



RESTORATION ADVISORY BOARD

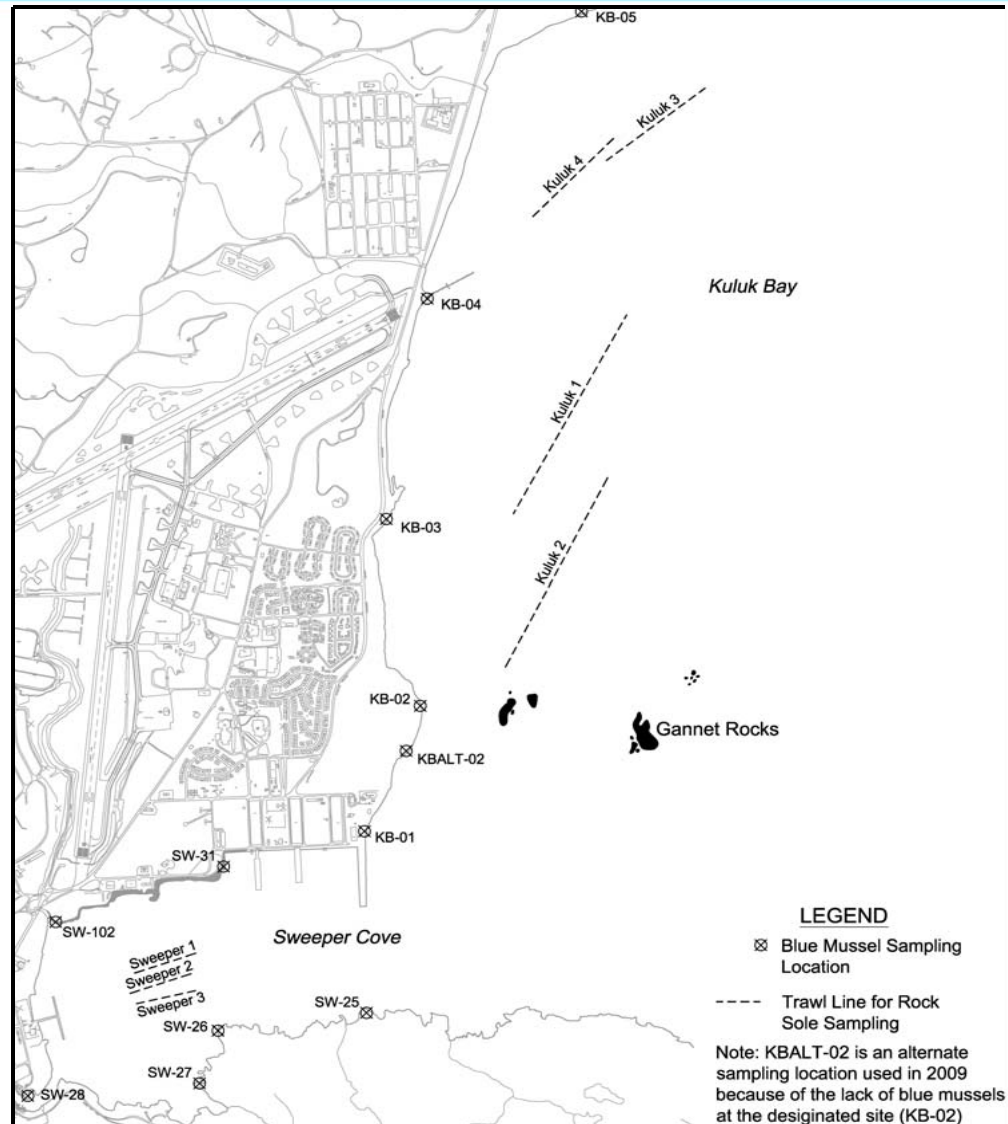
April 7, 2010

Former Adak Naval Complex Adak Island, Alaska

Biological Monitoring Program 2009 Sampling Summary



Sampling Locations



Sweeper Cove Sampling & Results



- Fish (rock sole) were collected along 3 trawl lines in central Sweeper Cove and composited to create 5 representative samples.
- Concentrations of total PCBs ranged from 33.5 to 60.9 $\mu\text{g}/\text{kg}$. The mean concentration was 44.5 $\mu\text{g}/\text{kg}$, which is above the action level.



