CH2MHILL

PROJECT NUMBER: 335392.FI.01

WELL ID: MW27A

WELL DEVELOPMENT LOG

PROJECT: Omega Chemical OU-2 LOCATION: 4/23/07

DEVELOPMENT CONTRACTOR: WDC

DEVELOPMENT METHOD AND EQUIPMENT USED:

START WATER LEVELS: START: END:

MAXIMUM DRAWDOWN DURING PUMPING:

RANGE AND AVERAGE DISCHARGE RATE: LOGGER: M. Ladeau

TOTAL QUANTITY OF WATER DISCHARGED:

DISPOSITION OF DISCHARGE WATER: TANK # 274502

MONITORING EQUIPMENT USED: MP20 - LAMOTTE TURBIDITY METER

Time	Volume Dischared (gal)	Flow Rate (gpm)	Water Level (ft BTOC)	Turbidity (NTU)	Temp. (°C)	pH	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Remarks (color, odor, sheen, sediment, etc.)
1245	PUMP ON @ 90' BTC.									
1250	20	4	79.08	118	24.16	7.27	1.65	192	0.87	CLEARING
1300			79.01	8.24	24.42	7.23	1.65	191	1.20	CLEAR
1301	PUMP OFF. SURGE WELL.									
1307	PUMP ON.									
1310	35	4	78.71	14.2	24.66	7.19	1.63	191	0.77	CLEAR
1320	75			4.54	24.24	7.20	1.65	190	0.41	CLEAR
1322	LOWER PUMP INTAKE TO 95' BTC.									
1330	115		78.75	2.99	24.33	7.15	1.63	189	0.15	CLEAR
1335	PUMP OFF SURGE WELL.									
1340	PUMP ON.									
1345	135	4		5.47	24.49	7.15	1.64	189	0.12	CLEAR
1355	175		78.51	1.23	24.53	7.14	1.65	189	0.12	CLEAR
1359	PUMP OFF. MOVE INTAKE TO 100' BTC.									
1415	PUMP ON									
1425	220	4	78.39	4.38	24.59	7.15	1.66	189	0.54	CLEAR
1427	PUMP OFF SURGE WELL.									
1435	PUMP ON.									
1440	240		78.52	27.7	24.24	7.15	1.65	189	0.27	CLEAR
1450	280	4		4.16	24.19	7.13	1.66	189	0.09	CLEAR
1455	PUMP OFF. DONE FOR WELL									

CH2MHILL

PROJECT NUMBER 335392.FI.01

WELL ID MW27B

WELL DEVELOPMENT LOG

PROJECT: Omega Chemical OU-2 LOCATION: O 4/23/07

DEVELOPMENT CONTRACTOR: WDC

DEVELOPMENT METHOD AND EQUIPMENT USED: BAIL, SWAB, PUMP

START WATER LEVELS: START: 0700 END:

MAXIMUM DRAWDOWN DURING PUMPING:

RANGE AND AVERAGE DISCHARGE RATE: LOGGER: M. Ladeau

TOTAL QUANTITY OF WATER DISCHARGED: ±300 gallons

DISPOSITION OF DISCHARGE WATER: TANK # 274502

MONITORING EQUIPMENT USED: MP-20 LAMOTTE TURBIDITY METER

Time	Volume Dischared (gal)	Flow Rate (gpm)	Water Level (ft BTOC)	Turbidity (NTU)	Temp. (°C)	pH	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Remarks (color, odor, sheen, sediment, etc.)
0920	20	4	77.10	59.1	24.50	7.39	1.446	185	0.34	CLEARING
0930	60	4	79.24	15.0	24.49	7.43	1.438	184	0.17	CLEAR
0940	100	4	79.24	3.65	24.57	7.43	1.444	184	0.10	CLEAR
0945	SURGE WELL PUMP OFF.									
0950	PUMP ON.									
0955	140	4	79.51	11.5	24.32	7.44	1.449	184	0.12	CLEAR
1005	180			3.30	24.21	7.41	1.450	185	0.08	CLEAR
1008	PUMP OFF. MOVE INTAKE TO 156' BTC.									
1015	PUMP ON.									
1020	200	4	78.93	7.24	24.76	7.38	1.441	185	0.09	CLEAR
1030	240			6.35	24.78	7.39	1.446	185	0.07	CLEAR
1032	PUMP OFF. SURGE WELL.									
1040	PUMP ON.									
1045	260	4	78.98	5.14	24.87	7.40	1.450	185	0.07	CLEAR
1048	PUMP OFF DONE W/THIS WELL.									

