

**Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227. Time zero indicates addition of perturbation feed.**

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
0.152	0.386	0.223	0.396	0.295	0.346	0.367	0.298
0.153	0.390	0.225	0.368	0.297	0.349	0.369	0.320
0.155	0.386	0.227	0.405	0.299	0.349	0.370	0.325
0.157	0.383	0.228	0.401	0.300	0.346	0.372	0.327
0.158	0.385	0.230	0.483	0.302	0.332	0.374	0.320
0.160	0.383	0.232	0.466	0.304	0.334	0.375	0.320
0.162	0.391	0.233	0.456	0.305	0.325	0.377	0.324
0.163	0.381	0.235	0.459	0.307	0.322	0.379	0.319
0.165	0.381	0.237	0.447	0.309	0.324	0.380	0.319
0.167	0.449	0.238	0.430	0.310	0.325	0.382	0.288
0.168	0.447	0.240	0.452	0.312	0.312	0.384	0.254
0.170	0.447	0.242	0.444	0.314	0.327	0.385	0.295
0.172	0.449	0.243	0.440	0.315	0.342	0.387	0.327
0.173	0.450	0.245	0.447	0.317	0.364	0.389	0.298
0.175	0.454	0.247	0.437	0.319	0.363	0.390	0.322
0.177	0.447	0.248	0.395	0.320	0.359	0.392	0.295
0.178	0.445	0.250	0.398	0.322	0.349	0.394	0.314
0.180	0.445	0.252	0.413	0.324	0.351	0.395	0.319
0.182	0.442	0.253	0.434	0.325	0.315	0.397	0.312
0.183	0.444	0.255	0.427	0.327	0.346	0.399	0.310
0.185	0.444	0.257	0.413	0.329	0.347	0.400	0.315
0.187	0.439	0.258	0.415	0.330	0.336	0.402	0.307
0.188	0.447	0.260	0.413	0.332	0.327	0.404	0.314
0.190	0.444	0.262	0.368	0.334	0.332	0.405	0.307
0.192	0.435	0.263	0.344	0.335	0.332	0.407	0.308
0.193	0.413	0.265	0.364	0.337	0.325	0.409	0.317
0.195	0.413	0.267	0.339	0.339	0.329	0.410	0.314
0.197	0.447	0.268	0.347	0.340	0.325	0.412	0.310
0.198	0.450	0.270	0.376	0.342	0.315	0.414	0.314
0.200	0.450	0.272	0.395	0.344	0.327	0.415	0.307
0.202	0.444	0.273	0.385	0.345	0.329	0.417	0.307
0.203	0.442	0.275	0.386	0.347	0.325	0.419	0.307
0.205	0.425	0.277	0.378	0.349	0.320	0.420	0.305
0.207	0.422	0.278	0.379	0.350	0.327	0.422	0.308
0.208	0.410	0.280	0.363	0.352	0.325	0.424	0.298
0.210	0.395	0.282	0.361	0.354	0.330	0.425	0.302
0.212	0.405	0.283	0.371	0.355	0.319	0.427	0.314
0.213	0.461	0.285	0.366	0.357	0.324	0.429	0.308
0.215	0.449	0.287	0.366	0.359	0.303	0.430	0.307
0.217	0.447	0.288	0.359	0.360	0.287	0.432	0.310
0.218	0.437	0.290	0.356	0.362	0.295	0.434	0.307
0.220	0.439	0.292	0.352	0.364	0.290	0.435	0.307
0.222	0.430	0.294	0.354	0.365	0.288	0.437	0.310

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
0.439	0.307	0.515	0.297	0.592	0.112	0.669	0.102
0.440	0.308	0.517	0.297	0.594	0.104	0.671	0.097
0.442	0.310	0.519	0.302	0.596	0.106	0.672	0.094
0.444	0.305	0.520	0.293	0.597	0.109	0.674	0.101
0.445	0.292	0.522	0.293	0.599	0.104	0.676	0.095
0.447	0.305	0.524	0.302	0.601	0.104	0.677	0.092
0.449	0.303	0.525	0.302	0.602	0.106	0.679	0.102
0.450	0.283	0.527	0.298	0.604	0.102	0.681	0.097
0.452	0.332	0.529	0.315	0.606	0.106	0.682	0.097
0.454	0.330	0.530	0.308	0.607	0.107	0.684	0.095
0.455	0.334	0.532	0.305	0.609	0.107	0.686	0.095
0.457	0.330	0.534	0.312	0.611	0.106	0.687	0.095
0.459	0.327	0.535	0.305	0.612	0.106	0.689	0.092
0.460	0.322	0.537	0.300	0.614	0.104	0.691	0.092
0.462	0.325	0.539	0.310	0.616	0.101	0.692	0.101
0.464	0.287	0.540	0.268	0.617	0.107	0.694	0.094
0.465	0.320	0.542	0.276	0.619	0.102	0.696	0.092
0.467	0.315	0.544	0.271	0.621	0.099	0.697	0.099
0.469	0.320	0.545	0.145	0.622	0.106	0.699	0.094
0.470	0.310	0.547	0.111	0.624	0.101	0.701	0.092
0.472	0.295	0.549	0.111	0.626	0.101	0.702	0.095
0.474	0.315	0.550	0.111	0.627	0.107	0.704	0.092
0.475	0.314	0.552	0.112	0.629	0.101	0.706	0.095
0.477	0.310	0.554	0.109	0.631	0.101	0.707	0.095
0.479	0.317	0.555	0.112	0.632	0.106	0.709	0.090
0.480	0.298	0.557	0.111	0.634	0.099	0.711	0.095
0.482	0.283	0.559	0.107	0.636	0.099	0.712	0.094
0.484	0.312	0.560	0.112	0.637	0.104	0.714	0.090
0.485	0.290	0.562	0.111	0.639	0.101	0.716	0.095
0.487	0.307	0.564	0.107	0.641	0.101	0.717	0.092
0.489	0.315	0.566	0.112	0.642	0.099	0.719	0.089
0.490	0.303	0.567	0.109	0.644	0.101	0.721	0.095
0.492	0.229	0.569	0.106	0.646	0.099	0.722	0.095
0.494	0.251	0.571	0.112	0.647	0.099	0.724	0.094
0.495	0.288	0.572	0.107	0.649	0.099	0.726	0.094
0.497	0.295	0.574	0.104	0.651	0.102	0.727	0.090
0.499	0.307	0.576	0.112	0.652	0.099	0.729	0.090
0.500	0.303	0.577	0.111	0.654	0.102	0.731	0.087
0.502	0.300	0.579	0.111	0.656	0.102	0.732	0.097
0.504	0.300	0.581	0.112	0.657	0.097	0.734	0.089
0.505	0.297	0.582	0.111	0.659	0.101	0.736	0.090
0.507	0.295	0.584	0.106	0.661	0.101	0.737	0.097
0.509	0.297	0.586	0.104	0.662	0.095	0.739	0.089
0.510	0.295	0.587	0.111	0.664	0.102	0.741	0.097
0.512	0.295	0.589	0.106	0.666	0.099	0.742	0.094
0.514	0.303	0.591	0.104	0.667	0.095	0.744	0.089

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
0.746	0.089	0.822	0.089	0.899	0.085	0.976	0.085
0.747	0.090	0.824	0.087	0.901	0.082	0.978	0.084
0.749	0.085	0.826	0.090	0.903	0.090	0.979	0.080
0.751	0.094	0.827	0.090	0.904	0.090	0.981	0.085
0.752	0.089	0.829	0.087	0.906	0.080	0.983	0.084
0.754	0.089	0.831	0.092	0.908	0.090	0.984	0.080
0.756	0.087	0.832	0.090	0.909	0.084	0.986	0.085
0.757	0.087	0.834	0.085	0.911	0.082	0.988	0.082
0.759	0.090	0.836	0.085	0.913	0.089	0.989	0.079
0.761	0.094	0.837	0.092	0.914	0.087	0.991	0.085
0.762	0.095	0.839	0.085	0.916	0.082	0.993	0.082
0.764	0.094	0.841	0.085	0.918	0.090	0.994	0.079
0.766	0.095	0.842	0.092	0.919	0.087	0.996	0.084
0.767	0.094	0.844	0.085	0.921	0.095	0.998	0.082
0.769	0.089	0.846	0.085	0.923	0.085	0.999	0.079
0.771	0.094	0.848	0.090	0.924	0.090	1.001	0.085
0.772	0.092	0.849	0.087	0.926	0.090	1.003	0.082
0.774	0.087	0.851	0.087	0.928	0.090	1.004	0.077
0.776	0.094	0.853	0.094	0.929	0.087	1.006	0.080
0.777	0.090	0.854	0.094	0.931	0.089	1.008	0.079
0.779	0.085	0.856	0.092	0.933	0.087	1.009	0.080
0.781	0.094	0.858	0.090	0.934	0.085	1.011	0.080
0.782	0.090	0.859	0.090	0.936	0.095	1.013	0.084
0.784	0.087	0.861	0.089	0.938	0.089	1.014	0.080
0.786	0.092	0.863	0.085	0.939	0.085	1.016	0.077
0.787	0.090	0.864	0.087	0.941	0.082	1.018	0.084
0.789	0.085	0.866	0.090	0.943	0.085	1.019	0.082
0.791	0.094	0.868	0.085	0.944	0.087	1.021	0.077
0.792	0.089	0.869	0.087	0.946	0.082	1.023	0.084
0.794	0.085	0.871	0.090	0.948	0.085	1.024	0.080
0.796	0.095	0.873	0.087	0.949	0.085	1.026	0.075
0.797	0.089	0.874	0.084	0.951	0.082	1.028	0.085
0.799	0.087	0.876	0.092	0.953	0.087	1.029	0.077
0.801	0.095	0.878	0.085	0.954	0.085	1.031	0.077
0.802	0.089	0.879	0.084	0.956	0.080	1.033	0.084
0.804	0.087	0.881	0.090	0.958	0.089	1.034	0.077
0.806	0.087	0.883	0.085	0.959	0.082	1.036	0.079
0.807	0.090	0.884	0.084	0.961	0.080	1.038	0.082
0.809	0.092	0.886	0.090	0.963	0.087	1.039	0.085
0.811	0.092	0.888	0.084	0.964	0.087	1.041	0.082
0.812	0.092	0.889	0.084	0.966	0.080	1.043	0.079
0.814	0.094	0.891	0.089	0.968	0.082	1.044	0.090
0.816	0.092	0.893	0.090	0.969	0.082	1.046	0.070
0.817	0.089	0.894	0.089	0.971	0.082	1.048	0.067
0.819	0.087	0.896	0.089	0.973	0.082	1.049	0.080
0.821	0.090	0.898	0.087	0.974	0.084	1.051	0.080

