Figures

9385657

QUADRANGLE LOCATION

N

Scale in Feet

0 1000 2000

Source:
Base map taken from http://www.tnris.state.tx.us Freeport, Texas 7.5 min. U.S.G.S. quadrangle, 1974.

TITLE:

SITE LOCATION MAP

REPORT: **PRELIMINARY SITE CHARACTERIZATION REPORT**

SITE: **GULFCO MARINE MAINTENANCE**
FREEPORT, BRAZORIA COUNTY, TEXAS

PROJECT: 41568745	DRAWN: ZGK/NAB	FIGURE: 1
DATE: OCTOBER, 2010	CHECKED: DL	

URS

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EXPLANATION

Gulfco Marine Maintenance Site Boundary (approximate)

N

Approx. Scale in Feet

0 125 250

Source of photo: H-GAC, Texas aerial photograph, 2006.

TITLE:

SITE MAP

REPORT: PRELIMINARY SITE CHARACTERIZATION REPORT

SITE: GULFCO MARINE MAINTENANCE
FREEPORT, BRAZORIA COUNTY, TEXAS

PROJECT: 41568745	DRAWN: ZGK/NAB	FIGURE: 2
DATE: OCTOBER, 2010	CHECKED: DL	

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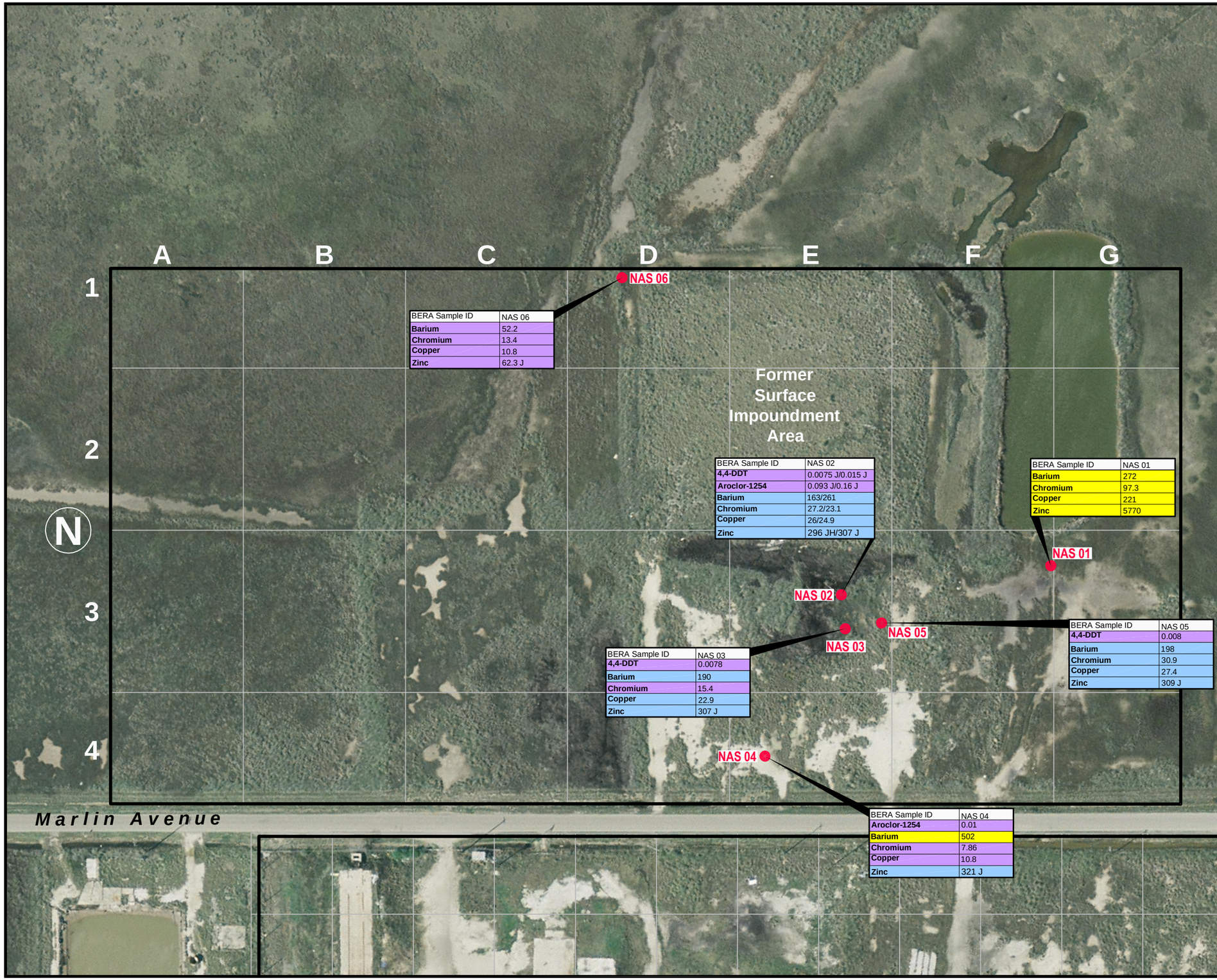

