylbenzene, toluene, xylene and vinyl chloride in sample PZ-2 were reported in Table 4.8 as exceeding the action limits, but the data are not presented in the tables of detected data.

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September 1992

Location	Analyte	Found (ug/L)	KAL (ug/L)	MCL (ug/L)
PZ-2	1,2-Dichloroethene	15000	70	70
	Ethylbenzene	9300	680	700
	Toluene	16000	2000	1000
	Vinyl chloride	1500J	2	2
	Xylene	57000	440	10000
	Phenol	400J	300	-
	Naphthalene	470	143	-
	Barium	**3200**	**1000**	**2000**
	Chromium	**90**	**50**	**100**
	Aluminum	**58000**	**5000**	**-**
	Iron	**14000**	**300**	**-**
	Manganese	**9500**	**50**	**-**
	Nickel	**180**	**150**	**100**
	Dissolved Barium	2600	1000	2000
	Dissolved Iron	24000	300	-
	Dissolved Manganese	1900	50	-
OPL-2	1,2-Dichloroethane	9	5	5
	Iron	**7600**	**300**	**-**
	Manganese	**360**	**50**	**-**
	Dissolved Manganese	300	50	-
OPL-5	Benzene	15	5	5
	1,2-Dichloroethane	180	5	5
	Tetrachloroethene	61	7	5
	Trichloroethene	33	5	5

OPL-5 (cont.)	Vinyl chloride	5J	2	2
	Iron	**15000**	**300**	**-**
	Manganese	**2300**	**50**	**-**
	Dissolved Manganese	2200	50	-
MW-5	Benzene	2900	680	700
	Xylene	7600	440	10000
	Fluorene	3J	0.029	-
	Barium	**1900**	**1000**	**2000**
	Iron	**18000**	**300**	**-**
	Manganese	**20000**	**50**	**-**
	Dissolved Barium	2100	1000	2000
	Dissolved Iron	7000	300	-
	Dissolved Manganese	20000	50	-
MW-6	Acenaphthylene	23J	0.029	-
	Fluorene	3J	0.029	-
	Phenanthrene	5J	0.029	-
	Iron	**11000**	**300**	**-**
	Manganese	**6000**	**50**	**-**
	Dissolved Iron	9100	300	-
	Dissolved Manganese	5200	50	-
MW-7	Benzene	810	5	5
	Chlorobenzene	130	60	-
	Anthracene	110	0.029	-
	Fluoranthene	11J	0.029	-
	Fluorene	340	0.029	-
	Phenanthrene	880	0.029	-
	Barium	**1300**	**1000**	**2000**
	Iron	**24000**	**300**	**-**
	Manganese	**3300**	**50**	**-**

MW-7 (cont.)	Dissolved Iron	15000	300	-
	Dissolved Manganese	3400	50	-
MW-9	Fluorene	2J	0.029	-
	Phenanthrene	3J	0.029	-
OW-11a	Fluorene	4J	0.029	-
	Phenanthrene	3J	0.029	-
PZ-1	**Iron**	**2700**	**300**	**-**
	Manganese	**320**	**50**	**-**
OPL-3	**Iron**	**4600**	**300**	**-**
	Manganese	**240**	**50**	**-**
	Dissolved Manganese	**150**	**50**	**-**
OW-14	**Iron**	**22000**	**300**	**-**
	Aluminum	**9300**	**5000**	**-**
	Manganese	**4400**	**50**	**-**
	Dissolved Iron	8900	300	-
	Dissolved Manganese	4200	50	-
MW-13	**Iron**	**12000**	**300**	**-**
	Manganese	**2300**	**50**	**-**
	Dissolved Iron	2200	300	-
	Dissolved Manganese	2000	50	-
Seep 1	**Iron**	**4400**	**300**	**-**
	Manganese	**1300**	**50**	**-**

December 1992/January 1993

Location	Analyte	Found (ug/L)	KAL (ug/L)	MCL (ug/L)
OPL-5	**Tetrachloroethene**	**5**	**7**	**5**
	Aluminum	**7200**	**5000**	**-**
	Calcium	**279000**	******	**-**
	Iron	**17000**	**300**	**-**
	Lead	**6000**	**50**	**50**
	Manganese	**1700**	**50**	**-**
	Dissolved calcium	**270000**	******	**-**
	Dissolved Iron	7100	300	-
	Dissolved Manganese	1700	50	-
OW-10a	**Ethylbenzene**	**6000**	**680**	**700**
	Xylene	**19000**	**440**	**10000**
MW-7	Benzene	1000	5	5
	Chlorobenzene	170	60	-
	Anthracene	82J	0.029	-
	Fluoranthene	470	0.029	-
	Phenanthrene	1000	0.029	-
	Pyrene	32J	0.029	-
	Barium	**1300**	**1000**	**2000**
	Iron	**14000**	**300**	**-**
	Manganese	**3000**	**50**	**-**
	Dissolved Iron	**17000**	**300**	**-**
	Dissolved Manganese	**3700**	**50**	**-**
MW-5	Barium	1400	1000	2000
	Iron	12000	300	-