Action Level = 6.5 $\mu\text{g}/\text{kg}$



Action Level = 31 $\mu\text{g}/\text{kg}$.

- Shellfish (blue mussels) were collected at 5 locations in Sweeper Cove and composited at each location to create 5 representative samples.
- Concentrations of total PCBs ranged from 9.59 to 144 $\mu\text{g}/\text{kg}$. The mean concentration was 42.5 $\mu\text{g}/\text{kg}$. One mussel sample collected near the small boat harbor contained significantly higher levels of PCBs than the other four. The mean concentration excluding this sample was 17.1 $\mu\text{g}/\text{kg}$ which is below the action level.

Kuluk Bay Sampling & Results



- Fish were collected along 4 trawl lines in Kuluk Bay east and northeast of downtown Adak and composited to create 5 representative samples.
- Concentrations of total PCBs ranged from 2.53 to 12.8 $\mu\text{g}/\text{kg}$. The mean concentration was 6.40 $\mu\text{g}/\text{kg}$, which is below the action level of 6.5 $\mu\text{g}/\text{kg}$ for fish.



- Shellfish were collected at 5 locations in Kuluk Bay and composited at each location to create 5 representative samples.
- Concentrations of total PCBs ranged from 5.62 to 37.8 $\mu\text{g}/\text{kg}$. The mean concentration was 18.1 $\mu\text{g}/\text{kg}$, which is below the action level of 31 $\mu\text{g}/\text{kg}$ for shellfish.

