### Cal/Ecotox
**Toxicity Data for Sea Otter (Enhydra lutris)**

#### Page 1

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Tox Exposure</th>
<th>Endpoint Type</th>
<th>Endpoint Description</th>
<th>Endpoint Value</th>
<th>Note</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRUDE OILS</td>
<td>multiple</td>
<td>TOX-Non-Repro-Sublethal - whole animal</td>
<td>otters that died from infectious diseases contained higher liver DDTs concentrations that those that died of trauma</td>
<td>review</td>
<td>a</td>
<td>1</td>
</tr>
<tr>
<td>DDD (4,4'-); DDE (4,4'); DDT (4,4')</td>
<td>mean liver DDTs residues in otters where disease was cause of death = 2000 (range = 290-4700 ng/g wet wt) compared to those that died of trauma = 1400 (range = 290 - 3800 ng/g wet wt)</td>
<td>TOX-MORT - mortality in the field</td>
<td>otters that died from infectious diseases contained higher liver DDTs concentrations that those that died of trauma</td>
<td>increase</td>
<td>b</td>
<td>2</td>
</tr>
<tr>
<td>TIN, BUTYL</td>
<td>mean liver butyltin residue levels in otters where disease was cause of death = 1570 (range = 40-5300 ng/g wet wt) compared to those that died of trauma = 220 (range = 92-480 ng/g wet wt)</td>
<td>TOX-MORT - mortality in the field</td>
<td>otters that died of infectious disease contained butyltin liver concentrations greater than those that died of trauma</td>
<td>increase</td>
<td>c</td>
<td>3</td>
</tr>
</tbody>
</table>

**Notes**

a NR; NR; Species - California (R)=Enhydra lutris; TOX - Chemical=CRUDE OILS; N=NR; Tox Exp Tech=NR; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

b Adult; CA; B; Species - California (R)=Enhydra lutris (ssp. nereis); TOX - Chemical=72-54-8; TOX - Chemical=72-55-9; TOX - Chemical=50-29-3; N=4-8; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=4 yrs; Tox Stat Sig=Y; otters found dead along the coast were autopsied; DDTs = p,p'-DDE, p,p'-DDD and p,p'-DDT; see citation for lipid normalized residue data

c Adult; CA; B; Species - California (R)=Enhydra lutris (ssp. nereis); TOX - Chemical=TIN, BUTYL; N=8-14 animals; Tox Exp Tech=site contamination; Tox Exp Dur=NR; Tox Study Dur=4 yrs; Tox Stat Sig=Y; otters found dead along the coast were autopsied, butyltins = sum of mono-, di- and tri-butyltin.

**References**


* Cal/EPA, OEHHA and the University of California Regents are not responsible for damages of any kind resulting from the use of or reliance on information in this report. Users are encouraged to consult the original data. Updated: February 1999.