



## Texas Department of Health

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INTER - AGENCY MEMORANDUM

Date: April 7, 1994

From: Texas Department of Health, Health Risk Assessment and Toxicology

Subject: Health Consultation: Health Consultation: Fish tissue analysis, Bailey Disposal NPL Site, Orange County, Texas

To: ATSDR Regional Representative  
U.S. EPA Region VI  
Through: Director, DHAC, ATSDR  
Chief, ERCB, DHAC  
Chief, TSS, ERCB

### BACKGROUND AND STATEMENT OF ISSUES

The Bailey Waste Disposal site, an inactive waste disposal site for industrial waste, municipal trash, and construction debris, is in Orange County, about three miles southwest of Bridge City, Texas. The site is part of a saltwater marshland near the confluence of the Neches River and Sabine Lake. EPA placed the site on the National Priorities List in 1984.

In August 1992, the Texas Department of Health (TDH) under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Site Review and Update for the site identifying the consumption of fish as a potential source of exposure to site contaminants. At that time they recommended that fish and crabs be sampled for contaminants.

On January 18, 1994, the Texas Department of Health Aquatic Life Survey Team collected 15 fish samples from locations near the Bailey Site. Table 1 lists the types of fish collected at each location.

Fish tissue was analyzed for commonly applied and environmentally persistent pesticides; metals; volatile organic compounds (VOCs); polychlorinated biphenyl aroclors (PCBs); and semi-volatile organic compounds including polyaromatic hydrocarbons (PAHs) by the Texas Department of Health State Laboratory.

PCBs, PAHs, and pesticides were all found below detection limits. Two volatile chemicals, carbon disulfide and acetone, were reported above detection limits. However, acetone is a laboratory contaminant and carbon disulfide is a widely reported degradation product in fish tissue in the laboratory. The concentrations of metals in the fish tissue are presented in Table 2. These levels are insignificant with respect to public health.

Table 1 Bailey Waste Disposal Fish Samples January 18, 1993		
Location	Species	Sample Type; Length (cm)
Neches River 1/4 mile west and upstream of Bailey	Red Drum	Single; 64
	Red Drum	Single; 68
	Red Drum	Single; 64
	Sheepshead	Single; 39
	Black Drum	Single; 43
Discharge Canal adjacent to the southeastern corner of Bailey	Red Drum	Single; 54
Neches River 1/4 mile east and downstream of Bailey	Yellow Perch	Composite; 29,27
	Black Drum	Single; 32
	Black Drum	Single; 44
	Black Drum	Single; 61
Sabine Lake near mouth of Neches River	Southern Flounder	Composite; 37,41
	Black Drum	Single; 43
	Black Drum	Single; 46
	Red Drum	Single; 56
	Red Drum	Single; 53

Table 2 Metals in Fish Tissue Taken Near the Bailey Waste Disposal NPL Site January 18, 1994		
Contaminant	Range of Values (mg/kg)	Mean Concentration (mg/kg)*
Arsenic	ND - 0.82	0.039
Copper	ND - 0.58	0.225
Lead	ND	0.200
Mercury	0.089 - 0.289	0.157
Zinc	2.90 - 5.33	3.77

ND = Below detection limit.

\* non-detect samples estimated at 1/2 detection limit.

## **DISCUSSION**

Based on these results it is not necessary to restrict fishing near the Bailey Waste Disposal Site. During our initial site visit on April, 24, 1992, we saw people crabbing along the discharge canal adjacent to the site near the site entrance. Due to weather conditions, the survey team was unable to collect crabs. Thus, we are unable to determine the public health significance of eating crabs taken from this area.

## **RECOMMENDATIONS**

We recommend that crabs be sampled along the discharge canal near the site entrance.

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John F. Villanacci, Ph.D.

Director

Health Risk Assessment and Toxicology Program

## CERTIFICATION

This Health Consultation was prepared by the Texas Department of Health under the a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.

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Technical Project Officer, SPS, RPB, DHAC

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.

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Director, DHAC, ATSDR

## REFERENCES

Texas Department of Health. Investigation of Public Health Concerns from Consumption of Fish Taken from the Neches River and Sabine Lake Near the Bailey Superfund Site. Undated.