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
1.053	0.085	1.130	0.075	1.206	0.072	1.283	0.067
1.054	0.074	1.131	0.074	1.208	0.070	1.285	0.063
1.056	0.075	1.133	0.084	1.210	0.079	1.286	0.070
1.058	0.080	1.135	0.077	1.211	0.072	1.288	0.065
1.059	0.085	1.136	0.077	1.213	0.070	1.290	0.063
1.061	0.072	1.138	0.075	1.215	0.077	1.291	0.067
1.063	0.087	1.140	0.077	1.216	0.075	1.293	0.067
1.064	0.077	1.141	0.075	1.218	0.072	1.295	0.063
1.066	0.074	1.143	0.074	1.220	0.075	1.296	0.067
1.068	0.085	1.145	0.080	1.221	0.077	1.298	0.070
1.069	0.075	1.146	0.075	1.223	0.072	1.300	0.062
1.071	0.077	1.148	0.074	1.225	0.070	1.301	0.063
1.073	0.079	1.150	0.080	1.226	0.079	1.303	0.074
1.074	0.079	1.151	0.075	1.228	0.077	1.305	0.067
1.076	0.077	1.153	0.074	1.230	0.079	1.306	0.067
1.078	0.074	1.155	0.080	1.231	0.079	1.308	0.067
1.079	0.079	1.156	0.074	1.233	0.077	1.310	0.068
1.081	0.077	1.158	0.074	1.235	0.075	1.311	0.067
1.083	0.072	1.160	0.082	1.236	0.072	1.313	0.063
1.084	0.079	1.161	0.077	1.238	0.068	1.315	0.062
1.086	0.079	1.163	0.072	1.240	0.070	1.316	0.067
1.088	0.072	1.165	0.080	1.241	0.072	1.318	0.062
1.089	0.082	1.166	0.080	1.243	0.068	1.320	0.060
1.091	0.074	1.168	0.079	1.245	0.068	1.321	0.067
1.093	0.077	1.170	0.080	1.246	0.075	1.323	0.063
1.094	0.080	1.171	0.080	1.248	0.068	1.325	0.060
1.096	0.077	1.173	0.077	1.250	0.067	1.326	0.067
1.098	0.079	1.175	0.074	1.251	0.075	1.328	0.065
1.099	0.082	1.176	0.079	1.253	0.068	1.330	0.060
1.101	0.085	1.178	0.077	1.255	0.065	1.331	0.067
1.103	0.085	1.180	0.072	1.256	0.074	1.333	0.065
1.104	0.082	1.181	0.079	1.258	0.068	1.335	0.060
1.106	0.095	1.183	0.077	1.260	0.070	1.336	0.065
1.108	0.079	1.185	0.072	1.261	0.072	1.338	0.065
1.109	0.075	1.186	0.079	1.263	0.068	1.340	0.060
1.111	0.075	1.188	0.077	1.265	0.065	1.341	0.060
1.113	0.082	1.190	0.072	1.266	0.068	1.343	0.060
1.114	0.074	1.191	0.077	1.268	0.072	1.345	0.062
1.116	0.075	1.193	0.077	1.270	0.072	1.346	0.062
1.118	0.080	1.195	0.072	1.271	0.074	1.348	0.058
1.120	0.075	1.196	0.074	1.273	0.074	1.350	0.067
1.121	0.075	1.198	0.077	1.275	0.072	1.351	0.062
1.123	0.080	1.200	0.077	1.276	0.074	1.353	0.058
1.125	0.075	1.201	0.075	1.278	0.063	1.355	0.065
1.126	0.074	1.203	0.079	1.280	0.065	1.356	0.062
1.128	0.082	1.205	0.080	1.281	0.072	1.358	0.058

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1.360	0.065	1.437	0.053	1.513	0.036	1.590	0.026
1.361	0.062	1.438	0.050	1.515	0.043	1.592	0.031
1.363	0.058	1.440	0.057	1.517	0.041	1.593	0.028
1.365	0.065	1.442	0.057	1.518	0.040	1.595	0.023
1.366	0.067	1.443	0.057	1.520	0.038	1.597	0.031
1.368	0.060	1.445	0.057	1.522	0.036	1.598	0.026
1.370	0.065	1.447	0.058	1.523	0.036	1.600	0.025
1.371	0.063	1.448	0.053	1.525	0.040	1.602	0.030
1.373	0.062	1.450	0.048	1.527	0.038	1.603	0.026
1.375	0.060	1.452	0.057	1.528	0.033	1.605	0.021
1.376	0.060	1.453	0.050	1.530	0.041	1.607	0.031
1.378	0.060	1.455	0.046	1.532	0.035	1.608	0.025
1.380	0.060	1.457	0.053	1.533	0.033	1.610	0.023
1.381	0.057	1.458	0.048	1.535	0.043	1.612	0.025
1.383	0.065	1.460	0.046	1.537	0.035	1.613	0.026
1.385	0.060	1.462	0.052	1.538	0.031	1.615	0.030
1.386	0.057	1.463	0.046	1.540	0.040	1.617	0.028
1.388	0.063	1.465	0.046	1.542	0.033	1.618	0.030
1.390	0.058	1.467	0.052	1.543	0.033	1.620	0.021
1.391	0.055	1.468	0.048	1.545	0.040	1.622	0.021
1.393	0.063	1.470	0.043	1.547	0.035	1.623	0.028
1.395	0.057	1.472	0.052	1.548	0.035	1.625	0.019
1.396	0.055	1.473	0.046	1.550	0.033	1.627	0.021
1.398	0.063	1.475	0.041	1.552	0.033	1.628	0.026
1.400	0.057	1.477	0.043	1.553	0.033	1.630	0.021
1.402	0.057	1.478	0.041	1.555	0.035	1.632	0.019
1.403	0.065	1.480	0.043	1.557	0.041	1.633	0.025
1.405	0.058	1.482	0.045	1.558	0.031	1.635	0.019
1.407	0.055	1.483	0.045	1.560	0.033	1.637	0.019
1.408	0.062	1.485	0.046	1.562	0.033	1.638	0.023
1.410	0.062	1.487	0.046	1.563	0.030	1.640	0.019
1.412	0.062	1.488	0.041	1.565	0.036	1.642	0.019
1.413	0.063	1.490	0.046	1.567	0.031	1.643	0.023
1.415	0.063	1.492	0.045	1.568	0.030	1.645	0.016
1.417	0.055	1.493	0.038	1.570	0.036	1.647	0.016
1.418	0.052	1.495	0.043	1.572	0.033	1.648	0.018
1.420	0.062	1.497	0.043	1.573	0.028	1.650	0.018
1.422	0.055	1.498	0.036	1.575	0.036	1.652	0.018
1.423	0.052	1.500	0.045	1.577	0.030	1.653	0.019
1.425	0.062	1.502	0.038	1.578	0.030	1.655	0.019
1.427	0.055	1.503	0.036	1.580	0.026	1.657	0.023
1.428	0.052	1.505	0.045	1.582	0.028	1.658	0.016
1.430	0.060	1.507	0.038	1.583	0.030	1.660	0.016
1.432	0.053	1.508	0.036	1.585	0.026	1.662	0.025
1.433	0.052	1.510	0.046	1.587	0.033	1.663	0.014
1.435	0.057	1.512	0.038	1.588	0.030	1.665	0.014

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
1.667	0.025	1.744	0.009	1.820	0.009	1.897	0.011
1.668	0.014	1.745	0.006	1.822	0.003	1.899	0.004
1.670	0.013	1.747	0.013	1.824	0.008	1.900	-0.004
1.672	0.021	1.749	0.009	1.825	0.009	1.902	0.008
1.673	0.014	1.750	0.004	1.827	0.009	1.904	0.003
1.675	0.011	1.752	0.013	1.829	0.009	1.905	-0.001
1.677	0.021	1.754	0.008	1.830	0.009	1.907	0.008
1.678	0.014	1.755	0.004	1.832	0.011	1.909	0.001
1.680	0.011	1.757	0.004	1.834	0.004	1.910	-0.001
1.682	0.021	1.759	0.006	1.835	0.003	1.912	0.013
1.683	0.011	1.760	0.008	1.837	0.009	1.914	0.004
1.685	0.009	1.762	0.009	1.839	0.004	1.915	0.003
1.687	0.011	1.764	0.013	1.840	0.003	1.917	0.004
1.689	0.009	1.765	0.008	1.842	0.011	1.919	0.001
1.690	0.009	1.767	0.004	1.844	0.003	1.920	0.008
1.692	0.009	1.769	0.013	1.845	0.001	1.922	0.004
1.694	0.009	1.770	0.006	1.847	0.009	1.924	0.003
1.695	0.018	1.772	0.006	1.849	0.003	1.925	0.003
1.697	0.011	1.774	0.013	1.850	0.003	1.927	0.001
1.699	0.011	1.775	0.006	1.852	0.009	1.929	0.001
1.700	0.018	1.777	0.006	1.854	0.003	1.930	0.003
1.702	0.009	1.779	0.009	1.855	0.003	1.932	0.013
1.704	0.009	1.780	0.003	1.857	0.006	1.934	-0.001
1.705	0.019	1.782	0.009	1.859	0.003	1.935	0.001
1.707	0.009	1.784	0.008	1.860	-0.003	1.937	0.006
1.709	0.008	1.785	0.003	1.862	0.003	1.939	-0.001
1.710	0.018	1.787	0.009	1.864	0.001	1.940	0.008
1.712	0.009	1.789	0.008	1.865	0.001	1.942	0.003
1.714	0.008	1.790	0.008	1.867	-0.006	1.944	0.001
1.715	0.016	1.792	0.008	1.869	0.006	1.945	0.006
1.717	0.009	1.794	0.006	1.870	0.008	1.947	0.003
1.719	0.006	1.795	0.004	1.872	0.008	1.949	-0.003
1.720	0.016	1.797	0.004	1.874	0.001	1.950	0.013
1.722	0.011	1.799	0.004	1.875	0.001	1.952	0.004
1.724	0.009	1.800	0.009	1.877	0.006	1.954	0.004
1.725	0.009	1.802	0.004	1.879	0.003	1.955	0.003
1.727	0.008	1.804	0.004	1.880	-0.001	1.957	0.003
1.729	0.009	1.805	0.008	1.882	0.009	1.959	0.003
1.730	0.006	1.807	0.004	1.884	0.003	1.961	-0.003
1.732	0.011	1.809	0.003	1.885	0.003	1.962	0.008
1.734	0.009	1.810	0.008	1.887	0.006	1.964	0.003
1.735	0.006	1.812	0.004	1.889	0.003	1.966	-0.001
1.737	0.013	1.814	0.004	1.890	0.004	1.967	0.009
1.739	0.011	1.815	0.009	1.892	0.008	1.969	0.001
1.740	0.006	1.817	0.003	1.894	0.008	1.971	-0.001
1.742	0.013	1.819	0.004	1.895	0.009	1.972	0.009