BERA Sample ID	NAS 06
Barium	52.2
Chromium	13.4
Copper	10.8
Zinc	62.3 J

BERA Sample ID	NAS 02
4,4-DDT	0.0075 J/0.015 J
Aroclor-1254	0.093 J/0.16 J
Barium	163/261
Chromium	27.2/23.1
Copper	26/24.9
Zinc	296 JH/307 J

BERA Sample ID	NAS 01
Barium	272
Chromium	97.3
Copper	221
Zinc	5770

BERA Sample ID	NAS 05
4,4-DDT	0.008
Barium	198
Chromium	30.9
Copper	27.4
Zinc	309 J

BERA Sample ID	NAS 03
4,4-DDT	0.0078
Barium	190
Chromium	15.4
Copper	22.9
Zinc	307 J

BERA Sample ID	NAS 04
Aroclor-1254	0.01
Barium	502
Chromium	7.86
Copper	10.8
Zinc	321 J

EXPLANATION

Gulfco Marine Maintenance Site Boundary (approximate)

BERA Sediment Sample Location

Notes:
The background soil sample area is shown on Figure 1 (and Figure 14 of the Nature and Extent Data Report - May 20, 2009).

J - Estimated Value
H - Bias in results likely to be high

= High Concentration
= Mid Concentration
= Low Concentration

N

Approx. Scale in Feet

0 60 120

Source of photo: H-GAC, Texas aerial photograph, 2006.

TITLE:

NORTH AREA SOIL SAMPLE LOCATIONS

REPORT: PRELIMINARY SITE CHARACTERIZATION REPORT

SITE: GULFCO MARINE MAINTENANCE
FREEPORT, BRAZORIA COUNTY, TEXAS

PROJECT: 41568745	DRAWN: ZGK/NAB	FIGURE: 3
DATE: OCTOBER, 2010	CHECKED: DL	

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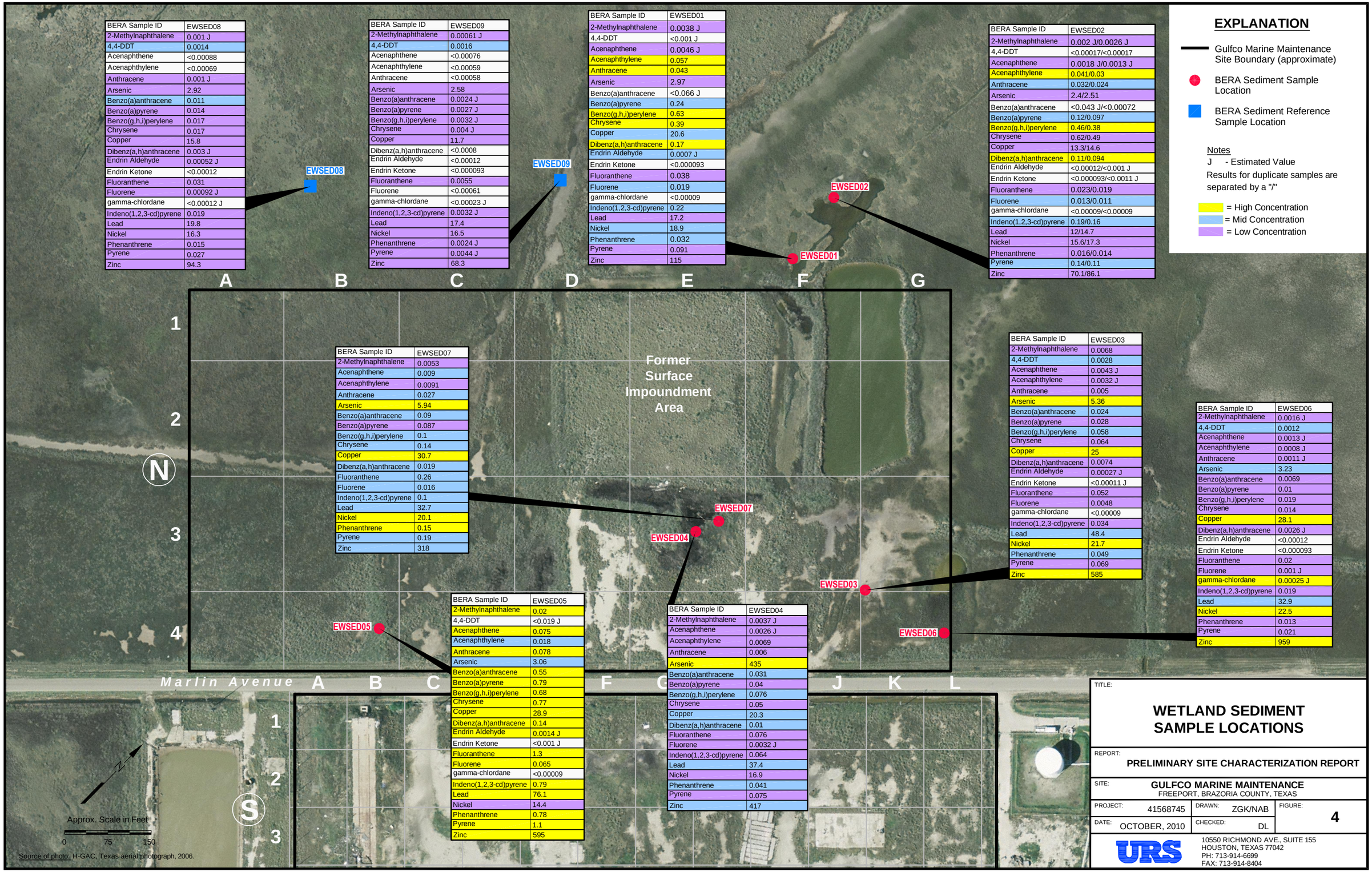

