

## BIOTECH RESTORATIONS, LLC

### HERCULES CHEMICAL GEORGIA PROJECT

#### Bench study results (aerobic)

##### Toxaphene content (mg/Kg) at various times following treatment

Sample	Week 0	Week 2	Week 4	Week 6	Week 8	Week13
HA 1 (control)	2,488	2,274	1,881	1,741	1,664	1,757
HA 2	2,487	1,931	1,119	1,000	944	-
HA 3	2,071	1,417	410	144	103	<b>50</b>
HA 4	2,311	1,552	1,352	1,306	982	-

#### Bench study results (anaerobic)

##### Toxaphene content (mg/Kg) at various times following treatment

Sample	Week 0	Week 2*	Week 4	Week 6	Week 8	Week 13
HN 5 (control)	2,488	-	1,985	1,451	2,290	2,084
HN 6	2,487	-	339	263	419	-
HN 7	2,071	-	470	152	129	<b>61</b>
HN 8	2,311	-	462	360	251	-

\*The soils were left anaerobic for 4 weeks and then made aerobic for the rest of the study

### GILROY CALIFORNIA PROJECT

#### Bench & Field study results – site pending clean closure August 2008

##### Toxaphene (mg/Kg): Initial value = 5.4 mg/Kg

Sample	Week 4 after treatment	Week 12 after treatment
G1 (control)	5.4	5.4
G2*	<b>1.6</b>	<b>ND**</b>
G4*	<b>1.7</b>	<b>ND</b>
G6*	<b>1.5</b>	<b>ND</b>

G2, G4, and G6 are samples of soil to which different Factors have been added.

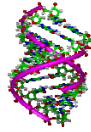
ND = non-detect

##### DDT (mg/Kg): Initial value = 0.21 mg/Kg

Sample	Week 4 after treatment	Week 12 after treatment
G1 (control)	0.21	0.21
G2	<b>0.04</b>	<b>ND</b>
G4	<b>0.05</b>	<b>ND</b>
G6	<b>ND</b>	<b>ND</b>

##### DDE (mg/Kg): Initial value = 0.25 mg/Kg

Sample	Week 4 after treatment	Week 12 after treatment
G1 (control)	0.25	0.25
G2	<b>0.06</b>	<b>ND</b>
G4	<b>0.07</b>	<b>ND</b>
G6	<b>0.07</b>	<b>ND</b>



## BIOTECH RESTORATIONS, LLC

### GLENDALE ARIZONA PROJECT

Bench study results – field remediation approved, pending AZ regulatory permit

**Toxaphene (mg/Kg): Initial value = 770 mg/Kg**

Sample	Week 8 after treatment	Week 13 after treatment	Week 25 after treatment
AZ 1 (control)	770	770	770
AZ 2	500	520	440
AZ 4	<b>230</b>	<b>&lt; 130</b>	<b>&lt; 31</b>

### LAKE APOPKA FLORIDA PROJECT

Bench study results – field pilot study in progress August 2008

**Toxaphene (mg/Kg): Initial value = 80 mg/Kg**

Sample	Week 4 after treatment	Week 10 after treatment	Week 19 after treatment
LAF 5 (control)	80	80	80
LAF 6	55	47	42
LAF 7	<b>56</b>	<b>44</b>	<b>25</b>

**DDT (mg/Kg): Initial value = 53 mg/Kg**

Sample	Week 4 after treatment	Week 10 after treatment	Week 19 after treatment
LAF 5 (control)	53	53	53
LAF 6	38	25	29
LAF 7	<b>37</b>	<b>21</b>	<b>8</b>

### TSI-DIXON CALIFORNIA PROJECT

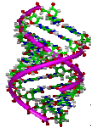
Bench study results – remediation scheduled to commence September 2008