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
1.974	0.001	2.051	0.001	2.127	0.003	2.204	0.004
1.976	-0.001	2.052	0.004	2.129	0.004	2.206	0.003
1.977	0.006	2.054	0.003	2.131	-0.001	2.207	-0.003
1.979	-0.003	2.056	0.001	2.132	0.001	2.209	0.006
1.981	0.001	2.057	-0.003	2.134	0.004	2.211	0.001
1.982	0.009	2.059	0.001	2.136	0.001	2.212	-0.001
1.984	0.008	2.061	0.001	2.137	0.003	2.214	0.006
1.986	0.003	2.062	-0.003	2.139	0.004	2.216	-0.001
1.987	0.003	2.064	0.006	2.141	-0.001	2.217	-0.001
1.989	-0.004	2.066	0.001	2.142	0.006	2.219	0.006
1.991	-0.001	2.067	-0.003	2.144	0.001	2.221	-0.001
1.992	0.001	2.069	0.006	2.146	-0.003	2.222	-0.001
1.994	0.001	2.071	-0.001	2.147	0.008	2.224	0.006
1.996	0.008	2.072	-0.003	2.149	-0.001	2.226	0.004
1.997	0.003	2.074	0.006	2.151	-0.001	2.227	0.003
1.999	0.006	2.076	0.001	2.152	-0.001	2.229	0.003
2.001	0.004	2.077	-0.001	2.154	-0.001	2.231	0.003
2.002	-0.001	2.079	0.004	2.156	-0.003	2.232	-0.001
2.004	0.006	2.081	0.001	2.157	-0.001	2.234	0.004
2.006	0.001	2.082	0.004	2.159	0.006	2.236	0.003
2.007	-0.001	2.084	0.003	2.161	-0.001	2.237	-0.001
2.009	0.008	2.086	-0.001	2.162	-0.003	2.239	0.004
2.011	0.001	2.087	0.006	2.164	0.006	2.241	0.001
2.012	0.001	2.089	0.008	2.166	0.001	2.243	-0.003
2.014	0.008	2.091	0.008	2.167	-0.001	2.244	0.004
2.016	-0.001	2.092	0.008	2.169	0.006	2.246	-0.001
2.017	-0.001	2.094	0.006	2.171	-0.001	2.248	-0.001
2.019	0.004	2.096	0.001	2.172	0.004	2.249	0.008
2.021	0.001	2.097	-0.001	2.174	0.003	2.251	-0.001
2.022	0.003	2.099	0.006	2.176	-0.001	2.253	-0.001
2.024	0.003	2.101	0.001	2.177	0.004	2.254	0.003
2.026	0.001	2.102	-0.003	2.179	0.001	2.256	-0.001
2.027	0.001	2.104	0.006	2.181	-0.003	2.258	0.008
2.029	0.001	2.106	0.001	2.182	0.008	2.259	0.006
2.031	-0.001	2.107	0.003	2.184	-0.001	2.261	0.008
2.032	-0.001	2.109	0.004	2.186	-0.001	2.263	0.008
2.034	0.008	2.111	-0.001	2.187	-0.003	2.264	0.004
2.036	0.001	2.112	0.003	2.189	-0.004	2.266	0.003
2.037	0.001	2.114	0.001	2.191	-0.001	2.268	-0.003
2.039	0.009	2.116	-0.001	2.192	-0.001	2.269	0.004
2.041	0.001	2.117	0.006	2.194	0.001	2.271	0.001
2.042	-0.001	2.119	0.003	2.196	0.004	2.273	-0.004
2.044	0.006	2.121	-0.003	2.197	-0.001	2.274	0.003
2.046	0.001	2.122	0.001	2.199	0.004	2.276	-0.001
2.047	0.001	2.124	-0.001	2.201	0.004	2.278	-0.001
2.049	0.004	2.126	-0.003	2.202	-0.001	2.279	0.004

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
2.281	-0.003	2.358	-0.001	2.434	0.001	2.511	-0.003
2.283	0.004	2.359	0.004	2.436	-0.003	2.513	-0.001
2.284	-0.001	2.361	-0.001	2.438	0.004	2.515	-0.001
2.286	-0.003	2.363	0.009	2.439	0.004	2.516	-0.003
2.288	0.008	2.364	0.008	2.441	0.004	2.518	-0.003
2.289	-0.003	2.366	-0.001	2.443	0.003	2.520	0.004
2.291	-0.001	2.368	-0.003	2.444	0.003	2.521	0.001
2.293	0.003	2.369	0.004	2.446	0.003	2.523	0.001
2.294	-0.001	2.371	0.009	2.448	-0.001	2.525	0.003
2.296	0.001	2.373	0.006	2.449	-0.001	2.526	0.004
2.298	-0.001	2.374	0.006	2.451	0.004	2.528	-0.003
2.299	-0.001	2.376	0.008	2.453	-0.001	2.530	0.004
2.301	-0.003	2.378	0.003	2.454	-0.003	2.531	0.001
2.303	0.001	2.379	-0.003	2.456	0.004	2.533	-0.004
2.304	0.006	2.381	0.003	2.458	0.001	2.535	0.004
2.306	-0.001	2.383	0.013	2.459	-0.004	2.536	-0.001
2.308	0.001	2.384	-0.003	2.461	0.004	2.538	-0.004
2.309	0.001	2.386	0.006	2.463	-0.001	2.540	0.003
2.311	-0.003	2.388	-0.001	2.464	-0.004	2.541	-0.001
2.313	0.004	2.389	-0.004	2.466	0.003	2.543	-0.004
2.314	0.004	2.391	0.004	2.468	-0.001	2.545	-0.003
2.316	-0.003	2.393	-0.001	2.469	-0.003	2.546	-0.003
2.318	0.008	2.394	-0.004	2.471	0.004	2.548	-0.003
2.319	-0.001	2.396	0.008	2.473	0.001	2.550	-0.001
2.321	-0.001	2.398	-0.001	2.474	-0.003	2.551	0.001
2.323	0.013	2.399	-0.001	2.476	0.006	2.553	0.001
2.324	-0.003	2.401	0.006	2.478	0.004	2.555	-0.003
2.326	-0.001	2.403	-0.001	2.479	0.004	2.556	0.003
2.328	0.004	2.404	0.001	2.481	0.004	2.558	-0.001
2.329	-0.001	2.406	-0.004	2.483	0.004	2.560	-0.004
2.331	0.001	2.408	-0.001	2.484	0.004	2.561	0.004
2.333	-0.004	2.409	-0.001	2.486	-0.001	2.563	-0.003
2.334	-0.004	2.411	-0.001	2.488	-0.001	2.565	-0.003
2.336	-0.001	2.413	0.006	2.489	0.003	2.566	0.006
2.338	0.001	2.414	0.003	2.491	-0.003	2.568	-0.003
2.339	0.008	2.416	-0.003	2.493	0.003	2.570	-0.003
2.341	0.001	2.418	0.004	2.494	0.003	2.571	0.001
2.343	-0.004	2.419	0.003	2.496	-0.001	2.573	-0.003
2.344	0.008	2.421	0.001	2.498	0.003	2.575	-0.001
2.346	-0.001	2.423	0.004	2.499	0.001	2.576	0.001
2.348	-0.003	2.424	0.001	2.501	-0.001	2.578	-0.003
2.349	0.006	2.426	-0.001	2.503	0.003	2.580	-0.003
2.351	-0.003	2.428	-0.001	2.504	0.003	2.581	-0.003
2.353	-0.003	2.429	0.003	2.506	-0.004	2.583	-0.004
2.354	0.006	2.431	-0.001	2.508	0.004	2.585	-0.004
2.356	0.001	2.433	0.001	2.509	0.001	2.586	-0.003



Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
2.588	0.003	2.665	-0.003	2.741	-0.001	2.818	0.001
2.590	-0.003	2.666	0.004	2.743	-0.004	2.820	0.001
2.591	0.001	2.668	-0.003	2.745	0.003	2.822	-0.004
2.593	0.001	2.670	0.003	2.746	-0.001	2.823	0.004
2.595	-0.003	2.671	0.003	2.748	-0.004	2.825	-0.001
2.596	0.003	2.673	-0.003	2.750	0.004	2.827	-0.004
2.598	-0.003	2.675	0.004	2.751	-0.001	2.828	0.003
2.600	-0.004	2.676	-0.001	2.753	-0.006	2.830	0.001
2.601	0.006	2.678	-0.003	2.755	0.003	2.832	-0.004
2.603	-0.001	2.680	0.004	2.756	0.008	2.833	-0.009
2.605	-0.003	2.681	-0.003	2.758	0.004	2.835	-0.003
2.606	0.003	2.683	-0.004	2.760	0.006	2.837	-0.004
2.608	-0.001	2.685	-0.004	2.761	0.008	2.838	-0.004
2.610	0.003	2.686	-0.004	2.763	0.004	2.840	-0.003
2.611	0.003	2.688	-0.001	2.765	0.003	2.842	0.003
2.613	-0.004	2.690	0.003	2.766	-0.001	2.843	-0.003
2.615	-0.004	2.691	0.004	2.768	-0.004	2.845	-0.001
2.616	-0.004	2.693	0.001	2.770	0.003	2.847	0.004
2.618	0.001	2.695	-0.004	2.771	-0.001	2.848	0.003
2.620	-0.001	2.696	0.003	2.773	-0.006	2.850	-0.003
2.621	0.004	2.698	-0.001	2.775	0.003	2.852	0.006
2.623	-0.003	2.700	-0.001	2.776	-0.003	2.853	-0.003
2.625	-0.004	2.701	0.004	2.778	-0.003	2.855	-0.003
2.626	0.004	2.703	-0.001	2.780	0.003	2.857	0.004
2.628	-0.001	2.705	0.003	2.781	0.001	2.858	-0.003
2.630	-0.004	2.706	-0.001	2.783	-0.003	2.860	-0.003
2.631	0.006	2.708	-0.004	2.785	0.003	2.862	0.003
2.633	-0.003	2.710	0.004	2.786	0.003	2.863	-0.003
2.635	-0.001	2.711	-0.001	2.788	-0.003	2.865	-0.001
2.636	0.001	2.713	-0.004	2.790	0.003	2.867	0.001
2.638	-0.003	2.715	0.003	2.791	0.003	2.868	-0.001
2.640	0.004	2.716	-0.001	2.793	-0.003	2.870	-0.001
2.641	0.003	2.718	-0.004	2.795	0.001	2.872	0.001
2.643	-0.003	2.720	0.004	2.797	0.003	2.873	-0.003
2.645	0.004	2.721	0.001	2.798	-0.003	2.875	-0.003
2.646	0.004	2.723	0.003	2.800	-0.003	2.877	-0.001
2.648	0.004	2.725	-0.001	2.802	0.001	2.878	-0.001
2.650	0.006	2.726	-0.001	2.803	-0.003	2.880	-0.004
2.651	0.006	2.728	-0.001	2.805	-0.001	2.882	0.001
2.653	0.003	2.730	-0.003	2.807	-0.004	2.883	-0.001
2.655	-0.001	2.731	0.006	2.808	0.001	2.885	-0.004
2.656	0.001	2.733	0.001	2.810	0.001	2.887	0.003
2.658	0.003	2.735	0.014	2.812	-0.003	2.888	-0.003
2.660	-0.004	2.736	-0.001	2.813	0.003	2.890	-0.004
2.661	0.004	2.738	-0.004	2.815	0.001	2.892	0.004
2.663	-0.001	2.740	0.003	2.817	-0.003	2.893	-0.003