MW-5 (cont.)	Manganese	16000	50	-
	Dissolved Barium	1500	1000	2000
	Dissolved Iron	6700	300	-
	Dissolved Manganese	15000	50	-
PZ-1	**Iron**	**9400**	**300**	**-**
	Manganese	**580**	**50**	**-**
MW-6	**Iron**	**20000**	**300**	**-**
	Manganese	**6300**	**50**	**-**
	Dissolved Iron	**5700**	**300**	**-**
	Dissolved Manganese	**6700**	**50**	**-**
	Dissolved Aluminum	**5700**	**5000**	**-**
PZ-2	**Aluminum**	**20000**	**5000**	**-**
	Barium	**1500**	**1000**	**2000**
	Iron	**60000**	**300**	**-**
	Manganese	**3200**	**50**	**-**
OW-13a	**Aluminum**	**10000**	**5000**	**-**
	Barium	**1200**	**1000**	**2000**
	Cadmium	**6**	**5**	**5**
	Iron	**26000**	**154***	**-**
	Manganese	**3600**	**50**	**-**
	Dissolved Iron	2000	154*	-
	Dissolved Manganese	3300	50	-
OW-14	**Aluminum**	**11000**	**5000**	**-**
	Iron	**31000**	**154***	**-**
	Manganese	**4300**	**50**	**-**
	Dissolved Iron	14000	154*	-
	Dissolved Manganese	4000J	50	-
OPL-2	**Calcium**	**100000**	****	**-**
	Iron	**6800**	**300**	**-**

OPL-2 (cont.)	**Manganese**	**320**	**50**	**-**
	Dissolved Calcium	**98000**	**	**-**
	Dissolved Iron	**6500**	**300**	**-**
	Dissolved Manganese	**290**	**50**	**-**
OPL-3	**Calcium**	**61000**	**	**-**
	Iron	**1800**	**300**	**-**
	Manganese	**310**	**50**	**-**
	Dissolved Calcium	**64000**	**	**-**
	Dissolved Manganese	260	50	-
Seep 1	**Iron**	**1700**	**300**	**-**
	Manganese	**1300**	**50**	**-**
Seep 2	**Benzene**	**380**	**5**	**5**
	1,2-Dichloroethene	**1400**	**70**	**70**
	Ethylbenzene	**2700**	**680**	**700**
	Toluene	**1500**	**2000**	**1000**
	Vinyl chloride	**390**	**2**	**2**
	Xylene	**12000**	**440**	**10000**
	Manganese	**650**	**50**	**-**
Seep 3	**Benzene**	**330**	**5**	**5**
	1,2-Dichloroethane	**140**	**70**	**70**
	Ethylbenzene	**1600**	**680**	**700**
	Toluene	**1100**	**2000**	**1000**
	Vinyl chloride	**350**	**2**	**2**
	Xylene	**7500**	**440**	**10000**
	Manganese	**670**	**50**	**-**
Seep 5	**1,2-Dichloroethane**	**8**	**5**	**5**
	Manganese	**50**	**50**	**-**
Seep 8	**Iron**	**440**	**300**	**-**

March 1993

Location	Analyte	Found (ug/L)	KAL (ug/L)	MCL (ug/L)
PZ-2	Benzene	550	5	5
	1,2-Dichloroethene	1100	70	70
	Ethylbenzene	6100	680	70
	Toluene	1900	2000	1000
	Vinyl chloride	610J	2	2
	Xylene	30000	440	10000
	Naphthalene	270	143	-
OPL-2	1,2-Dichloroethane	22	5	-
	Trichloroethene	24	5	-
	Vinyl chloride	**6J**	**2**	**2**
MW-5	Ethylbenzene	8400	680	700
	Xylene	25000	440	10000
MW-7	Benzene	790	5	5
	Chlorobenzene	84	60	-
	1,1-Dichloroethane	10J	5	-
	Anthracene	39	0.029	-
	Fluoranthene	4J	0.029	-
	Fluorene	200	0.029	-
	N-Nitrosodiphenylamine	72	71	-
	Phenanthrene	370	0.029	-
	Pyrene	11J	0.029	-

June 1993

Location	Analyte	Found (ug/L)	KAL (ug/L)	MCL (ug/L)
OPL-2	1,2-Dichloroethane	10	5	5
	Trichloroethene	**16**	**5**	**5**
	Vinyl chloride	5.3J	2	2
	Pyrene	**3.2J**	**0.029**	**-**
	Arsenic	**110**	**50**	**50**
OPL-3	Trichloroethene	6.7	5	5
MW-5	Ethylbenzene	8200	680	700
	Xylene	26000	440	10000
	Naphthalene	180	143	-
	Lead	**5000**	**50**	**50**
MW-7	Benzene	830	5	5
	Chlorobenzene	80	60	-
	1,1-Dichloroethane	13J	5	5
	Anthracene	6.1J	0.029	-
	Fluorene	42	0.029	-
	Phenanthrene	56	0.029	-
MW-9	Trichloroethene	9.3	5	5
OW-10a	Trichloroethene	7.4	5	5
OW-11a	**Trichloroethene**	**6.0**	**5**	**5**
OW-12a	Trichloroethene	10	5	5
OW-13	Trichloroethene	7.1	5	5
PZ-2	1,2-Dichloroethene	620	70	70
	Ethylbenzene	5600	680	700
	Toluene	1300	2000	1000

PZ-2 (cont.)	Vinyl chloride	650J	2	2
	Xylene	28000	440	10000
	Naphthalene	360	143	-
Seep 1	Vinyl chloride	2.2J	2	2
OW-14	Vinyl chloride	2.3J	2	2
	Cadmium	**5.4**	**5**	**5**

* The (incorrect) calcium KAL was listed, but the result reported was for iron.

** The calcium KAL was incorrectly reported as 154 ug/L; the correct value would be many thousands (ug/L = ppb).