**Toxaphene (mg/Kg): Initial value = 24 mg/Kg**

Sample	Week 5 after treatment	Week 15 after treatment
DIX 1 (control)	24	24
DIX 4	9	9
DIX 5	<b>10</b>	<b>5</b>

**DDT (mg/Kg): Initial value = 2.2 mg/Kg**

Sample	Week 5 after treatment	Week 15 after treatment
DIX 1 (control)	2.2	2.2
DIX 4	0.7	0.7
DIX 5	<b>1.2</b>	<b>0.3</b>



## BIOTECH RESTORATIONS, LLC

### BELLE GLADE AIRPORT FLORIDA PROJECT

Bench study results – Pilot study approved, pending funding by SJRWMD

**Toxaphene (mg/Kg):** Initial concentration could not be measured at week zero because the levels of DDT were so high that the dilutions needed to measure DDT made the concentration of toxaphene too low to be detected. However, after 6 weeks when the level of DDT had been reduced, it was possible to measure toxaphene concentration.

**Toxaphene (mg/Kg):**

Sample	Week 6 after treatment	Week 12 after treatment
BGA 1	1,850	640
BGA 3	1,160	769
BGA 6	<b>574</b>	<b>40</b>

**DDT (mg/Kg):**

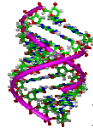
Sample	Initial values at week 0	Week 6 after treatment	Week 12 after treatment
BGA 1	105	407	125
BGA 3	528	265	176
BGA 6	<b>188</b>	<b>98</b>	<b>12</b>

### BORELLO PROPERTY, MORGAN HILL CALIFORNIA PROJECT

Field treatment results – clean closure with unrestricted use issued by CA EPA

**Toxaphene (mg/Kg):** Initial value = 6.2 mg/Kg

Sample	Week 4 after treatment	Week 8 after treatment
B1 (control)	6.2	6.2
B2	3.2	<b>ND</b>
B4	3.0	<b>ND</b>
B6	1.9	<b>ND</b>



**BIOTECH RESTORATIONS, LLC**

**NORTH CAROLINA PESTICIDE PROJECT**

**Bench study results**

**Toxaphene (mg/Kg): Initial value = 796 mg/Kg**

**DDT (mg/Kg): Initial value = 186 mg/Kg**

**DDD (mg/Kg): Initial value = 55 mg/kg**

<b>Sample Toxaphene</b>	<b>Week 4 after treatment</b>
NC1 (control)	796
NC2	<b>ND</b>
NC3	188
NC4	<b>ND</b>

<b>Sample DDT</b>	<b>Week 4 after treatment</b>
NC1 (control)	186
NC2	<b>25</b>
NC3	66
NC4	42

<b>Sample DDD</b>	<b>Week 4 after treatment</b>
NC1 (control)	55
NC2	<b>18</b>
NC3	27
NC4	26

**EAST PALO ALTO CALIFORNIA PROJECT**

**Bench study results**

**Mixed Pesticides study**

<b>Sample</b>	<b>DDD mg/Kg</b>	<b>DDE mg/Kg (% reduction cf to control)</b>	<b>DDT mg/Kg (% reduction cf to control)</b>	<b>Dieldrin mg/Kg (% reduction cf to control)</b>
EPA1-12 (control)	0.022	0.52	0.21	1.8
EPA2-12	0.062	0.24 <b>(54%)</b>	ND <b>(100%)</b>	1.2 <b>(33%)</b>
EPA3-12	0.070	0.23 <b>(56%)</b>	ND <b>(100%)</b>	1.2 <b>(33%)</b>
EPA4-12	0.070	0.22 <b>(58%)</b>	ND <b>(100%)</b>	1.1 <b>(39%)</b>
EPA5-12	0.096	0.28 <b>(46%)</b>	ND <b>(100%)</b>	1.3 <b>(28%)</b>
EPA6-12	0.088	0.26 <b>(50%)</b>	ND <b>(100%)</b>	1.1 <b>(39%)</b>