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
2.895	-0.004	2.972	-0.011	3.048	-0.004	3.125	-0.003
2.897	0.001	2.973	-0.001	3.050	-0.001	3.127	0.001
2.898	-0.003	2.975	-0.003	3.052	-0.003	3.129	-0.006
2.900	-0.003	2.977	0.001	3.053	-0.004	3.130	-0.001
2.902	-0.003	2.978	0.009	3.055	0.003	3.132	0.001
2.903	-0.004	2.980	-0.009	3.057	-0.003	3.134	0.003
2.905	-0.004	2.982	-0.004	3.058	0.004	3.135	0.004
2.907	0.003	2.983	-0.004	3.060	-0.003	3.137	0.006
2.908	0.003	2.985	-0.004	3.062	-0.006	3.139	-0.001
2.910	-0.004	2.987	-0.003	3.063	0.004	3.140	-0.004
2.912	0.004	2.988	-0.003	3.065	-0.001	3.142	0.001
2.913	-0.004	2.990	0.006	3.067	-0.003	3.144	-0.003
2.915	-0.004	2.992	-0.001	3.069	-0.003	3.145	-0.006
2.917	0.003	2.993	-0.001	3.070	-0.003	3.147	0.003
2.918	-0.003	2.995	0.003	3.072	-0.003	3.149	-0.004
2.920	-0.001	2.997	0.003	3.074	-0.006	3.150	-0.004
2.922	0.001	2.998	0.008	3.075	0.004	3.152	0.003
2.923	-0.004	3.000	0.001	3.077	-0.003	3.154	-0.004
2.925	0.003	3.002	-0.003	3.079	-0.004	3.155	-0.003
2.927	-0.001	3.003	0.001	3.080	0.004	3.157	-0.001
2.928	-0.004	3.005	0.003	3.082	-0.004	3.159	-0.006
2.930	-0.004	3.007	-0.003	3.084	-0.003	3.160	0.003
2.932	-0.003	3.008	0.006	3.085	-0.001	3.162	-0.004
2.933	-0.004	3.010	-0.003	3.087	-0.003	3.164	-0.006
2.935	-0.004	3.012	-0.001	3.089	0.003	3.165	0.003
2.937	-0.004	3.013	0.003	3.090	-0.003	3.167	0.004
2.938	-0.014	3.015	-0.003	3.092	-0.004	3.169	0.003
2.940	-0.004	3.017	0.003	3.094	0.001	3.170	0.004
2.942	-0.003	3.018	-0.003	3.095	-0.003	3.172	0.004
2.943	-0.003	3.020	-0.001	3.097	-0.003	3.174	0.001
2.945	-0.004	3.022	0.006	3.099	-0.001	3.175	-0.003
2.947	-0.008	3.023	-0.004	3.100	-0.004	3.177	-0.006
2.948	-0.004	3.025	0.003	3.102	-0.004	3.179	0.004
2.950	-0.006	3.027	0.003	3.104	-0.003	3.180	-0.003
2.952	-0.004	3.028	0.001	3.105	0.001	3.182	-0.003
2.953	-0.009	3.030	-0.001	3.107	0.003	3.184	-0.001
2.955	-0.003	3.032	-0.003	3.109	0.001	3.185	-0.004
2.957	0.003	3.033	-0.003	3.110	-0.006	3.187	0.001
2.958	0.001	3.035	-0.003	3.112	0.001	3.189	-0.003
2.960	-0.004	3.037	0.003	3.114	-0.003	3.190	-0.006
2.962	-0.004	3.038	-0.003	3.115	-0.004	3.192	0.003
2.963	-0.003	3.040	-0.004	3.117	0.001	3.194	-0.003
2.965	-0.004	3.042	0.006	3.119	-0.003	3.195	-0.004
2.967	-0.003	3.043	-0.003	3.120	-0.006	3.197	0.003
2.968	-0.001	3.045	-0.001	3.122	0.003	3.199	-0.003
2.970	-0.003	3.047	-0.001	3.124	-0.004	3.200	-0.001

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
3.202	0.001	3.279	-0.001	3.356	-0.001	3.432	-0.004
3.204	-0.004	3.280	-0.006	3.357	-0.003	3.434	-0.006
3.205	0.001	3.282	0.003	3.359	-0.003	3.436	0.004
3.207	-0.003	3.284	0.001	3.361	-0.004	3.437	-0.004
3.209	-0.006	3.285	-0.003	3.362	-0.004	3.439	-0.004
3.210	-0.003	3.287	-0.003	3.364	-0.004	3.441	-0.004
3.212	-0.001	3.289	-0.004	3.366	-0.004	3.442	-0.001
3.214	0.004	3.290	-0.003	3.367	0.001	3.444	0.001
3.215	0.004	3.292	-0.001	3.369	-0.001	3.446	0.001
3.217	0.003	3.294	-0.001	3.371	-0.008	3.447	0.003
3.219	-0.004	3.295	-0.004	3.372	0.004	3.449	-0.004
3.220	-0.003	3.297	0.003	3.374	-0.004	3.451	-0.004
3.222	-0.001	3.299	-0.004	3.376	-0.004	3.452	0.001
3.224	-0.004	3.300	-0.004	3.377	0.003	3.454	-0.004
3.225	0.001	3.302	-0.001	3.379	-0.004	3.456	-0.001
3.227	-0.004	3.304	-0.006	3.381	0.001	3.457	-0.001
3.229	-0.004	3.305	0.001	3.382	-0.001	3.459	-0.004
3.230	0.001	3.307	-0.004	3.384	-0.008	3.461	0.001
3.232	-0.003	3.309	-0.008	3.386	0.001	3.462	-0.003
3.234	0.003	3.310	0.004	3.387	-0.003	3.464	-0.006
3.235	-0.003	3.312	-0.003	3.389	-0.006	3.466	0.001
3.237	-0.006	3.314	-0.003	3.391	0.003	3.467	-0.003
3.239	0.004	3.315	-0.003	3.392	-0.004	3.469	-0.006
3.240	-0.004	3.317	-0.004	3.394	-0.003	3.471	0.003
3.242	-0.004	3.319	-0.006	3.396	0.003	3.472	-0.003
3.244	-0.006	3.320	-0.004	3.397	-0.004	3.474	-0.006
3.245	-0.006	3.322	-0.001	3.399	-0.004	3.476	-0.004
3.247	-0.003	3.324	0.001	3.401	0.003	3.477	-0.004
3.249	-0.001	3.325	0.003	3.402	0.004	3.479	-0.001
3.250	0.003	3.327	-0.001	3.404	0.004	3.481	0.003
3.252	-0.001	3.329	-0.006	3.406	0.004	3.482	0.001
3.254	-0.003	3.330	0.003	3.407	0.001	3.484	-0.004
3.255	0.001	3.332	-0.004	3.409	-0.001	3.486	0.001
3.257	-0.003	3.334	-0.006	3.411	-0.006	3.487	-0.003
3.259	-0.004	3.335	0.004	3.412	0.001	3.489	-0.004
3.260	0.001	3.337	-0.004	3.414	-0.003	3.491	0.001
3.262	-0.004	3.339	-0.004	3.416	-0.006	3.492	-0.004
3.264	0.001	3.340	0.001	3.417	0.003	3.494	-0.009
3.265	-0.001	3.342	-0.006	3.419	-0.004	3.496	-0.003
3.267	-0.006	3.344	0.001	3.421	-0.006	3.497	-0.006
3.269	0.001	3.345	-0.003	3.422	0.004	3.499	-0.006
3.270	-0.004	3.347	-0.004	3.424	-0.003	3.501	-0.001
3.272	-0.006	3.349	0.001	3.426	-0.004	3.502	-0.004
3.274	0.001	3.351	-0.003	3.427	-0.001	3.504	0.001
3.275	-0.004	3.352	-0.008	3.429	-0.004	3.506	-0.001
3.277	0.001	3.354	0.004	3.431	0.001	3.507	-0.004

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
3.509	-0.004	3.586	-0.006	3.663	-0.003	3.739	-0.004
3.511	-0.006	3.587	-0.004	3.664	0.001	3.741	0.003
3.512	-0.006	3.589	-0.004	3.666	-0.004	3.743	-0.004
3.514	-0.004	3.591	-0.006	3.668	0.001	3.744	0.003
3.516	0.001	3.592	-0.006	3.669	-0.003	3.746	-0.003
3.517	-0.004	3.594	-0.006	3.671	-0.006	3.748	-0.008
3.519	-0.006	3.596	0.003	3.673	0.001	3.749	-0.001
3.521	0.003	3.597	-0.004	3.674	0.001	3.751	-0.001
3.522	-0.004	3.599	-0.004	3.676	-0.001	3.753	0.003
3.524	-0.003	3.601	0.003	3.678	-0.003	3.754	0.004
3.526	-0.001	3.602	-0.004	3.679	-0.003	3.756	0.003
3.527	-0.004	3.604	-0.004	3.681	-0.001	3.758	-0.001
3.529	0.001	3.606	-0.001	3.683	-0.004	3.759	-0.006
3.531	-0.003	3.607	-0.004	3.684	-0.001	3.761	-0.001
3.532	-0.006	3.609	-0.001	3.686	-0.004	3.763	-0.003
3.534	0.004	3.611	-0.003	3.688	0.001	3.764	-0.006
3.536	-0.003	3.612	-0.004	3.689	-0.001	3.766	0.001
3.537	-0.006	3.614	-0.001	3.691	-0.006	3.768	-0.004
3.539	0.001	3.616	-0.003	3.693	0.001	3.769	-0.004
3.541	-0.004	3.617	-0.004	3.694	-0.004	3.771	0.003
3.542	-0.004	3.619	0.001	3.696	-0.006	3.773	-0.004
3.544	-0.004	3.621	-0.003	3.698	0.001	3.774	-0.004
3.546	-0.004	3.623	-0.006	3.699	-0.006	3.776	-0.001
3.547	0.001	3.624	0.001	3.701	-0.001	3.778	-0.004
3.549	0.003	3.626	-0.003	3.703	0.001	3.779	-0.003
3.551	0.003	3.628	-0.006	3.704	-0.006	3.781	-0.003
3.552	-0.001	3.629	0.004	3.706	0.003	3.783	-0.006
3.554	-0.004	3.631	-0.004	3.708	-0.001	3.784	0.001
3.556	0.001	3.633	-0.006	3.709	-0.003	3.786	-0.004
3.557	-0.003	3.634	0.004	3.711	-0.004	3.788	-0.004
3.559	-0.006	3.636	-0.006	3.713	-0.003	3.789	0.001
3.561	0.004	3.638	-0.006	3.714	-0.004	3.791	0.006
3.562	-0.003	3.639	-0.008	3.716	-0.003	3.793	0.004
3.564	-0.004	3.641	-0.006	3.718	0.003	3.794	0.001
3.566	0.004	3.643	-0.004	3.719	-0.001	3.796	-0.004
3.567	-0.004	3.644	-0.003	3.721	-0.006	3.798	-0.008
3.569	-0.001	3.646	0.004	3.723	0.001	3.799	0.003
3.571	-0.001	3.648	-0.006	3.724	-0.004	3.801	-0.004
3.572	-0.006	3.649	-0.004	3.726	-0.006	3.803	-0.004
3.574	-0.003	3.651	0.001	3.728	-0.001	3.804	0.001
3.576	-0.001	3.653	-0.004	3.729	-0.003	3.806	-0.004
3.577	-0.006	3.654	-0.001	3.731	-0.001	3.808	0.001
3.579	0.003	3.656	-0.001	3.733	-0.001	3.809	-0.004
3.581	-0.004	3.658	-0.008	3.734	-0.006	3.811	-0.006
3.582	-0.003	3.659	0.003	3.736	0.003	3.813	0.001
3.584	-0.004	3.661	-0.004	3.738	-0.004	3.814	-0.006