Analysis of Results for Sweeper Cove



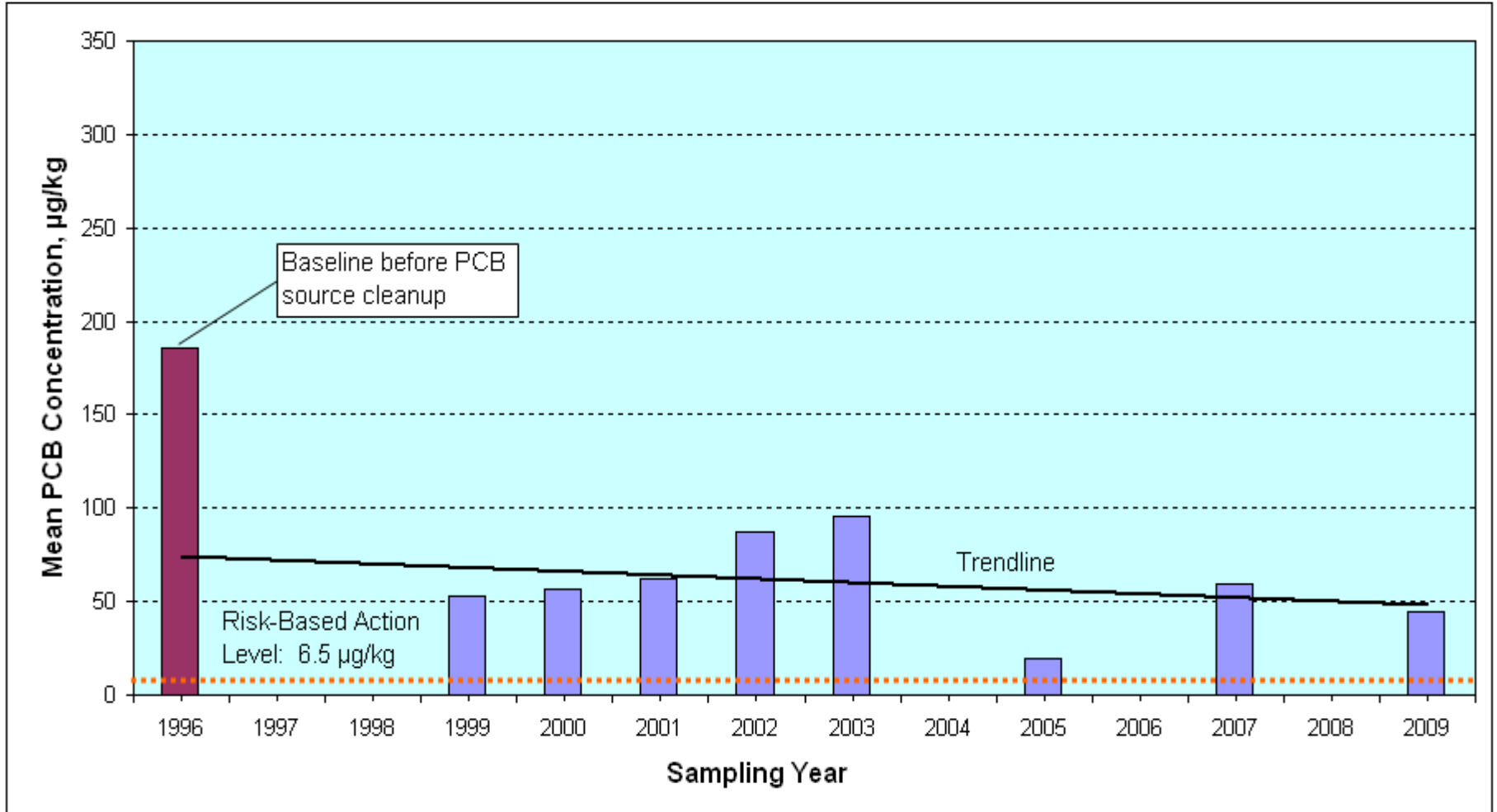
Fish

- The 2009 sampling results for rock sole in Sweeper Cove showed a decrease in the mean total PCB concentration since 2007.
 - Statistical analysis of fish data from 1999 through 2009 indicated a slight, but not significant, decreasing trend in the data.
 - Because the 2009 mean total PCB concentration was above the action level for fish, retaining the consumption advisory for fish caught in Sweeper Cove is recommended.
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Shellfish

