



Analytical Summary: Laboratory Screening of Commercial Bioremediation Agents for the Deepwater Horizon Spill Response

Ralph J. Portier, Ph.D., Louisiana State University, August 2011.

Component	Week 0 mg/kg	Week 12 average mg/kg	Week 12 % reduction	Component	Week 0 mg/kg	Week 12 average mg/kg	Week 12 % reduction	Component	Week 0 mg/kg	Week 12 average mg/kg	Week 12 % reduction
Positive Control 1: Slightly weathered crude, indigenous microbes				Positive Control 2: Slightly weathered crude, nutrients added, indigenous microbes				Product A Slightly weathered crude, nutrients added, bio accelerator			
Alkanes	21200	24067	-19.5	Alkanes	21900	959	95.6	Alkanes	23933	988	95.9
PAHS	437	312	28.7	PAHS	412	344	16.5	PAHS	285	253	11.2
TPH	21637	24378	-12.7	TPH	22312	1303	94.2	TPH	24218	1241	94.9
DRO	17664	20301	-14.9	DRO	17778	624	96.5	DRO	18186	677	96.3
ORO	15244	17521	-14.9	ORO	15075	752	95	ORO	18004	672	96.3
Product B Heavily weathered Crude, contains surfactant				Product C Heavily weathered crude, nutrients.				Ultra-Microbes® (Product D) Heavily weathered crude, nutrients			
Alkanes	8797	121	98.6	Alkanes	17400	1977	88.6	Alkanes	13667	17	99.9
PAHS	382	233	38.9	PAHS	428	92	78.6	PAHS	586	9	98.5
TPH	9178	354	96	TPH	17828	2068	88.4	TPH	14253	26	99.8
DRO	6027	94	98.4	DRO	12792	1516	88.2	DRO	9227	17	99.8
ORO	6683	76	98.9	ORO	12789	1115	91.3	ORO	9568	2.7	100
Product E Slightly Weathered crude, nutrients added				Product F Moderately Weathered crude, contains enzymes & surfactant				Product G Slightly Weathered crude, contains enzymes & surfactant			
Alkanes	23367	355	98.5	Alkanes	18567	3687	80.1	Alkanes	28133	5300	81.2
PAHS	322	316	1.8	PAHS	506	105	79.3	PAHS	421	218	48.2
TPH	23688	671	97.2	TPH	19073	3792	80.1	TPH	28555	5518	80.7
DRO	18719	161	99.1	DRO	14016	2696	80.8	DRO	23210	3639	84.3
ORO	17323	294	98.3	ORO	13320	2350	82.4	ORO	19764	3456	82.5
Product H Slightly Weathered crude, nutrients added, contains enzymes & surface washing additive				Product I: Slightly Weathered crude, nutrients added, contains enzymes				Product J: Slightly Weathered crude, nutrients added, contains humic acid, amino acids and a surfactant			
Alkanes	22967	1108	95.2	Alkanes	28500	438	98.5	Alkanes	27733	332	98.8
PAHS	316	227	28.1	PAHS	461	369	20	PAHS	521	338	35
TPH	23283	1335	94.3	TPH	28961	807	97.2	TPH	28254	670	97.6
DRO	18407	828	96.4	DRO	23234	168	99.3	DRO	21830	170	99.2
ORO	17011	743	95.6	ORO	20803	383	98.2	ORO	20132	290	98.6