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
3.816	-0.001	3.893	-0.001	3.970	0.003	4.046	0.001
3.818	0.001	3.894	0.001	3.971	-0.006	4.048	-0.004
3.819	-0.006	3.896	0.003	3.973	-0.006	4.050	-0.006
3.821	-0.006	3.898	-0.004	3.975	0.001	4.051	0.001
3.823	-0.006	3.899	-0.006	3.976	-0.006	4.053	-0.006
3.824	-0.003	3.901	0.003	3.978	-0.004	4.055	-0.004
3.826	0.001	3.903	-0.008	3.980	-0.001	4.056	-0.001
3.828	0.003	3.905	-0.008	3.981	-0.006	4.058	-0.006
3.829	-0.003	3.906	0.003	3.983	-0.001	4.060	-0.006
3.831	-0.004	3.908	-0.004	3.985	-0.001	4.061	-0.008
3.833	0.001	3.910	-0.008	3.986	-0.006	4.063	-0.006
3.834	-0.006	3.911	0.004	3.988	-0.006	4.065	-0.004
3.836	-0.001	3.913	-0.004	3.990	-0.006	4.066	0.004
3.838	-0.004	3.915	-0.006	3.991	-0.008	4.068	-0.006
3.839	-0.006	3.916	0.001	3.993	-0.009	4.070	-0.006
3.841	0.003	3.918	-0.006	3.995	-0.006	4.071	0.001
3.843	-0.008	3.920	-0.006	3.996	0.001	4.073	-0.009
3.844	-0.004	3.921	-0.006	3.998	-0.003	4.075	-0.004
3.846	0.001	3.923	-0.006	4.000	-0.006	4.076	-0.001
3.848	-0.006	3.925	-0.004	4.001	0.001	4.078	-0.008
3.849	-0.004	3.926	-0.006	4.003	-0.003	4.080	0.001
3.851	-0.001	3.928	0.001	4.005	-0.008	4.081	-0.004
3.853	-0.006	3.930	-0.003	4.006	-0.001	4.083	-0.008
3.854	-0.003	3.931	-0.006	4.008	-0.004	4.085	0.003
3.856	-0.001	3.933	0.004	4.010	-0.008	4.086	-0.006
3.858	0.001	3.935	-0.003	4.011	-0.001	4.088	-0.006
3.859	0.001	3.936	-0.008	4.013	-0.004	4.090	0.001
3.861	0.001	3.938	-0.001	4.015	-0.008	4.091	0.003
3.863	-0.001	3.940	-0.003	4.016	0.001	4.093	0.004
3.864	-0.006	3.941	-0.008	4.018	-0.004	4.095	0.001
3.866	0.001	3.943	0.001	4.020	-0.006	4.096	-0.001
3.868	-0.004	3.945	-0.004	4.021	0.001	4.098	-0.006
3.869	-0.004	3.946	-0.008	4.023	-0.006	4.100	0.001
3.871	0.003	3.948	0.001	4.025	-0.004	4.101	-0.003
3.873	-0.004	3.950	-0.004	4.026	0.003	4.103	-0.008
3.874	-0.008	3.951	-0.008	4.028	0.004	4.105	0.001
3.876	0.001	3.953	0.001	4.030	0.001	4.106	-0.004
3.878	-0.004	3.955	-0.001	4.031	-0.001	4.108	-0.006
3.879	-0.004	3.956	-0.003	4.033	-0.001	4.110	0.001
3.881	-0.003	3.958	-0.003	4.035	-0.006	4.111	-0.006
3.883	-0.004	3.960	-0.003	4.036	-0.004	4.113	-0.006
3.884	-0.001	3.961	-0.006	4.038	-0.001	4.115	-0.001
3.886	-0.001	3.963	-0.006	4.040	-0.006	4.116	-0.006
3.888	-0.006	3.965	0.001	4.041	-0.001	4.118	-0.004
3.889	0.003	3.966	-0.006	4.043	-0.003	4.120	-0.004
3.891	0.001	3.968	-0.006	4.045	-0.006	4.121	-0.006

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
4.123	-0.001	4.200	-0.001	4.277	0.001	4.353	-0.006
4.125	-0.001	4.202	-0.006	4.278	-0.003	4.355	-0.001
4.126	0.003	4.203	-0.008	4.280	-0.006	4.357	-0.004
4.128	0.003	4.205	0.003	4.282	-0.001	4.358	-0.008
4.130	0.001	4.207	-0.006	4.283	-0.001	4.360	0.001
4.131	-0.006	4.208	-0.008	4.285	-0.004	4.362	-0.006
4.133	-0.006	4.210	-0.001	4.287	0.001	4.363	-0.006
4.135	0.003	4.212	-0.008	4.288	-0.001	4.365	-0.003
4.136	-0.004	4.213	-0.001	4.290	-0.006	4.367	-0.013
4.138	-0.001	4.215	-0.004	4.292	-0.004	4.368	-0.004
4.140	-0.003	4.217	-0.008	4.293	0.001	4.370	-0.001
4.141	-0.008	4.218	0.001	4.295	-0.004	4.372	-0.006
4.143	-0.001	4.220	-0.004	4.297	0.001	4.373	-0.008
4.145	-0.003	4.222	-0.006	4.298	-0.003	4.375	-0.006
4.146	-0.006	4.223	0.001	4.300	-0.008	4.377	-0.008
4.148	-0.001	4.225	-0.006	4.302	0.001	4.378	-0.006
4.150	-0.004	4.227	-0.003	4.303	-0.004	4.380	-0.003
4.151	-0.008	4.228	-0.003	4.305	-0.008	4.382	-0.003
4.153	0.001	4.230	-0.008	4.307	0.003	4.383	-0.006
4.155	-0.004	4.232	-0.006	4.308	-0.001	4.385	-0.001
4.156	-0.006	4.233	-0.008	4.310	-0.008	4.387	-0.003
4.158	-0.008	4.235	-0.006	4.312	-0.003	4.388	-0.008
4.160	-0.008	4.237	-0.006	4.313	-0.006	4.390	0.003
4.161	-0.003	4.238	-0.004	4.315	-0.004	4.392	-0.004
4.163	-0.004	4.240	-0.001	4.317	-0.004	4.393	-0.006
4.165	-0.001	4.242	-0.003	4.318	-0.006	4.395	0.001
4.166	-0.004	4.243	-0.006	4.320	-0.008	4.397	-0.004
4.168	-0.006	4.245	0.003	4.322	-0.001	4.398	-0.006
4.170	0.003	4.247	-0.004	4.323	-0.004	4.400	0.003
4.172	-0.006	4.248	-0.006	4.325	-0.008	4.402	-0.006
4.173	-0.006	4.250	0.001	4.327	-0.001	4.403	-0.004
4.175	-0.001	4.252	-0.006	4.328	-0.004	4.405	-0.004
4.177	-0.006	4.253	-0.001	4.330	-0.001	4.407	0.001
4.178	-0.001	4.255	-0.003	4.332	-0.001	4.408	0.001
4.180	-0.003	4.257	-0.009	4.333	-0.006	4.410	0.001
4.182	-0.006	4.258	0.001	4.335	-0.001	4.412	0.003
4.183	-0.001	4.260	-0.004	4.337	-0.004	4.413	-0.004
4.185	-0.004	4.262	-0.006	4.338	-0.009	4.415	-0.008
4.187	-0.008	4.263	0.003	4.340	-0.001	4.417	-0.001
4.188	0.003	4.265	-0.006	4.342	-0.004	4.418	-0.004
4.190	-0.004	4.267	-0.004	4.343	-0.004	4.420	-0.006
4.192	-0.006	4.268	0.003	4.345	-0.004	4.422	0.003
4.193	-0.008	4.270	-0.008	4.347	-0.006	4.423	-0.004
4.195	-0.008	4.272	-0.001	4.348	-0.006	4.425	-0.006
4.197	-0.006	4.273	0.004	4.350	-0.003	4.427	-0.001
4.198	-0.003	4.275	0.001	4.352	-0.004	4.428	-0.006

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
4.430	-0.001	4.507	0.001	4.584	-0.004	4.660	-0.003
4.432	-0.006	4.509	-0.004	4.585	-0.001	4.662	-0.004
4.433	-0.008	4.510	-0.006	4.587	-0.006	4.664	-0.003
4.435	0.001	4.512	-0.006	4.589	-0.008	4.665	-0.001
4.437	-0.006	4.514	-0.006	4.590	-0.003	4.667	-0.006
4.438	-0.008	4.515	-0.006	4.592	-0.004	4.669	-0.003
4.440	0.003	4.517	-0.008	4.594	-0.001	4.670	-0.001
4.442	-0.001	4.519	0.001	4.595	-0.006	4.672	-0.006
4.443	0.003	4.520	-0.004	4.597	-0.009	4.674	-0.008
4.445	0.003	4.522	-0.008	4.599	0.001	4.675	-0.008
4.447	0.001	4.524	0.001	4.600	-0.003	4.677	-0.008
4.448	-0.004	4.525	-0.006	4.602	0.001	4.679	-0.006
4.450	-0.004	4.527	-0.001	4.604	-0.006	4.680	-0.006
4.452	0.001	4.529	-0.003	4.605	-0.006	4.682	0.003
4.453	-0.006	4.530	-0.008	4.607	-0.008	4.684	-0.006
4.455	-0.009	4.532	0.003	4.609	0.003	4.685	-0.004
4.457	-0.004	4.534	-0.006	4.610	-0.008	4.687	0.003
4.459	-0.009	4.535	-0.004	4.612	-0.004	4.689	-0.006
4.460	-0.001	4.537	-0.001	4.614	-0.001	4.690	-0.003
4.462	-0.006	4.539	-0.006	4.615	-0.006	4.692	-0.001
4.464	-0.006	4.540	-0.001	4.617	0.001	4.694	-0.006
4.465	0.001	4.542	-0.006	4.619	-0.004	4.695	-0.004
4.467	-0.006	4.544	-0.008	4.620	-0.004	4.697	-0.003
4.469	-0.006	4.545	-0.008	4.622	0.003	4.699	-0.008
4.470	-0.003	4.547	-0.004	4.624	-0.008	4.700	0.001
4.472	-0.008	4.549	0.001	4.625	-0.004	4.702	-0.006
4.474	0.001	4.550	0.003	4.627	-0.001	4.704	-0.008
4.475	-0.003	4.552	-0.006	4.629	-0.008	4.705	-0.001
4.477	-0.003	4.554	-0.008	4.630	0.001	4.707	-0.001
4.479	-0.004	4.555	-0.001	4.632	0.001	4.709	-0.003
4.480	-0.006	4.557	-0.008	4.634	-0.003	4.710	-0.004
4.482	-0.004	4.559	-0.001	4.635	-0.003	4.712	-0.004
4.484	-0.006	4.560	-0.006	4.637	0.014	4.714	-0.004
4.485	0.001	4.562	-0.006	4.639	-0.006	4.715	-0.006
4.487	-0.006	4.564	0.001	4.640	0.003	4.717	-0.001
4.489	-0.006	4.565	-0.006	4.642	-0.008	4.719	-0.004
4.490	-0.001	4.567	-0.006	4.644	-0.006	4.720	-0.008
4.492	-0.008	4.569	-0.001	4.645	0.001	4.722	0.001
4.494	0.001	4.570	-0.008	4.647	-0.006	4.724	-0.006
4.495	-0.004	4.572	-0.004	4.649	-0.006	4.726	-0.008
4.497	-0.006	4.574	-0.003	4.650	-0.001	4.727	0.004
4.499	0.001	4.575	0.001	4.652	-0.008	4.729	-0.008
4.500	-0.006	4.577	0.001	4.654	-0.008	4.731	-0.008
4.502	-0.001	4.579	-0.004	4.655	-0.001	4.732	0.003
4.504	-0.001	4.580	-0.008	4.657	-0.008	4.734	-0.006
4.505	-0.006	4.582	-0.001	4.659	-0.004	4.736	-0.006