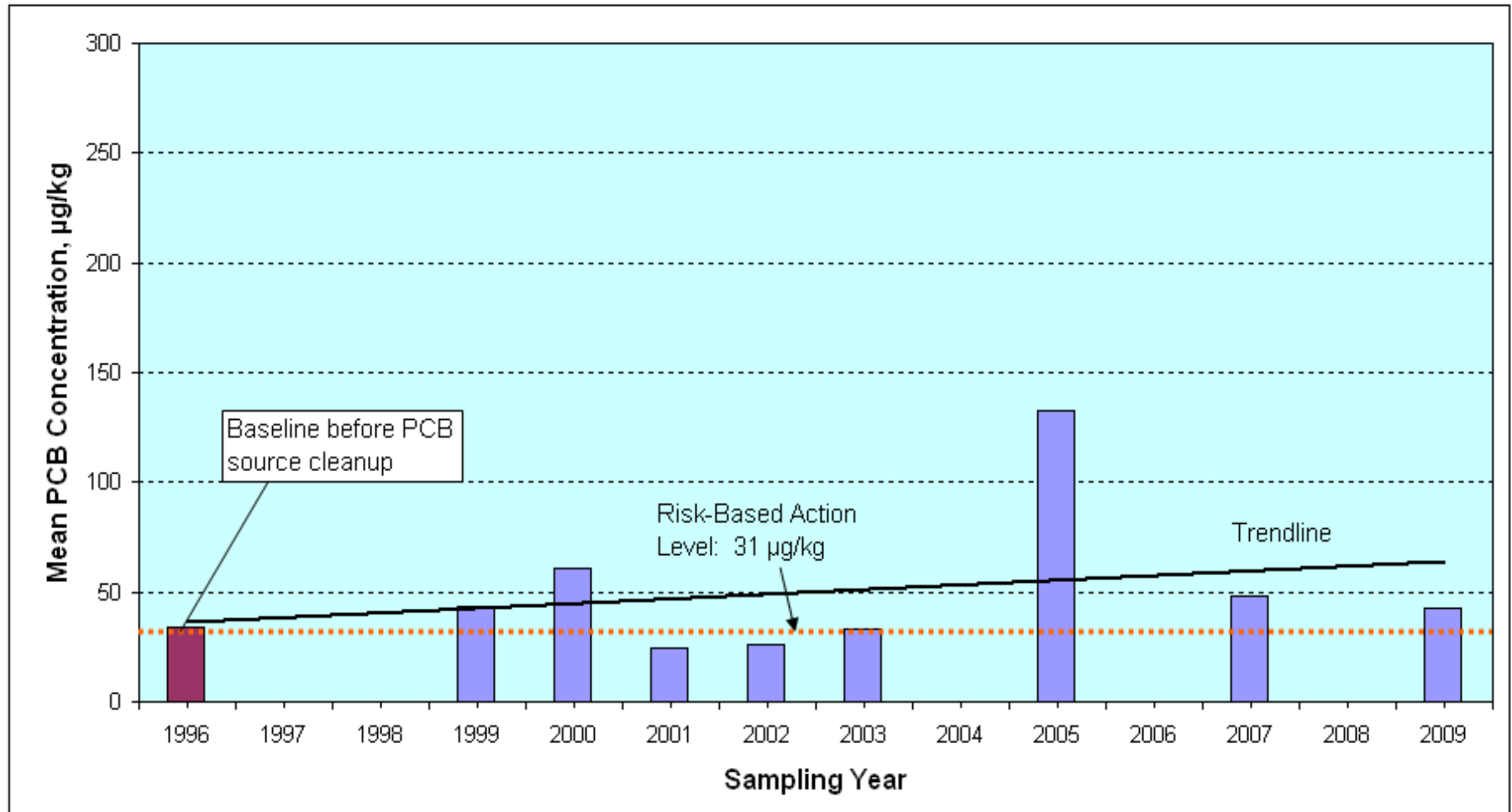
- The 2009 sampling results for shellfish in Sweeper Cove showed a slight decrease in the mean total PCB concentration since 2007.
- Statistical analysis of shellfish data from 1999 through 2009 indicated a slight, but not significant, increasing trend in the data.
- Because the 2009 mean total PCB concentration was above the action level, retaining the consumption advisory for shellfish gathered in Sweeper Cove is recommended.

Sweeper Cove Fish Samples Mean Total PCB Levels Over Time



Note: Baseline concentration was not used in trendline calculation.

Sweeper Cove Mussel Samples Mean Total PCB Levels Over Time



Note: Baseline concentration was not used in trendline calculation.