BERA Sample ID	EWSED08
2-Methylnaphthalene	0.001 J
4,4-DDT	0.0014
Acenaphthene	<0.00088
Acenaphthylene	<0.00069
Anthracene	0.001 J
Arsenic	2.92
Benzo(a)anthracene	0.011
Benzo(a)pyrene	0.014
Benzo(g,h,i)perylene	0.017
Chrysene	0.017
Copper	15.8
Dibenz(a,h)anthracene	0.003 J
Endrin Aldehyde	0.00052 J
Endrin Ketone	<0.00012
Fluoranthene	0.031
Fluorene	0.00092 J
gamma-chlordane	<0.00012 J
Indeno(1,2,3-cd)pyrene	0.019
Lead	19.8
Nickel	16.3
Phenanthrene	0.015
Pyrene	0.027
Zinc	94.3

BERA Sample ID	EWSED09
2-Methylnaphthalene	0.00061 J
4,4-DDT	0.0016
Acenaphthene	<0.00076
Acenaphthylene	<0.00059
Anthracene	<0.00058
Arsenic	2.58
Benzo(a)anthracene	0.0024 J
Benzo(a)pyrene	0.0027 J
Benzo(g,h,i)perylene	0.0032 J
Chrysene	0.004 J
Copper	11.7
Dibenz(a,h)anthracene	<0.0008
Endrin Aldehyde	<0.00012
Endrin Ketone	<0.000093
Fluoranthene	0.0055
Fluorene	<0.00061
gamma-chlordane	<0.00023 J
Indeno(1,2,3-cd)pyrene	0.0032 J
Lead	17.4
Nickel	16.5
Phenanthrene	0.0024 J
Pyrene	0.0044 J
Zinc	68.3

BERA Sample ID	EWSED01
2-Methylnaphthalene	0.0038 J
4,4-DDT	<0.001 J
Acenaphthene	0.0046 J
Acenaphthylene	0.057
Anthracene	0.043
Arsenic	2.97
Benzo(a)anthracene	<0.066 J
Benzo(a)pyrene	0.24
Benzo(g,h,i)perylene	0.63
Chrysene	0.39
Copper	20.6
Dibenz(a,h)anthracene	0.17
Endrin Aldehyde	0.0007 J
Endrin Ketone	<0.000093
Fluoranthene	0.038
Fluorene	0.019
gamma-chlordane	<0.00009
Indeno(1,2,3-cd)pyrene	0.22
Lead	17.2
Nickel	18.9
Phenanthrene	0.032
Pyrene	0.091
Zinc	115

BERA Sample ID	EWSED02
2-Methylnaphthalene	0.002 J/0.0026 J
4,4-DDT	<0.00017/<0.00017
Acenaphthene	0.0018 J/0.0013 J
Acenaphthylene	0.041/0.03
Anthracene	0.032/0.024
Arsenic	2.4/2.51
Benzo(a)anthracene	<0.043 J/<0.00072
Benzo(a)pyrene	0.12/0.097
Benzo(g,h,i)perylene	0.46/0.38
Chrysene	0.62/0.49
Copper	13.3/14.6
Dibenz(a,h)anthracene	0.11/0.094
Endrin Aldehyde	<0.00012/<0.001 J
Endrin Ketone	<0.000093/<0.0011 J
Fluoranthene	0.023/0.019
Fluorene	0.013/0.011
gamma-chlordane	<0.00009/<0.00009
Indeno(1,2,3-cd)pyrene	0.19/0.16
Lead	12/14.7
Nickel	15.6/17.3
Phenanthrene	0.016/0.014
Pyrene	0.14/0.11
Zinc	70.1/86.1