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
4.737	0.003	4.814	-0.008	4.891	-0.008	4.967	-0.006
4.739	-0.006	4.816	-0.003	4.892	-0.008	4.969	-0.006
4.741	-0.006	4.817	-0.003	4.894	-0.009	4.971	-0.006
4.742	0.001	4.819	-0.001	4.896	0.001	4.972	-0.009
4.744	-0.001	4.821	-0.001	4.897	-0.006	4.974	-0.001
4.746	0.001	4.822	-0.001	4.899	-0.004	4.976	-0.006
4.747	0.003	4.824	-0.006	4.901	-0.003	4.977	-0.009
4.749	-0.001	4.826	-0.004	4.902	-0.008	4.979	0.001
4.751	-0.001	4.827	-0.003	4.904	0.003	4.981	-0.006
4.752	-0.001	4.829	-0.006	4.906	-0.006	4.982	-0.004
4.754	-0.003	4.831	0.001	4.907	-0.006	4.984	-0.003
4.756	-0.006	4.832	-0.003	4.909	0.001	4.986	-0.006
4.757	0.006	4.834	-0.008	4.911	-0.006	4.987	-0.001
4.759	-0.004	4.836	-0.001	4.912	-0.003	4.989	-0.006
4.761	-0.008	4.837	-0.001	4.914	-0.004	4.991	-0.009
4.762	-0.001	4.839	-0.008	4.916	-0.008	4.992	0.001
4.764	-0.011	4.841	0.001	4.917	-0.001	4.994	-0.006
4.766	-0.008	4.842	-0.006	4.919	-0.006	4.996	-0.008
4.767	0.001	4.844	-0.004	4.921	-0.004	4.997	-0.001
4.769	-0.004	4.846	0.001	4.922	-0.001	4.999	-0.006
4.771	-0.006	4.847	-0.006	4.924	0.001	5.001	-0.003
4.772	-0.003	4.849	-0.006	4.926	0.003	5.002	-0.006
4.774	-0.004	4.851	-0.006	4.927	0.003	5.004	-0.008
4.776	0.001	4.852	-0.003	4.929	-0.001	5.006	-0.003
4.777	0.001	4.854	0.001	4.931	-0.004	5.007	-0.001
4.779	0.001	4.856	0.001	4.932	-0.008	5.009	-0.003
4.781	0.001	4.857	-0.003	4.934	0.001	5.011	0.001
4.782	-0.004	4.859	-0.003	4.936	-0.006	5.013	0.003
4.784	-0.008	4.861	-0.001	4.937	-0.004	5.014	-0.006
4.786	-0.001	4.862	-0.003	4.939	-0.001	5.016	-0.008
4.787	-0.004	4.864	-0.006	4.941	-0.006	5.018	0.001
4.789	-0.008	4.866	0.001	4.942	-0.001	5.019	-0.006
4.791	-0.001	4.867	-0.004	4.944	-0.004	5.021	-0.008
4.792	-0.004	4.869	-0.008	4.946	-0.009	5.023	-0.003
4.794	-0.009	4.871	-0.001	4.947	-0.001	5.024	-0.009
4.796	0.003	4.872	-0.004	4.949	-0.006	5.026	-0.001
4.797	-0.006	4.874	-0.008	4.951	-0.008	5.028	-0.006
4.799	-0.008	4.876	0.003	4.952	0.001	5.029	-0.011
4.801	0.003	4.877	-0.006	4.954	-0.006	5.031	0.001
4.802	-0.004	4.879	-0.008	4.956	-0.001	5.033	-0.006
4.804	-0.008	4.881	-0.003	4.957	-0.003	5.034	-0.008
4.806	0.001	4.882	-0.008	4.959	-0.008	5.036	-0.001
4.807	-0.006	4.884	-0.001	4.961	-0.001	5.038	-0.006
4.809	-0.006	4.886	-0.006	4.962	-0.003	5.039	-0.008
4.811	0.003	4.887	-0.008	4.964	-0.006	5.041	-0.008
4.812	-0.004	4.889	-0.008	4.966	-0.004	5.043	-0.006



Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
5.044	-0.003	5.121	-0.001	5.198	-0.003	5.274	-0.003
5.046	-0.001	5.123	-0.003	5.199	-0.006	5.276	-0.004
5.048	-0.003	5.124	-0.006	5.201	-0.004	5.278	-0.006
5.049	-0.009	5.126	-0.001	5.203	-0.004	5.280	-0.001
5.051	-0.001	5.128	-0.003	5.204	-0.006	5.281	-0.003
5.053	-0.006	5.129	-0.008	5.206	-0.001	5.283	-0.006
5.054	-0.009	5.131	-0.001	5.208	-0.006	5.285	-0.008
5.056	0.003	5.133	-0.004	5.209	-0.009	5.286	-0.006
5.058	-0.006	5.134	-0.011	5.211	-0.001	5.288	-0.008
5.059	-0.006	5.136	-0.003	5.213	0.001	5.290	-0.008
5.061	-0.001	5.138	-0.003	5.214	0.001	5.291	-0.004
5.063	-0.006	5.139	-0.003	5.216	-0.001	5.293	-0.004
5.064	-0.006	5.141	-0.003	5.218	-0.003	5.295	-0.006
5.066	-0.003	5.143	-0.006	5.219	-0.004	5.296	-0.001
5.068	-0.006	5.144	-0.006	5.221	-0.008	5.298	-0.006
5.069	-0.001	5.146	-0.006	5.223	-0.003	5.300	-0.008
5.071	-0.003	5.148	-0.008	5.224	-0.006	5.301	0.001
5.073	-0.003	5.149	-0.001	5.226	-0.008	5.303	-0.006
5.074	-0.004	5.151	-0.006	5.228	-0.001	5.305	-0.006
5.076	-0.006	5.153	-0.006	5.229	-0.006	5.306	-0.003
5.078	-0.006	5.154	0.001	5.231	-0.009	5.308	-0.008
5.079	-0.009	5.156	-0.008	5.233	-0.001	5.310	-0.001
5.081	-0.001	5.158	-0.006	5.234	-0.006	5.311	-0.001
5.083	-0.006	5.159	-0.016	5.236	-0.006	5.313	-0.008
5.084	-0.009	5.161	-0.008	5.238	-0.004	5.315	-0.001
5.086	0.001	5.163	-0.004	5.239	-0.008	5.316	-0.004
5.088	-0.006	5.164	-0.003	5.241	-0.003	5.318	-0.008
5.089	-0.008	5.166	-0.006	5.243	-0.006	5.320	-0.009
5.091	0.001	5.168	-0.001	5.244	-0.011	5.321	-0.008
5.093	-0.006	5.169	-0.004	5.246	0.001	5.323	-0.008
5.094	-0.006	5.171	-0.009	5.248	-0.008	5.325	-0.008
5.096	-0.001	5.173	0.003	5.249	-0.008	5.326	-0.004
5.098	-0.006	5.174	-0.004	5.251	-0.006	5.328	-0.003
5.099	-0.006	5.176	-0.008	5.253	-0.003	5.330	-0.006
5.101	-0.003	5.178	-0.001	5.254	-0.001	5.331	-0.001
5.103	-0.006	5.179	-0.001	5.256	0.001	5.333	-0.003
5.104	-0.009	5.181	-0.003	5.258	-0.003	5.335	-0.008
5.106	-0.009	5.183	-0.003	5.259	-0.009	5.336	-0.001
5.108	-0.009	5.184	-0.006	5.261	-0.001	5.338	-0.006
5.109	-0.006	5.186	-0.006	5.263	-0.006	5.340	-0.008
5.111	-0.004	5.188	-0.006	5.264	-0.008	5.341	0.001
5.113	-0.003	5.189	-0.004	5.266	0.001	5.343	-0.006
5.114	-0.006	5.191	-0.009	5.268	-0.006	5.345	-0.003
5.116	-0.004	5.193	-0.003	5.269	-0.004	5.346	-0.001
5.118	-0.003	5.194	-0.006	5.271	-0.003	5.348	-0.008
5.119	-0.008	5.196	-0.009	5.273	-0.006	5.350	-0.001

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
5.351	-0.006	5.428	0.003	5.505	-0.009	5.582	-0.008
5.353	-0.006	5.430	-0.008	5.506	0.001	5.583	-0.001
5.355	0.003	5.431	-0.006	5.508	-0.006	5.585	-0.006
5.356	-0.001	5.433	-0.003	5.510	-0.006	5.587	-0.004
5.358	-0.004	5.435	-0.008	5.511	-0.001	5.588	-0.003
5.360	-0.004	5.436	-0.001	5.513	-0.006	5.590	-0.008
5.361	-0.008	5.438	-0.006	5.515	-0.004	5.592	-0.003
5.363	-0.006	5.440	-0.006	5.516	-0.003	5.593	-0.004
5.365	-0.008	5.441	-0.008	5.518	-0.008	5.595	-0.006
5.366	-0.004	5.443	-0.008	5.520	-0.008	5.597	-0.001
5.368	-0.001	5.445	-0.008	5.521	-0.006	5.598	0.001
5.370	-0.008	5.446	-0.001	5.523	-0.006	5.600	-0.001
5.371	-0.001	5.448	-0.006	5.525	-0.006	5.602	-0.001
5.373	-0.006	5.450	-0.009	5.526	-0.004	5.603	0.004
5.375	-0.008	5.451	0.001	5.528	-0.003	5.605	0.001
5.376	0.001	5.453	-0.006	5.530	-0.001	5.607	-0.001
5.378	-0.008	5.455	-0.006	5.531	-0.004	5.608	-0.006
5.380	-0.006	5.456	-0.004	5.533	-0.008	5.610	-0.009
5.381	-0.003	5.458	-0.006	5.535	-0.001	5.612	-0.001
5.383	-0.009	5.460	-0.001	5.536	-0.004	5.613	-0.006
5.385	-0.001	5.461	-0.004	5.538	-0.008	5.615	-0.009
5.386	-0.006	5.463	-0.009	5.540	-0.004	5.617	0.003
5.388	-0.008	5.465	-0.001	5.541	-0.003	5.618	-0.006
5.390	0.001	5.466	-0.006	5.543	-0.008	5.620	-0.008
5.391	-0.006	5.468	-0.008	5.545	-0.006	5.622	-0.001
5.393	-0.008	5.470	-0.008	5.546	0.001	5.623	-0.008
5.395	-0.003	5.471	-0.006	5.548	-0.004	5.625	-0.001
5.396	-0.008	5.473	-0.006	5.550	-0.008	5.627	-0.006
5.398	-0.001	5.475	-0.008	5.551	0.001	5.628	-0.008
5.400	-0.006	5.476	-0.004	5.553	-0.006	5.630	-0.001
5.401	-0.009	5.478	0.001	5.555	-0.008	5.632	-0.008
5.403	-0.003	5.480	-0.004	5.556	0.001	5.633	-0.008
5.405	-0.001	5.481	-0.008	5.558	-0.006	5.635	-0.001
5.406	-0.001	5.483	-0.001	5.560	-0.009	5.637	-0.008
5.408	0.003	5.485	-0.006	5.561	0.001	5.638	-0.003
5.410	0.001	5.486	-0.006	5.563	-0.004	5.640	-0.004
5.411	-0.006	5.488	0.003	5.565	-0.004	5.642	-0.008
5.413	-0.008	5.490	-0.008	5.567	-0.004	5.643	-0.001
5.415	0.001	5.491	-0.006	5.568	-0.006	5.645	-0.001
5.416	-0.008	5.493	-0.003	5.570	-0.008	5.647	0.001
5.418	-0.001	5.495	-0.008	5.572	-0.008	5.648	0.001
5.420	-0.003	5.496	-0.003	5.573	-0.003	5.650	0.001
5.421	-0.008	5.498	-0.006	5.575	-0.006	5.652	-0.006
5.423	-0.001	5.500	-0.009	5.577	-0.008	5.653	-0.008
5.425	-0.004	5.501	-0.001	5.578	0.001	5.655	0.001
5.426	-0.008	5.503	-0.006	5.580	-0.008	5.657	-0.006