Analysis of Results for Kuluk Bay



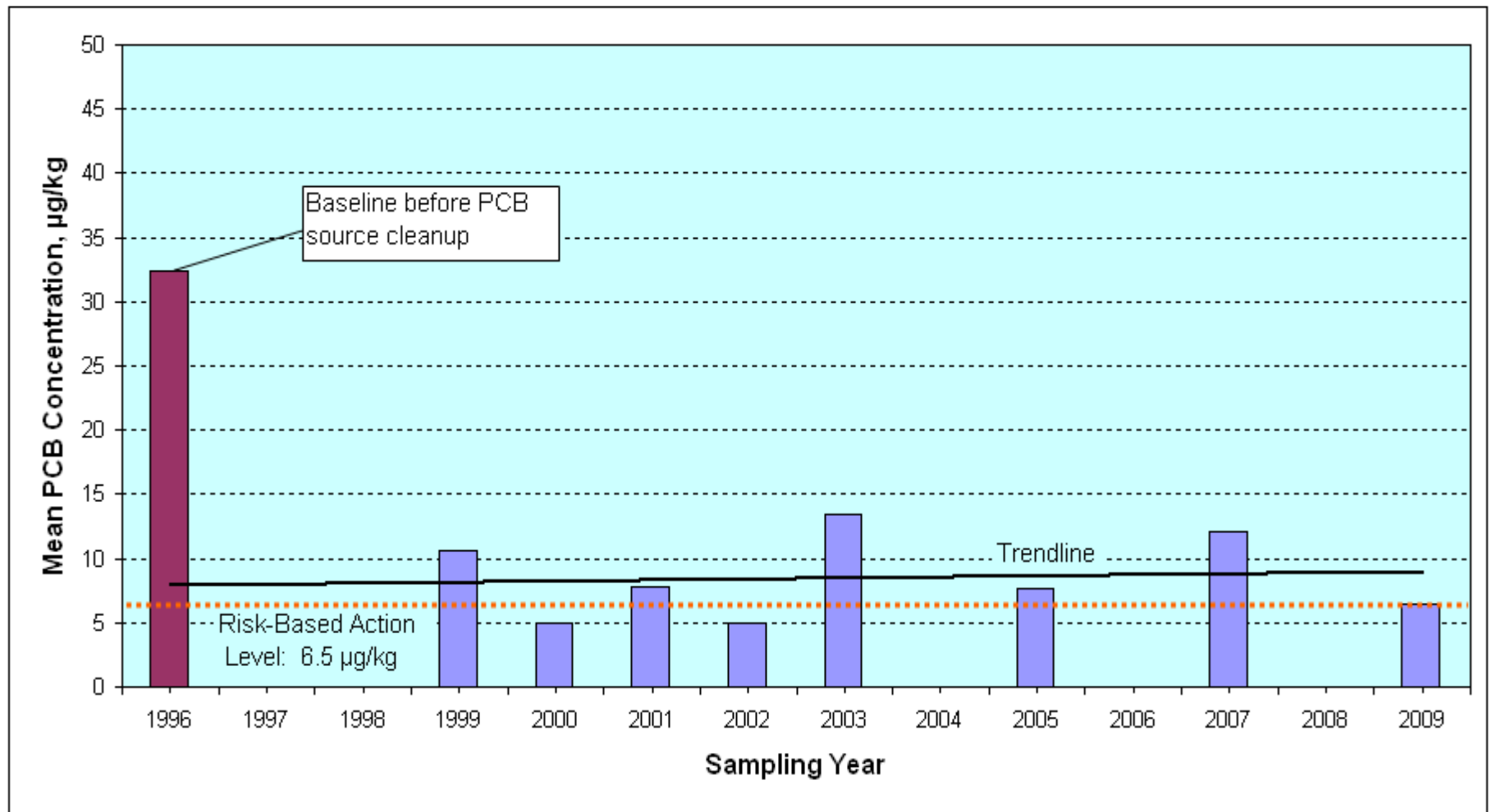
Fish

- The 2009 sampling results for fish in Kuluk Bay showed a substantial decrease in the mean total PCB concentration since 2007.
- Statistical analysis of fish data gathered from 1999 through 2009 indicated there is a slight, but not significant, increasing trend in the data.
- Because the 2009 mean total PCB concentration was close to the action level and because there is no significant decreasing trend, retaining the consumption advisory for fish caught in Kuluk Bay is recommended.

