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INVESTIGATIVE SAMPLING REPORT AREA OF CONCERN 861 (AOC 681) CNC CHARLESTON SC

6/1/1999

SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR USN

AOC 681
INVESTIGATIVE SAMPLING
NAVAL BASE CHARLESTON
CHARLESTON SC

Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SC

Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106

June 1, 1999

AOC 681
INVESTIGATIVE SAMPLING
NAVAL BASE CHARLESTON
CHARLESTON SC

Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106

June 1, 1999

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID	: 99SPORT0196-01
Lab ID	: 9905780-01
Matrix	: Soil
Date Collected	: 05/21/99
Date Received	: 05/21/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	6.64	33.3	ug/kg	1.0	JPA	05/26/99	1405	149825	1
Acenaphthylene	U	ND	6.64	33.3	ug/kg	1.0					
Anthracene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(a)anthracene		57.2	6.64	33.3	ug/kg	1.0					
Benzo(a)pyrene		57.0	6.64	33.3	ug/kg	1.0					
Benzo(b)fluoranthene		142	6.64	33.3	ug/kg	1.0					
Benzo(ghi)perylene		37.2	6.64	33.3	ug/kg	1.0					
Benzo(k)fluoranthene	U	ND	6.64	33.3	ug/kg	1.0					
Chrysene		74.5	6.64	33.3	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	ND	26.6	33.3	ug/kg	1.0					
Fluoranthene		116	6.64	33.3	ug/kg	1.0					
Fluorene	U	ND	6.64	33.3	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	J	26.5	23.2	33.3	ug/kg	1.0					
Naphthalene	U	ND	6.64	33.3	ug/kg	1.0					
Phenanthrene	J	27.5	6.64	33.3	ug/kg	1.0					
Pyrene		116	6.64	33.3	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	59.2	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	55.4	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	75.4	(45.5 - 104.)

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87155/87294	E87472/87458
NC	223	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-01

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Elise Hanson at 843-556-8171.

Reviewed By

GENERAL ENGINEERING LABORATORIES
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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-02
Lab ID : 9905780-02
Matrix : Soil
Date Collected : 05/21/99
Date Received : 05/21/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	6.64	33.3	ug/kg	1.0	JPA	05/26/99	1434	149825	1
Acenaphthylene	U	ND	6.64	33.3	ug/kg	1.0					
Anthracene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(a)anthracene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(a)pyrene	J	17.5	6.64	33.3	ug/kg	1.0					
Benzo(b)fluoranthene	J	20.0	6.64	33.3	ug/kg	1.0					
Benzo(ghi)perylene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(k)fluoranthene	J	17.0	6.64	33.3	ug/kg	1.0					
Chrysene	J	17.4	6.64	33.3	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	ND	26.6	33.3	ug/kg	1.0					
Fluoranthene	J	19.9	6.64	33.3	ug/kg	1.0					
Fluorene	U	ND	6.64	33.3	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	ND	23.2	33.3	ug/kg	1.0					
Naphthalene	U	ND	6.64	33.3	ug/kg	1.0					
Phenanthrene	U	ND	6.64	33.3	ug/kg	1.0					
Pyrene	J	25.6	6.64	33.3	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	64.8	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	59.3	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	85.7	(45.5 - 104.)

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date. May 28, 1999

Sample ID : 99SPORT0196-02

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Elise Hanson at 843-556-8171.

E Hanson

Reviewed By

GENERAL ENGINEERING LABORATORIES, INC.