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
5.658	-0.008	5.735	-0.008	5.812	-0.008	5.889	0.001
5.660	-0.001	5.737	-0.001	5.813	0.003	5.890	-0.008
5.662	-0.008	5.738	-0.008	5.815	-0.008	5.892	-0.004
5.663	-0.006	5.740	-0.009	5.817	-0.009	5.894	-0.001
5.665	-0.004	5.742	0.001	5.818	0.003	5.895	-0.001
5.667	-0.006	5.743	-0.006	5.820	-0.006	5.897	-0.001
5.668	-0.001	5.745	-0.006	5.822	-0.008	5.899	0.001
5.670	-0.004	5.747	-0.003	5.823	-0.006	5.900	-0.001
5.672	-0.008	5.748	-0.006	5.825	-0.008	5.902	-0.006
5.673	-0.001	5.750	-0.001	5.827	-0.008	5.904	-0.006
5.675	-0.006	5.752	-0.003	5.828	-0.006	5.905	-0.003
5.677	-0.006	5.753	-0.008	5.830	-0.008	5.907	-0.006
5.678	-0.008	5.755	-0.008	5.832	0.001	5.909	-0.004
5.680	-0.008	5.757	-0.008	5.833	-0.006	5.910	0.003
5.682	-0.006	5.758	-0.009	5.835	-0.008	5.912	-0.006
5.683	-0.008	5.760	-0.009	5.837	0.003	5.914	-0.006
5.685	-0.001	5.762	-0.003	5.838	-0.006	5.915	0.001
5.687	-0.004	5.763	-0.004	5.840	-0.008	5.917	-0.008
5.688	-0.008	5.765	-0.008	5.842	-0.001	5.919	-0.006
5.690	0.001	5.767	-0.001	5.843	-0.008	5.920	-0.001
5.692	-0.006	5.768	-0.004	5.845	-0.006	5.922	-0.006
5.693	-0.009	5.770	-0.009	5.847	0.001	5.924	-0.006
5.695	-0.001	5.772	-0.001	5.849	-0.006	5.925	0.001
5.697	-0.006	5.773	-0.004	5.850	-0.009	5.927	-0.001
5.698	-0.008	5.775	-0.009	5.852	0.001	5.929	-0.001
5.700	-0.001	5.777	0.001	5.854	-0.006	5.930	-0.001
5.702	-0.006	5.778	-0.004	5.855	-0.008	5.932	-0.003
5.703	-0.004	5.780	-0.009	5.857	-0.001	5.934	-0.003
5.705	0.001	5.782	-0.001	5.859	-0.004	5.935	-0.006
5.707	-0.006	5.783	-0.006	5.860	-0.004	5.937	-0.008
5.708	-0.004	5.785	-0.008	5.862	-0.006	5.939	-0.001
5.710	-0.001	5.787	0.001	5.864	-0.006	5.940	-0.006
5.712	-0.006	5.788	0.003	5.865	-0.006	5.942	-0.008
5.713	-0.006	5.790	0.003	5.867	-0.006	5.944	-0.003
5.715	-0.006	5.792	0.001	5.869	0.001	5.945	-0.006
5.717	-0.008	5.793	-0.001	5.870	-0.008	5.947	-0.006
5.718	-0.008	5.795	-0.004	5.872	-0.006	5.949	0.001
5.720	-0.009	5.797	-0.008	5.874	-0.003	5.950	-0.006
5.722	-0.009	5.798	0.001	5.875	-0.006	5.952	-0.008
5.723	-0.001	5.800	-0.006	5.877	-0.006	5.954	0.003
5.725	-0.006	5.802	-0.008	5.879	-0.003	5.955	-0.008
5.727	-0.006	5.803	0.001	5.880	-0.006	5.957	-0.006
5.728	-0.003	5.805	-0.006	5.882	-0.006	5.959	-0.001
5.730	-0.008	5.807	-0.006	5.884	-0.004	5.960	-0.008
5.732	-0.001	5.808	0.003	5.885	-0.008	5.962	-0.006
5.733	-0.006	5.810	-0.006	5.887	-0.004	5.964	-0.001

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
5.965	-0.006	6.042	-0.006	6.119	-0.008	6.196	-0.009
5.967	-0.006	6.044	-0.006	6.121	-0.006	6.197	-0.003
5.969	-0.008	6.045	-0.006	6.122	0.001	6.199	-0.006
5.970	-0.006	6.047	-0.008	6.124	-0.006	6.201	-0.008
5.972	-0.008	6.049	-0.008	6.126	-0.006	6.202	0.001
5.974	-0.008	6.050	0.001	6.127	-0.003	6.204	-0.008
5.975	-0.004	6.052	-0.004	6.129	-0.006	6.206	-0.008
5.977	-0.004	6.054	-0.008	6.131	-0.004	6.207	-0.008
5.979	-0.008	6.055	-0.001	6.132	-0.003	6.209	-0.008
5.980	-0.003	6.057	-0.006	6.134	-0.008	6.211	-0.008
5.982	-0.003	6.059	-0.008	6.136	-0.006	6.212	-0.004
5.984	-0.006	6.060	-0.001	6.137	-0.006	6.214	-0.001
5.985	-0.004	6.062	-0.008	6.139	-0.008	6.216	-0.006
5.987	-0.003	6.064	-0.008	6.141	-0.006	6.217	-0.004
5.989	-0.008	6.065	0.001	6.142	-0.006	6.219	-0.001
5.990	-0.006	6.067	-0.006	6.144	-0.004	6.221	-0.008
5.992	-0.001	6.069	-0.009	6.146	0.001	6.222	-0.003
5.994	-0.006	6.070	0.001	6.147	-0.008	6.224	-0.001
5.995	-0.003	6.072	-0.006	6.149	-0.004	6.226	-0.008
5.997	-0.001	6.074	-0.009	6.151	0.001	6.227	-0.008
5.999	-0.008	6.075	-0.001	6.152	-0.008	6.229	-0.001
6.000	-0.006	6.077	-0.001	6.154	-0.004	6.231	-0.006
6.002	-0.003	6.079	-0.001	6.156	0.003	6.232	-0.008
6.004	-0.008	6.080	-0.001	6.157	-0.006	6.234	-0.001
6.005	-0.006	6.082	0.001	6.159	-0.009	6.236	0.001
6.007	-0.006	6.084	-0.008	6.161	0.001	6.237	-0.001
6.009	-0.006	6.085	-0.003	6.162	-0.006	6.239	-0.001
6.010	-0.006	6.087	-0.001	6.164	-0.009	6.241	0.001
6.012	-0.009	6.089	-0.008	6.166	0.001	6.242	-0.003
6.014	-0.008	6.090	-0.006	6.167	-0.006	6.244	-0.006
6.015	-0.001	6.092	-0.003	6.169	-0.009	6.246	-0.006
6.017	-0.008	6.094	-0.008	6.171	0.001	6.247	-0.003
6.019	-0.004	6.095	-0.003	6.172	-0.003	6.249	-0.008
6.020	-0.001	6.097	-0.003	6.174	-0.003	6.251	0.001
6.022	-0.006	6.099	-0.006	6.176	-0.006	6.252	-0.008
6.024	-0.006	6.100	-0.001	6.177	-0.004	6.254	-0.006
6.025	-0.003	6.102	-0.004	6.179	-0.004	6.256	-0.006
6.027	-0.008	6.104	-0.006	6.181	-0.008	6.257	-0.008
6.029	-0.004	6.105	-0.004	6.182	-0.001	6.259	-0.001
6.030	-0.001	6.107	-0.004	6.184	-0.004	6.261	-0.008
6.032	-0.008	6.109	-0.001	6.186	-0.009	6.262	-0.001
6.034	-0.001	6.110	-0.001	6.187	-0.001	6.264	-0.006
6.035	-0.004	6.112	-0.001	6.189	-0.004	6.266	-0.008
6.037	-0.008	6.114	-0.008	6.191	-0.009	6.267	-0.003
6.039	-0.001	6.115	-0.008	6.192	0.001	6.269	-0.009
6.040	-0.006	6.117	0.003	6.194	-0.006	6.271	-0.008

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
6.272	-0.004	6.349	-0.008	6.426	-0.008	6.503	-0.008
6.274	-0.001	6.351	0.001	6.428	-0.001	6.504	-0.001
6.276	0.003	6.352	-0.006	6.429	-0.003	6.506	-0.006
6.277	-0.001	6.354	-0.006	6.431	-0.008	6.508	-0.006
6.279	-0.003	6.356	-0.008	6.433	0.001	6.509	-0.001
6.281	-0.006	6.357	-0.008	6.434	-0.008	6.511	-0.006
6.282	-0.008	6.359	-0.008	6.436	-0.001	6.513	-0.001
6.284	0.001	6.361	-0.001	6.438	-0.004	6.514	-0.006
6.286	-0.006	6.362	-0.008	6.439	-0.008	6.516	-0.008
6.287	-0.004	6.364	-0.001	6.441	-0.001	6.518	0.001
6.289	-0.006	6.366	-0.004	6.443	-0.006	6.519	0.001
6.291	-0.008	6.367	-0.008	6.444	-0.004	6.521	-0.004
6.292	0.001	6.369	0.003	6.446	-0.003	6.523	-0.004
6.294	-0.008	6.371	-0.009	6.448	-0.008	6.524	-0.008
6.296	-0.003	6.372	-0.001	6.449	-0.006	6.526	-0.009
6.297	-0.004	6.374	-0.006	6.451	-0.008	6.528	-0.001
6.299	-0.008	6.376	-0.008	6.453	-0.008	6.529	-0.009
6.301	0.001	6.377	0.001	6.454	-0.004	6.531	-0.008
6.302	-0.006	6.379	-0.008	6.456	-0.001	6.533	-0.003
6.304	-0.006	6.381	-0.006	6.458	-0.008	6.534	-0.008
6.306	-0.004	6.382	-0.003	6.459	-0.003	6.536	-0.001
6.307	-0.008	6.384	-0.006	6.461	-0.004	6.538	-0.006
6.309	-0.001	6.386	-0.008	6.463	-0.009	6.539	-0.009
6.311	-0.006	6.388	-0.008	6.464	-0.001	6.541	-0.001
6.312	-0.008	6.389	-0.008	6.466	-0.006	6.543	-0.008
6.314	-0.003	6.391	-0.009	6.468	-0.006	6.544	-0.001
6.316	-0.009	6.393	-0.001	6.469	-0.003	6.546	-0.008
6.317	0.001	6.394	-0.008	6.471	-0.006	6.548	-0.008
6.319	-0.006	6.396	-0.006	6.473	-0.001	6.549	-0.003
6.321	-0.008	6.398	-0.004	6.474	-0.008	6.551	-0.011
6.322	-0.008	6.399	-0.008	6.476	-0.009	6.553	-0.001
6.324	-0.008	6.401	-0.001	6.478	-0.001	6.554	0.001
6.326	-0.006	6.403	-0.006	6.479	-0.008	6.556	0.001
6.327	0.001	6.404	-0.008	6.481	-0.001	6.558	-0.004
6.329	-0.008	6.406	-0.001	6.483	0.001	6.559	-0.006
6.331	-0.001	6.408	-0.008	6.484	-0.004	6.561	-0.008
6.332	-0.008	6.409	-0.004	6.486	-0.006	6.563	-0.008
6.334	-0.004	6.411	-0.003	6.488	-0.006	6.564	-0.004
6.336	-0.004	6.413	-0.008	6.489	-0.009	6.566	-0.008
6.337	-0.006	6.414	-0.001	6.491	-0.004	6.568	-0.001
6.339	-0.001	6.416	-0.003	6.493	-0.003	6.569	-0.008
6.341	-0.008	6.418	-0.006	6.494	-0.009	6.571	-0.001
6.342	-0.001	6.419	-0.006	6.496	0.001	6.573	-0.006
6.344	-0.008	6.421	-0.008	6.498	-0.008	6.574	-0.008
6.346	-0.006	6.423	-0.009	6.499	-0.006	6.576	-0.003
6.347	-0.003	6.424	-0.003	6.501	-0.001	6.578	-0.008