CH2MHILL

PROJECT NUMBER: 335392.FI.01

WELL ID: MW27C

WELL DEVELOPMENT LOG

PROJECT: Omega Chemical OU-2 LOCATION:

DEVELOPMENT CONTRACTOR: WDC

DEVELOPMENT METHOD AND EQUIPMENT USED: BAIL, SWAB, PUMP

START WATER LEVELS: START: 0800 END:

MAXIMUM DRAWDOWN DURING PUMPING:

RANGE AND AVERAGE DISCHARGE RATE: LOGGER: M. Ladeau

TOTAL QUANTITY OF WATER DISCHARGED: SCREEN 180-190

DISPOSITION OF DISCHARGE WATER: TANK # 274502 TD = 195.7'

MONITORING EQUIPMENT USED: MP 20 - LA MOTTE 2000 TURBIDIMETER

Time	Volume Discharged (gal)	Flow Rate (gpm)	Water Level (ft BTOC)	Turbidity (NTU)	Temp. (°C)	pH	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Remarks (color, odor, sheen, sediment, etc.)
0840	PUMP ON @ 100' BGS									
0850	15.0	1.5	95.9	76000	23.63	7.82	0.710	245	1.07	VERY CLOUDY
0900	30.0	1.5		6773	24.15	8.10	794	225	0.59	CLOUDY
0910	45			6455	24.18	8.14	803	226	0.37	CLOUDY
0920	60			849	24.18	8.12	779	217	0.14	CLOUDY
0930	75		95.18	303	24.23	8.10	772	214	0.11	CLOUDY
0940	90			338	24.41	8.06	759	211	0.09	CLOUDY
0950	105			167	24.53	7.99	749	207	0.07	CLEARING
1000	120			63.1	24.48	7.98	743	206	0.06	CLEARING
1001	PUMP OFF LOWER INTAKE.									
1013	SET PUMP @ 180' 2 GPM									
1015	125	2		943	24.38	7.94	738	202	0.16	CLOUDY
1030	155	2		335	24.29	7.91	737	201	0.15	CLOUDY
1045	185			67.2	24.32	7.90	734	197	0.08	CLEARING
1100	215	2		22.0	24.06	7.88	735	196	0.09	
1101	PUMP OFF LUNCH.									
1200	PUMP ON. 2 GPM									
1210	235	2		26.8	25.04	7.89	738	191	0.26	CLEAR
1220	255	2		11.7	25.06	7.87	738	190	0.17	CLEAR
1230	275	2		11.3	25.05	7.85	732	190	0.12	CLEAR
1234	MOVE INTAKE TO 185' BTC									
1240	295	2		1954	24.98	7.84	708	190	0.10	CLOUDY
1300	335			17.4	25.02	7.81	731	187	0.07	CLEAR
1320	375			5.21	25.08	7.87	727	188	0.05	CLEAR
1321	SURGE WELL									
1332	PUMP ON									
1335	380			66.4	25.70	7.77	735	186	0.08	CLEAR
1345	400	2		14.7	25.02	7.78	728	185	0.07	CLEAR
1355	420			8.10	24.98	7.77	722	184	0.05	CLEAR
1357	PUMP OFF. DONE W/ DEVELOPMENT OF THIS WELL.									

CH2MHILL

PROJECT NUMBER	WELL ID
335392.FI.01	

WELL DEVELOPMENT LOG

PROJECT: Omega Chemical OU-2 LOCATION: MW-27D 04-18-07

DEVELOPMENT CONTRACTOR: WDC

DEVELOPMENT METHOD AND EQUIPMENT USED: Bailer, Swab & Pump

START WATER LEVELS: START: 83.88' TOC END: 83.6' TOC

MAXIMUM DRAWDOWN DURING PUMPING:

RANGE AND AVERAGE DISCHARGE RATE: ~ 2 gpm LOGGER: ~~M. Ladeau~~ Tom-Shing Ma

TOTAL QUANTITY OF WATER DISCHARGED: ~ 532 gal.

DISPOSITION OF DISCHARGE WATER: on-site container

MONITORING EQUIPMENT USED: LaMotte 2002e turbidimeter, MP-20, Water level Meter

Time	Volume Discharged (gal)	Flow Rate (gpm)	Water Level (ft BTOC)	Turbidity (NTU)	Temp. (°C)	pH	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Remarks (color, odor, sheen, sediment, etc.)
11:17		2gpm		112	24.62	7.75	0.807	101	0.11	clear. No o
11:21		"		84	24.60	7.76	0.811	99	0.10	"
11:23		"		149	24.61	7.75	0.805	97	0.09	"
11:27		"		1119	24.7	7.75	0.802	91	0.09	cloudy
11:33		"		507	24.62	7.74	0.800	86	0.08	cloudy
12:08		"		34.2	24.52	7.74	0.793	57	0.06	clear
12:25		"		35.2	24.61	7.73	0.791	49	0.11	clear
12:28		"		28.5	24.59	7.72	0.792	46	0.09	"
12:33		"		80.0	24.45	7.72	0.791	42	0.09	"
12:37		"		50.0	24.49	7.71	0.790	40	0.07	"
12:42		"		53.1	24.45	7.74	0.791	36	0.06	"
12:52		"		43.8	24.56	7.72	0.790	34	0.09	"
12:55		"		44.7	24.61	7.72	0.792	31	0.08	"
12:58		"		42.0	24.54	7.71	0.791	29	0.07	"
13:06		"		35.8	24.54	7.77	0.791	21	0.06	"
					Done					

Note: Reading wasn't correctly read until 11:17 PM due to unfamiliar with equipment (no manual)

initial water is cloudy and turned to clear in ~10 min.

Turbidemeter from Equipco (DRT-15CE) is not working (out of battery?)
Turbidity is read using WDC's LaMotte 2020e Turbidimeter & MP-20 (EquipCO)