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87459
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID	: 99SPORT0196-03
Lab ID	: 9905780-03
Matrix	: Soil
Date Collected	: 05/21/99
Date Received	: 05/21/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	26.6	133	ug/kg	4.0	JPA	05/25/99	2110	149825	1
Acenaphthylene	U	ND	26.6	133	ug/kg	4.0					
Anthracene	U	ND	26.6	133	ug/kg	4.0					
Benzo(a)anthracene	J	81.6	26.6	133	ug/kg	4.0					
Benzo(a)pyrene	J	78.1	26.6	133	ug/kg	4.0					
Benzo(b)fluoranthene	J	74.7	26.6	133	ug/kg	4.0					
Benzo(ghi)perylene	U	ND	26.6	133	ug/kg	4.0					
Benzo(k)fluoranthene	J	99.2	26.6	133	ug/kg	4.0					
Chrysene		152	26.6	33.3	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	ND	106	133	ug/kg	4.0					
Fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Fluorene	U	ND	26.6	133	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	ND	93.0	133	ug/kg	4.0					
Naphthalene	U	ND	26.6	133	ug/kg	4.0					
Phenanthrene	U	ND	26.6	133	ug/kg	4.0					
Pyrene	U	ND	26.6	133	ug/kg	4.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	64.3	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	51.5	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	77.4	(45.5 - 104.)

GENERAL ENGINEERING LABORATORIES, INC.

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-03

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Elise Hanson at 843-556-8171.

E. Hanson

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GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID	: 99SPORT0196-04
Lab ID	: 9905780-04
Matrix	: Soil
Date Collected	: 05/21/99
Date Received	: 05/21/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	26.6	133	ug/kg	4.0	JPA	05/25/99	2138	149825	1
Acenaphthylene	U	ND	26.6	133	ug/kg	4.0					
Anthracene	U	ND	26.6	133	ug/kg	4.0					
Benzo(a)anthracene	U	ND	26.6	133	ug/kg	4.0					
Benzo(a)pyrene	U	ND	26.6	133	ug/kg	4.0					
Benzo(b)fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Benzo(ghi)perylene	U	ND	26.6	133	ug/kg	4.0					
Benzo(k)fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Chrysene	U	ND	26.6	33.3	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	ND	106	133	ug/kg	4.0					
Fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Fluorene	U	ND	26.6	133	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	ND	93.0	133	ug/kg	4.0					
Naphthalene	U	ND	26.6	133	ug/kg	4.0					
Phenanthrene	U	ND	26.6	133	ug/kg	4.0					
Pyrene	U	ND	26.6	133	ug/kg	4.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	59.2	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	0.00*	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	85.9	(45.5 - 104.)

GENERAL ENGINEERING LABORATORIES, INC.

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-04

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Elise Hanson at 843-556-8171.

E Hanson

Reviewed By

GENERAL ENGINEERING LABORATORIES
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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87455
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-05
Lab ID : 9905780-05
Matrix : Soil
Date Collected : 05/21/99
Date Received 05/21/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	26.6	133	ug/kg	4.0	JPA	05/26/99	0012	149825	1
Acenaphthylene	U	ND	26.6	133	ug/kg	4.0					
Anthracene	U	ND	26.6	133	ug/kg	4.0					
Benzo(a)anthracene	U	ND	26.6	133	ug/kg	4.0					
Benzo(a)pyrene	U	ND	26.6	133	ug/kg	4.0					
Benzo(b)fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Benzo(ghi)perylene	U	ND	26.6	133	ug/kg	4.0					
Benzo(k)fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Chrysene	U	ND	26.6	33.3	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	ND	106	133	ug/kg	4.0					
Fluoranthene	U	ND	26.6	133	ug/kg	4.0					
Fluorene	U	ND	26.6	133	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	ND	93.0	133	ug/kg	4.0					
Naphthalene	U	ND	26.6	133	ug/kg	4.0					
Phenanthrene	U	ND	26.6	133	ug/kg	4.0					
Pyrene	U	ND	26.6	133	ug/kg	4.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	44.2*	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	0.00*	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	63.2	(45.5 - 104.)

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GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact. Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date. May 28, 1999

Sample ID : 99SPORT0196-05

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
I 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Elise Hanson at 843-556-8171.

