Regional Water Quality Control Board
San Diego Region

Final Decision Tables for Designating Candidate Toxic Hot Spots and Sites of Concern in the San Diego Regional Toxic Hot Spot Cleanup Plan

December 16, 1998

Several changes were made to the decision tables used to identify hot spots and sites of concern. The changes were made as a result of public comments received.

The revised tables are presented below.

Table 1. Determination of Candidate Toxic Hot Spots Based on Exceedance of Chemistry Objectives or Criteria (Cleanup Policy Definition 1)

Question	Yes	No	Comments
1. Are the chemical measurements at a site water column measurements?	Go to No. 2	Go to No. 3	
2. Is the water data acceptable to the Regional Board?	Go to No. 3	The station is not a candidate toxic hot spot based on exceedance of water objectives or criteria	Data should be no more than ten years old
3. Do water or sediment chemical measurements at the site exceed water objectives or sediment quality objectives for toxic pollutants found in the San Diego Basin Plan, California Ocean Plan, or other appropriate water quality control plan?	Go to No. 4	The station is not a candidate toxic hot spot based on exceedance of objectives or criteria	
4. Do water chemical measurements at the site exceed promulgated U.S. EPA water quality criteria for toxic pollutants?	Go to No. 5	The station is not a candidate toxic hot spot based on exceedance of objectives or criteria	Values placed in regulation and equivalent to Basin Plan objectives, such as Calif. toxics rule values (not 304(a) gold book values), should be used
5. Were chemical tests of water or sediment, or were toxicity tests, run according to tests and objectives stipulated in water quality control plans?	Go to No. 6	The station is not a candidate toxic hot spot based on exceedance of objectives or criteria	
6. Were recurrent chemical tests of water or sediment run over at least two sampling dates with suitable time intervals?	**The station qualifies as a candidate toxic hot spot**	The station is not a candidate toxic hot spot based on exceedance of objectives or criteria	

Table 2. Determination of Elevated Chemistry Levels Associated With Amphipod Toxicity Tests (Cleanup Policy Definition 2)

Question	Yes	No	Comments
1. Are amphipod toxicity and sediment chemistry data available for stations in Mission Bay, San Diego Bay, or the Tijuana estuary?	**Use threshold values of 4.0 x the ERM or 5.9 x the PEL for individual chemicals, or 0.85 x the ERMQ or 1.29 x the PELQ for average chemistry to define elevated chemistry**	Go to No. 2	Sediment chemistry tests do not have to be run according to Basin Plan or promulgated U.S. EPA criteria required under Definition 1
2. Are the amphipod toxicity and sediment chemistry data available for stations in San Diego Region coastal lagoons?	**Require six or more chemicals to exceed the ERMs or 0.5 x the ERMQ average chemistry value to define elevated chemistry**	Use straight ERM, PEL, ERMQ, or PELQ levels to define elevated chemistry at the station	The scientists recommended this definition after the small bays and estuaries report was published

Table 3. Determination of Candidate Toxic Hot Spots Based on Based on Amphipod Reference Envelope Sediment Toxicity Data (Cleanup Policy Definition 2)

Question	Yes	No	Comments
1. Is the *Rhepoxynius or Eohaustorius* amphipod survival rate at the station less than 48 percent?	Go to No. 2	The station is not a candidate toxic hot spot or site of concern based on amphipod reference envelope data	*Eohaustorius* and *Rhepoxynius* sensitivities are similar enough to use the same toxicity cutoff (best professional judgment by BPTC scientists)
2. Is elevated sediment chemistry present at the station?	Go to No. 3	The station is not a candidate toxic hot spot or site of concern based on this data	Elevated chemistry and amphipod toxicity must occur on the same dates
3. Has the *Rhepoxynius or Eohaustorius* amphipod survival rate at the station been less than 48 percent with elevated chemistry on repeat occasions?	Go to No. 4	The station is a site of concern based on amphipod toxicity and elevated chemistry	
4. Were elevated levels of persistent chemicals detected at the station on the last sampling date?	**The station qualifies as a candidate toxic hot spot**	The station is a site of concern	

Table 4. Determination of Candidate Toxic Hot Spots Based on State Mussel Watch or Other Shellfish Data (Cleanup Policy Definition 3)

Question	Yes	No	Comments
1. Has the Office of Environmental Health Hazard Assessment or Department of Health Services issued a health advisory against consumption of edible resident non-migratory shellfish species at a site or water body?	Go to No. 2	Go to No. 3	
2. Is the shellfish tissue chemical contaminant on which a health advisory is based associated with sediment or water at the site or water body?	**The site automatically qualifies as a candidate toxic hot spot**	The site is not a candidate toxic hot spot based on shellfish data	
3. Were edible resident non-migratory species tested?	Go to No. 4	The site is not a candidate toxic hot spot based on shellfish data	
4. Were the shellfish species tested and the methodology used acceptable to the Regional Board?	Go to No. 5	The site is not a candidate toxic hot spot based on shellfish data	Data should be of State Mussel Watch quality and no more than ten years old
5. Were new shellfish tissue pollutant data used?	Go to No. 8	Go to No. 6	
6. Were existing State Mussel Watch data used for organic pollutants?	Go to No. 7	Go to No. 9	
7. For organic pollutants using existing Mussel Watch information, does each replicate consist of at least one composite sample consisting of 20 to 100 individuals?	Go to No. 9	The site is not a candidate toxic hot spot based on shellfish data	
8. For new shellfish tissue data, were there at least three replicate samples consisting of at least 15 individuals in each replicate?	Go to No. 9	The site is not a candidate toxic hot spot based on shellfish data	

