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NAS KEY WEST  
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FISH COLLECTION LETTER REPORT FOR BOCA CHICA KEY NAS KEY WEST FL  
3/21/1996  
BROWN AND ROOT ENVIRONMENTAL



AIK-OES-96-5297  
March 21, 1996

(803) 649-7963  
FAX: (803) 649-4808

Steve Adams  
Florida Department of Environmental Protection  
3900 Commonwealth Boulevard  
Tallahassee, FL 32399

REFERENCE: NAS Key West Project HK 7046 (CTO 007)

SUBJECT: Fish Collection Report

Dear Steve:

The following end of project report is submitted in accordance with Chapter 62R-1, F.A.C., and is a summary of the activities conducted under the terms and conditions of FDEP Special Permit # 96S-011, issued to me on January 12, 1996.

Fish were collected during January 17-26, 1996, at six locations on Boca Chica Key at Naval Air Station Key West, Florida. These locations consisted of three sites where contamination of aquatic resources is being investigated, as well as three background (i.e., reference) sites. All sites were either landlocked or connected to marine waters by drainage ditches or canals; none of the sites were in open water of the Gulf of Mexico or the ocean. Fish were collected using gill nets at depths of 0 to 10 feet, and minnow traps and beach seines at depths of 0 to 4 feet.

Fish collected by gill net consisted of 4 tarpon, 10 striped mullet, 9 ladyfish, 9 yellowfin mojarra, 3 gray snapper, 4 pinfish, 1 bluestriped grunt, and 1 sea robin. Individual lengths and weights of these fish are provided in Table 1.

Minnow traps and beach seines were used to collect a variety of small fish. Individual lengths and weights of these minnow-sized fish were not determined. Instead, minnows were pooled by species to create samples of 30-35 grams each. Lengths of the smallest and largest fish in each sample were measured (Table 2).

All specimens were frozen and shipped to Environmental Science and Engineering, Inc., in Gainesville, Florida, for laboratory analyses of contaminants potentially present in the fish tissue. The analytical data are needed to conduct ecological risk assessments at sites where terrestrial and aquatic resources may be at high risk due to contamination from past military-related activities. The results of the risk assessments will be used to determine remediation goals at Naval Air Station Key West.



Mr. Adams, FDEP  
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Thank you for your assistance in obtaining the FDEP permit. If you have any questions, please do not hesitate to call me at 803-649-7963.

Sincerely,

Michael L. Whitten  
Senior Scientist

MLW:jm

Enclosures: Tables 1 and 2 Fish Collected January 17-26, 1996

cc w/enclosure:

K. Donnelly, B&RE-Pittsburgh  
K. Walter, B&RE-Aiken  
D. Patrick, NAVFACENGCOM  
R. Demes, NAS Key West  
File 7046 (CTO 007)

cc w/o enclosure:

File 1.1.1

Table 1. Fish Collected by Gill Nets During January 17-26, 1996, at Naval Air Station Key West (Boca Chica Key), Monroe County, Florida. (Page 1 of 2).

<u>Species</u>	<u>Total Length (mm)</u>	<u>Weight (g)</u>
Tarpon ( <i>Megalops atlanticus</i> )	570	1200
	595	1550
	517	970
	580	1250
Striped mullet ( <i>Mugil cephalus</i> )	511	1500
	545	1400
	505	1350
	325	334
	336	340
	380	508
	343	390
	505	1300
	530	1480
538	1250	
Ladyfish ( <i>Elops saurus</i> )	535	720
	532	658
	525	634
	495	522
	487	516
	465	488
	477	478
	470	560
	485	500
Yellowfin mojarra ( <i>Gerres cinereus</i> )	235	167
	235	182
	260	222
	257	223
	223	146
	338	500
	380	606
	370	594
	381	570
Pinfish ( <i>Lagodon rhomboides</i> )	247	224
	225	178
	261	240
	250	228

Fish Collected by Gill Nets During January 17-26, 1996, at Naval Air Station Key West (Boca Chica Key), Monroe County, Florida. (Page 2 of 2).

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<u>Species</u>	<u>Total Length (mm)</u>	<u>Weight (g)</u>
Gray snapper ( <i>Lutjanus griseus</i> )	315	414
	365	698
	277	300
Sea robin ( <i>Prionotus sp.</i> )	246	204
Bluestriped grunt ( <i>Haemulon sciurus</i> )	257	256

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Table 2. Fish Collected by Seines and Minnow Traps During January 17-26, 1996, at Naval Air Station Key West (Boca Chica Key), Monroe County, Florida.

<u>Species</u>	<u>Total Length<sup>1</sup> (mm)</u>	<u>Weight<sup>2</sup>(g)</u>
Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	26-57	461
Gulf killifish ( <i>Fundulus grandis</i> )	77-110	493
Marsh killifish ( <i>Fundulus confluentus</i> )	37-105	97
Sailfin molly ( <i>Poecilia latipinna</i> )	25-63	1344
Yellowfin mojarra ( <i>Gerres cinereus</i> )	30-65	43
Tomtate ( <i>Haemulon aurolineatum</i> )	50-83	58
Fat sleeper ( <i>Dormitator maculatus</i> )	93-122	75
Crested goby ( <i>Lophogobius cyprinoides</i> )	36-92	141
American eel ( <i>Anguilla rostrata</i> ) <sup>3</sup>	385	99

<sup>1</sup> Individual lengths and weights of small fish were not always determined. Lengths provided here indicate the range of the smallest to the largest fish.

<sup>2</sup> Aggregate weight of fish collected.

<sup>3</sup> One eel collected in minnow trap.