EXPLANATION

Gulfco Marine Maintenance Site Boundary (approximate)

BERA Sediment Sample Location

BERA Sediment Reference Sample Location

Notes

J - Estimated Value

Results for duplicate samples are separated by a "/"

= High Concentration

= Mid Concentration

= Low Concentration

BERA Sample ID	EWSED07
2-Methylnaphthalene	0.0053
Acenaphthene	0.009
Acenaphthylene	0.0091
Anthracene	0.027
Arsenic	5.94
Benzo(a)anthracene	0.09
Benzo(a)pyrene	0.087
Benzo(g,h,i)perylene	0.1
Chrysene	0.14
Copper	30.7
Dibenz(a,h)anthracene	0.019
Fluoranthene	0.26
Fluorene	0.016
Indeno(1,2,3-cd)pyrene	0.1
Lead	32.7
Nickel	20.1
Phenanthrene	0.15
Pyrene	0.19
Zinc	318

BERA Sample ID	EWSED03
2-Methylnaphthalene	0.0068
4,4-DDT	0.0028
Acenaphthene	0.0043 J
Acenaphthylene	0.0032 J
Anthracene	0.005
Arsenic	5.36
Benzo(a)anthracene	0.024
Benzo(a)pyrene	0.028
Benzo(g,h,i)perylene	0.058
Chrysene	0.064
Copper	25
Dibenz(a,h)anthracene	0.0074
Endrin Aldehyde	0.00027 J
Endrin Ketone	<0.00011 J
Fluoranthene	0.052
Fluorene	0.0048
gamma-chlordane	<0.00009
Indeno(1,2,3-cd)pyrene	0.034
Lead	48.4
Nickel	21.7
Phenanthrene	0.049
Pyrene	0.069
Zinc	585

BERA Sample ID	EWSED06
2-Methylnaphthalene	0.0016 J
4,4-DDT	0.0012
Acenaphthene	0.0013 J
Acenaphthylene	0.0008 J
Anthracene	0.0011 J
Arsenic	3.23
Benzo(a)anthracene	0.0069
Benzo(a)pyrene	0.01
Benzo(g,h,i)perylene	0.019
Chrysene	0.014
Copper	28.1
Dibenz(a,h)anthracene	0.0026 J
Endrin Aldehyde	<0.00012
Endrin Ketone	<0.000093
Fluoranthene	0.02
Fluorene	0.001 J
gamma-chlordane	0.00025 J
Indeno(1,2,3-cd)pyrene	0.019
Lead	32.9
Nickel	22.5
Phenanthrene	0.013
Pyrene	0.021
Zinc	959

BERA Sample ID	EWSED05
2-Methylnaphthalene	0.02
4,4-DDT	<0.019 J
Acenaphthene	0.075
Acenaphthylene	0.018
Anthracene	0.078
Arsenic	3.06
Benzo(a)anthracene	0.55
Benzo(a)pyrene	0.79
Benzo(g,h,i)perylene	0.68
Chrysene	0.77
Copper	28.9
Dibenz(a,h)anthracene	0.14
Endrin Aldehyde	0.0014 J
Endrin Ketone	<0.001 J
Fluoranthene	1.3
Fluorene	0.065
gamma-chlordane	<0.00009
Indeno(1,2,3-cd)pyrene	0.79
Lead	76.1
Nickel	14.4
Phenanthrene	0.78
Pyrene	1.1
Zinc	595

BERA Sample ID	EWSED04
2-Methylnaphthalene	0.0037 J
Acenaphthene	0.0026 J
Acenaphthylene	0.0069
Anthracene	0.006
Arsenic	435
Benzo(a)anthracene	0.031
Benzo(a)pyrene	0.04
Benzo(g,h,i)perylene	0.076
Chrysene	0.05
Copper	20.3
Dibenz(a,h)anthracene	0.01
Fluoranthene	0.076
Fluorene	0.0032 J
Indeno(1,2,3-cd)pyrene	0.064
Lead	37.4
Nickel	16.9
Phenanthrene	0.041
Pyrene	0.075
Zinc	417

TITLE:

WETLAND SEDIMENT SAMPLE LOCATIONS

REPORT: PRELIMINARY SITE CHARACTERIZATION REPORT

SITE: GULFCO MARINE MAINTENANCE
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PROJECT: 41568745

DRAWN: ZGK/NAB

FIGURE: 4

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