Shellfish

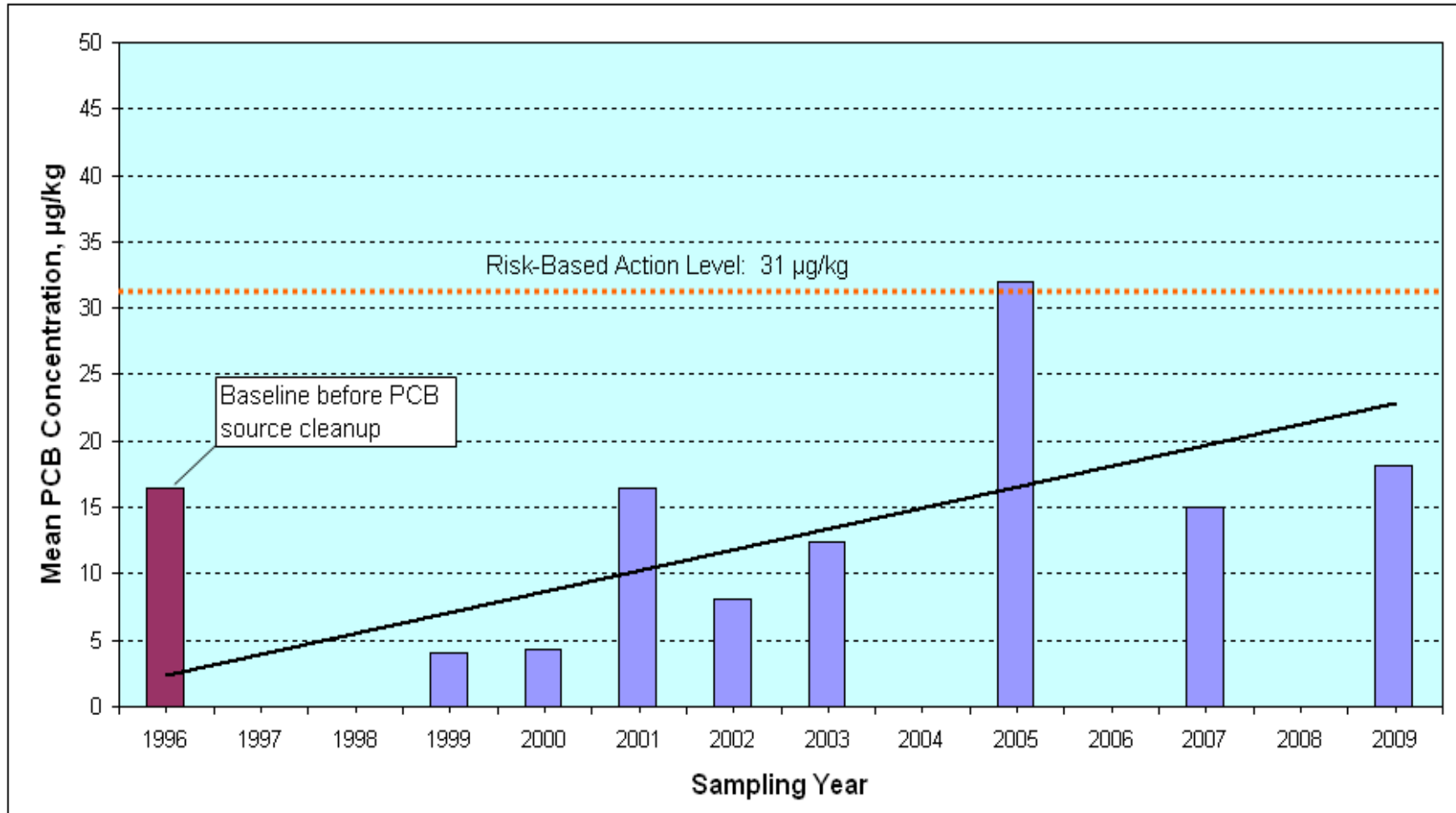
- The 2009 sampling results for shellfish in Kuluk Bay showed an increase in the mean total PCB concentration since 2007, but the concentration is below the action level.
- Statistical analysis of shellfish data gathered from 1999 through 2009 indicated there is a statistically significant increasing trend in the data.
- The shellfish consumption advisory for Kuluk Bay was removed in 2003. Because the 2009 mean total PCB concentration was below the action level, it is recommended that the advisory should not be reinstated at this time.

Kuluk Bay Fish Samples Mean Total PCB Levels Over Time



Note: Baseline concentration was not used in trendline calculation.

Kuluk Bay Mussel Samples Mean Total PCB Levels Over Time



Note: Baseline concentration was not used in trendline calculation.

Next Sampling Rounds



- **June 2011 - Collect five composite fish samples from Sweeper Cove and Kuluk Bay and five composite shellfish samples from Sweeper and Kuluk Bay at the established sampling locations.**



- **June 2013 - Collect five composite fish samples from Sweeper Cove and Kuluk Bay and five composite shellfish samples from Sweeper and Kuluk Bay at the established sampling locations.**
- **Evaluate total PCB concentrations in fish and shellfish after each sampling event and update the consumption advisory.**

Questions



Do you have any questions?