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
6.579	0.001	6.656	-0.003	6.733	-0.009	6.810	0.003
6.581	-0.008	6.658	-0.008	6.735	-0.003	6.811	-0.001
6.583	-0.001	6.659	-0.003	6.736	-0.006	6.813	-0.003
6.584	-0.006	6.661	-0.004	6.738	-0.008	6.815	-0.008
6.586	-0.008	6.663	-0.009	6.740	-0.003	6.816	-0.006
6.588	0.001	6.664	-0.001	6.741	-0.004	6.818	-0.001
6.589	-0.008	6.666	-0.001	6.743	-0.008	6.820	-0.008
6.591	-0.006	6.668	0.004	6.745	-0.006	6.821	-0.004
6.593	0.001	6.669	0.001	6.746	-0.009	6.823	-0.006
6.594	-0.003	6.671	-0.001	6.748	-0.003	6.825	-0.008
6.596	-0.004	6.673	-0.003	6.750	-0.004	6.826	0.001
6.598	-0.006	6.675	-0.003	6.751	-0.008	6.828	-0.006
6.599	-0.004	6.676	-0.008	6.753	0.001	6.830	-0.006
6.601	-0.009	6.678	-0.003	6.755	-0.006	6.831	-0.001
6.603	0.003	6.680	-0.004	6.756	-0.004	6.833	-0.006
6.604	-0.006	6.681	-0.008	6.758	-0.003	6.835	-0.006
6.606	-0.006	6.683	-0.001	6.760	-0.008	6.836	-0.008
6.608	-0.001	6.685	-0.004	6.761	0.001	6.838	-0.004
6.609	-0.006	6.686	-0.008	6.763	-0.006	6.840	-0.001
6.611	-0.001	6.688	0.001	6.765	-0.008	6.841	0.001
6.613	-0.003	6.690	-0.008	6.766	0.001	6.843	0.003
6.614	-0.009	6.691	-0.008	6.768	-0.008	6.845	-0.006
6.616	0.001	6.693	-0.001	6.770	-0.003	6.846	-0.004
6.618	-0.006	6.695	-0.006	6.771	-0.004	6.848	-0.003
6.619	-0.009	6.696	-0.004	6.773	-0.006	6.850	-0.008
6.621	-0.001	6.698	-0.003	6.775	-0.006	6.851	-0.001
6.623	-0.008	6.700	-0.008	6.776	-0.008	6.853	-0.006
6.624	-0.009	6.701	-0.001	6.778	-0.008	6.855	-0.008
6.626	-0.001	6.703	-0.003	6.780	-0.008	6.856	0.001
6.628	-0.006	6.705	-0.006	6.781	-0.003	6.858	-0.006
6.629	-0.006	6.706	-0.001	6.783	-0.008	6.860	-0.006
6.631	-0.008	6.708	-0.001	6.785	-0.001	6.861	-0.001
6.633	-0.008	6.710	-0.004	6.786	-0.006	6.863	-0.008
6.634	-0.008	6.711	-0.006	6.788	-0.009	6.865	-0.006
6.636	-0.004	6.713	-0.006	6.790	0.001	6.866	-0.003
6.638	-0.001	6.715	-0.006	6.791	-0.008	6.868	-0.008
6.639	-0.008	6.716	-0.009	6.793	-0.006	6.870	-0.004
6.641	-0.001	6.718	0.001	6.795	-0.004	6.871	-0.008
6.643	-0.004	6.720	-0.006	6.796	-0.008	6.873	-0.008
6.644	-0.009	6.721	-0.004	6.798	-0.001	6.875	-0.009
6.646	0.001	6.723	-0.001	6.800	-0.008	6.876	-0.001
6.648	-0.008	6.725	-0.008	6.801	-0.008	6.878	-0.003
6.649	-0.004	6.726	-0.001	6.803	-0.003	6.880	-0.008
6.651	-0.001	6.728	-0.006	6.805	-0.008	6.881	-0.003
6.653	-0.006	6.730	-0.006	6.806	-0.001	6.883	-0.004
6.654	-0.006	6.731	-0.003	6.808	0.001	6.885	-0.009

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)	Expt Time (hrs)	D.O. (mg/L)
6.886	-0.001	6.963	-0.008	7.040	-0.008	7.117	-0.001
6.888	-0.006	6.965	-0.008	7.042	-0.001	7.118	-0.006
6.890	-0.008	6.967	-0.004	7.043	-0.006	7.120	-0.008
6.891	0.003	6.968	-0.003	7.045	-0.009	7.122	0.001
6.893	-0.008	6.970	-0.001	7.047	-0.001	7.123	-0.008
6.895	-0.008	6.972	-0.001	7.048	-0.004	7.125	-0.006
6.896	-0.001	6.973	-0.008	7.050	-0.008	7.127	-0.004
6.898	-0.006	6.975	-0.008	7.052	-0.001	7.128	-0.008
6.900	-0.008	6.977	0.003	7.053	-0.006	7.130	-0.008
6.901	-0.008	6.978	-0.008	7.055	-0.006	7.132	-0.009
6.903	-0.008	6.980	-0.008	7.057	0.001	7.133	-0.006
6.905	-0.008	6.982	-0.001	7.058	-0.008	7.135	-0.001
6.906	-0.001	6.983	-0.008	7.060	-0.006	7.137	0.003
6.908	-0.003	6.985	-0.008	7.062	-0.006	7.138	-0.006
6.910	-0.008	6.987	-0.001	7.063	-0.006	7.140	-0.004
6.911	-0.003	6.988	-0.006	7.065	-0.008	7.142	-0.004
6.913	-0.006	6.990	-0.006	7.067	-0.009	7.143	-0.008
6.915	-0.008	6.992	-0.001	7.068	-0.004	7.145	-0.001
6.916	-0.001	6.993	-0.008	7.070	-0.001	7.147	-0.006
6.918	-0.006	6.995	-0.004	7.072	-0.008	7.148	-0.008
6.920	-0.008	6.997	-0.003	7.073	-0.001	7.150	-0.001
6.921	-0.001	6.998	-0.006	7.075	-0.004	7.152	-0.006
6.923	-0.008	7.000	-0.004	7.077	-0.009	7.153	-0.001
6.925	-0.009	7.002	-0.001	7.078	0.001	7.155	-0.004
6.926	0.001	7.003	-0.006	7.080	-0.006	7.157	-0.008
6.928	0.003	7.005	-0.003	7.082	-0.006	7.158	0.001
6.930	0.001	7.007	-0.001	7.083	0.001	7.160	-0.006
6.931	-0.001	7.008	-0.001	7.085	-0.008	7.162	-0.004
6.933	-0.003	7.010	0.001	7.087	-0.006	7.163	-0.001
6.935	-0.004	7.012	0.001	7.088	-0.003	7.165	-0.001
6.936	-0.008	7.013	0.001	7.090	-0.008	7.167	0.003
6.938	-0.003	7.015	-0.001	7.092	-0.001	7.168	0.001
6.940	-0.004	7.017	-0.003	7.093	-0.006	7.170	-0.003
6.941	-0.009	7.018	-0.003	7.095	-0.009	7.172	-0.008
6.943	0.001	7.020	-0.008	7.097	-0.003	7.173	-0.001
6.945	-0.006	7.022	-0.008	7.098	0.001	7.175	-0.004
6.946	-0.006	7.023	0.001	7.100	0.001	7.177	-0.009
6.948	-0.003	7.025	-0.006	7.102	0.001	7.178	0.003
6.950	-0.006	7.027	-0.004	7.103	0.001	7.180	-0.008
6.951	-0.003	7.028	-0.001	7.105	-0.006	7.182	-0.004
6.953	-0.004	7.030	-0.008	7.107	-0.004	7.183	-0.003
6.955	-0.008	7.032	-0.006	7.108	0.001	7.185	-0.008
6.956	-0.001	7.033	-0.003	7.110	-0.006	7.187	-0.001
6.958	-0.004	7.035	-0.008	7.112	-0.001	7.188	-0.006
6.960	-0.008	7.037	-0.003	7.113	-0.004	7.190	-0.006
6.962	-0.009	7.038	-0.004	7.115	-0.008	7.192	0.003

Table I.5 Effluent dissolved oxygen concentration during benzene perturbation on day 227.

Expt Time (hrs)	D.O. (mg/L)
7.193	-0.004
7.195	-0.008
7.197	-0.001
7.198	-0.006
7.200	-0.008
7.202	-0.006
7.203	-0.006
7.205	-0.006
7.207	-0.009
7.208	-0.008
7.210	0.001
7.212	-0.006
7.213	-0.006
7.215	0.001
7.217	-0.008
7.218	-0.004
7.220	-0.001
7.222	-0.008
7.223	-0.003
7.225	-0.003
7.227	-0.009
7.228	-0.001
7.230	-0.006
7.232	-0.004
7.233	-0.003
7.235	-0.006
7.237	-0.003
7.238	-0.004
7.240	-0.008
7.242	0.001
7.243	-0.004
7.245	-0.008
7.247	-0.008
7.249	-0.009
7.250	-0.008
7.252	-0.004
7.254	0.001
7.255	-0.008
7.257	-0.001
7.259	-0.004
7.260	-0.008
7.262	-0.001
7.264	-0.006
7.265	-0.003
7.267	-0.003
7.269	-0.008

Expt Time (hrs)	D.O. (mg/L)
7.270	0.001
7.272	-0.004
7.274	-0.006
7.275	0.001
7.277	-0.008
7.279	-0.001
7.280	-0.004
7.282	-0.008
7.284	-0.008
7.285	-0.008