Table 4, continued

Question	Yes	No	Comments
9. Were recurrent measurements made of shellfish tissue?	Go to No. 10	The site is not a candidate toxic hot spot based on shellfish data	
10. Do average tissue toxic pollutant levels of edible shellfish using at least three replicates exceed U.S. Food and Drug Administration levels for protection of human health or National Academy of Sciences levels for protection of human health or wildlife?	**The station qualifies as a candidate toxic hot spot**	The site is not a candidate toxic hot spot based on shellfish data	

Table 5. Determination of Candidate Toxic Hot Spots Based on Fin-fish Data (Cleanup Policy Definition 3)

Question	Yes	No	Comments
1. Has the Office of Environmental Health Hazard Assessment or Department of Health Services issued a health advisory for consumption of edible fish at the site or water body?	Go to No. 2	Go to No. 3	
2. Is the fin-fish tissue contaminant on which the health advisory is based associated with sediment or water at the site or water body?	**The site automatically qualifies as a candidate toxic hot spot**	The site is not a candidate toxic hot spot based on fin-fish data	
3. Were edible resident non-migratory fish species tested?	Go to No. 4	The site is not a candidate toxic hot spot based on fin-fish data	
4. Were the fin-fish species tested and the methodology used acceptable to the Regional Board?	Go to No. 5	The site is not a candidate toxic hot spot based on fin-fish data	
5. Have a minimum of three replicate samples been tested?	Go to No. 6	The site is not a candidate toxic hot spot based on fin-fish data	
6. Have fish of similar age and reproductive stage been tested?	Go to No. 7	The site is not a candidate toxic hot spot based on fin-fish data	
7. Do fin-fish tissue toxic pollutant levels of organisms exceed U.S. Food and Drug Administration levels for protection of human health or National Academy of Sciences levels for protection of human health or wildlife?	Go to No. 8	The site is not a candidate toxic hot spot based on fin-fish data	

Table 5, continued

Question	Yes	No	Comments
8. Were fish tissue residues measured in liver tissue alone?	The site is not a candidate toxic hot spot based on fin-fish data	Go to No. 9	
9. Were a minimum of five fish per replicate tested?	**The station qualifies as a candidate toxic hot spot**	The site is not a candidate toxic hot spot based on fin-fish data	

Table 6. Determination of Candidate Toxic Hot Spots Based on Impairment Measured in the Environment (Cleanup Policy Definition 4)

Question	Yes	No	Comments
1. Are impairment data acceptable to the Regional Board?	Go to No. 2	The site is not a candidate toxic hot spot based on impairment data	The data should be of a quality equivalent to BPTC data
2. Are impairment data available in resident individuals for reduction in growth, reproductive capacity, abnormal development, or histopathological abnormalities as listed in the Policy?	Go to No. 3	The site is not a candidate toxic hot spot based on impairment data	
3. Is elevated water or sediment chemistry present at the station?	Go to No 4	The site is not a candidate toxic hot spot based on impairment data	
4. Are each of these measures made in comparison to the same species at an unpolluted reference site?	Go to No. 5	The site is not a candidate toxic hot spot based on impairment data	
5. Are BPTC sediment toxicity or benthic community data available for the site?	**Use sediment data to define candidate toxic hot spots**	Use impairment data to define candidate toxic hot spots	

Table 7. Determination of Candidate Toxic Hot Spots Based on Degraded Benthic Communities (Cleanup Policy Definition 5)

Question	Yes	No	Comments
1. Are benthic data acceptable to the Regional Board?	Go to No. 2	The station is not a candidate toxic hot spot or site of concern based on degraded benthic communities	The data should be of a quality equivalent to BPTC benthic community analysis and no older than ten years
2. Is the benthic population or community degraded at a station?	Go to No. 3	The station is not a candidate toxic hot spot or site of concern based on degraded benthic communities	
3. Was at least one undegraded population or community site included in the sample?	Go to No. 4	The station is not a candidate toxic hot spot or site of concern based on degraded benthic communities	
4. Were multiple stations sampled?	Go to No. 5	The station is not a candidate toxic hot spot or site of concern based on degraded benthic communities	"Multiple" means more than one station
5. Were elevated sediment chemistry levels present at the stations?	Go to No. 6	The location is not a candidate toxic hot spot or site of concern based on degraded benthic community data	Elevated chemistry levels must occur on the same dates that degraded benthic communities are observed
6. Does the site have two or more nearby contiguous stations with degraded benthic communities with elevated sediment chemistry?	**The site qualifies as a candidate toxic hot spot**	The location may be a site of concern	

Table 8. Determination of Sites of Concern (San Diego Regional Definition)

Question	Yes	No	Comments
1. Is the station a toxic hot spot or part of a series of stations classified as a toxic hot spot?	The station or site is not a site of concern	Go to No. 2	
2. Was the station ranked "high priority" in a BPTC data report by the Department of Fish and Game?	**The station is a site of concern**	Go to No. 3	
3. Was the amphipod survival rate at the station lower than levels determined to be toxic (see Table 3)	Go to No. 5	Go to No. 4	
4. Was the benthic population or community degraded at a station (see Table 7)	Go to No. 5	The station is not a site of concern	
5. Were elevated sediment chemistry levels present at the station on the same date as the amphipod toxicity or degraded benthic community observations were made (see Table 2)	**The station is a site of concern**	The station is not a site of concern	