E Hanson

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GENERAL ENGINEERING LABORATORIES
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Laboratory Certifications

STATE	GEL	ERT
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID	: 99SPORT0196-06
Lab ID	: 9905780-06
Matrix	: Soil
Date Collected	: 05/21/99
Date Received	: 05/21/99
Priority	: Routine
Collector	: Client

rameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
xtractable Organics											
Polynuclear Aromatic Hydrocarbons - 18 items											
Acenaphthene	U	ND	6.64	33.3	ug/kg	1.0	JPA	05/26/99	1502	149825	1
Acenaphthylene	U	ND	6.64	33.3	ug/kg	1.0					
Anthracene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(a)anthracene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(a)pyrene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(b)fluoranthene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(ghi)perylene	U	ND	6.64	33.3	ug/kg	1.0					
Benzo(k)fluoranthene	U	ND	6.64	33.3	ug/kg	1.0					
Chrysene	U	ND	6.64	33.3	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	ND	26.6	33.3	ug/kg	1.0					
Fluoranthene	U	ND	6.64	33.3	ug/kg	1.0					
Fluorene	U	ND	6.64	33.3	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	ND	23.2	33.3	ug/kg	1.0					
Naphthalene	U	ND	6.64	33.3	ug/kg	1.0					
Phenanthrene	U	ND	6.64	33.3	ug/kg	1.0					
Pyrene	U	ND	6.64	33.3	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/24/99 0900 149825 2

rogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610-5972	57.5	(44.7 - 110.)
Nitrobenzene-d5	M610-5972	54.4	(42.4 - 107.)
p-Terphenyl-d14	M610-5972	77.5	(45.5 - 104.)

GENERAL ENGINEERING LABORATORIES, INC.

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
NJ	79002	79002
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: May 28, 1999

Sample ID : 99SPORT0196-06

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8270
2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Elise Hanson at 843-556-8171.

Reviewed By

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CHAIN OF CUSTODY RECORD

Client Name/Facility Name: SPORTENVDET CHASN

Collected by/Company: SPORTENVDET CHASN

SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	PAH		Remarks
99SPORTOA96-01	5/21/99	1030		X		X	1																X		AOC 681
99SPORTOA96-02	5/21/99	1035		X		X	1																X		AOC 681
99SPORTOA96-03	5/21/99	1040		X		X	1																X		AOC 681
99SPORTOA96-04	5/21/99	1045		X		X	1																X		AOC 681
99SPORTOA96-05	5/21/99	1055		X		X	1																X		AOC 681
99SPORTOA96-06	5/21/99	1105		X		X	1																X		AOC 681

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5/21/99	1240	W.R. Hiers, Jr.				
W.R. Hiers, Jr.	5/21/99	1536	[signature]	Date: 5/21/99	Time: 1536	Remarks:	

White = sample collector Yellow = file Pink = with report

DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR, USN
PORTSMOUTH, VIRGINIA, ENVIRONMENTAL DETACHMENT CHARLESTON
1899 NORTH HOBSON AVENUE, BUILDING 30
NORTH CHARLESTON, SOUTH CAROLINA 29405-2106

Ser: 430 IN REPLY REFER TO:
JUN 17 1999

MEMORANDUM

From: Director, Supervisor of Shipbuilding, Conversion and Repair, USN, Portsmouth, Va. Environmental Detachment Charleston, SC (SPROTENVDETCHASN)
To: Southern Division Naval Facilities Engineering Command
Reece Batten (Code 1876)

Subj: Area of Concern (AOC) 681 sampling results

Ref: (a) Authorization for Project C99013, dated 28 April 1999

1) The Environmental Detachment Charleston (DET) was tasked to perform investigative sampling per reference (a) at AOC 681. Previous sampling performed on this site by EnSafe showed significantly higher concentrations of semi-volatile organic compounds (SVOCs), specifically benzo(a)pyrene equivalents (BEQs) in the first interval sample location SB009 next to Building 1050. Additional sampling was required to determine if BEQ contamination extended out from sample SB009 in the south, southeast, east, and northeast direction.

2) The DET collected six samples that covered the area of interest (See sample location map). Asphalt and concrete coring was required to perform the sampling. Two sample locations (Samples 1 & 2) located outside Building 1050 were collected in the first interval after removing approximately 3 inches of asphalt and six inches of Run of Crusher. The four remaining first interval samples (3, 4, 5 & 6) were collected inside of Building 1050 by coring through approximately nine inches of concrete. Table 1 shows the sample results.

3) Inquires should be addressed to Jed Heames, Environmental Detachment, Charleston at (843) 743-6303 ext. 123.

Respectfully,

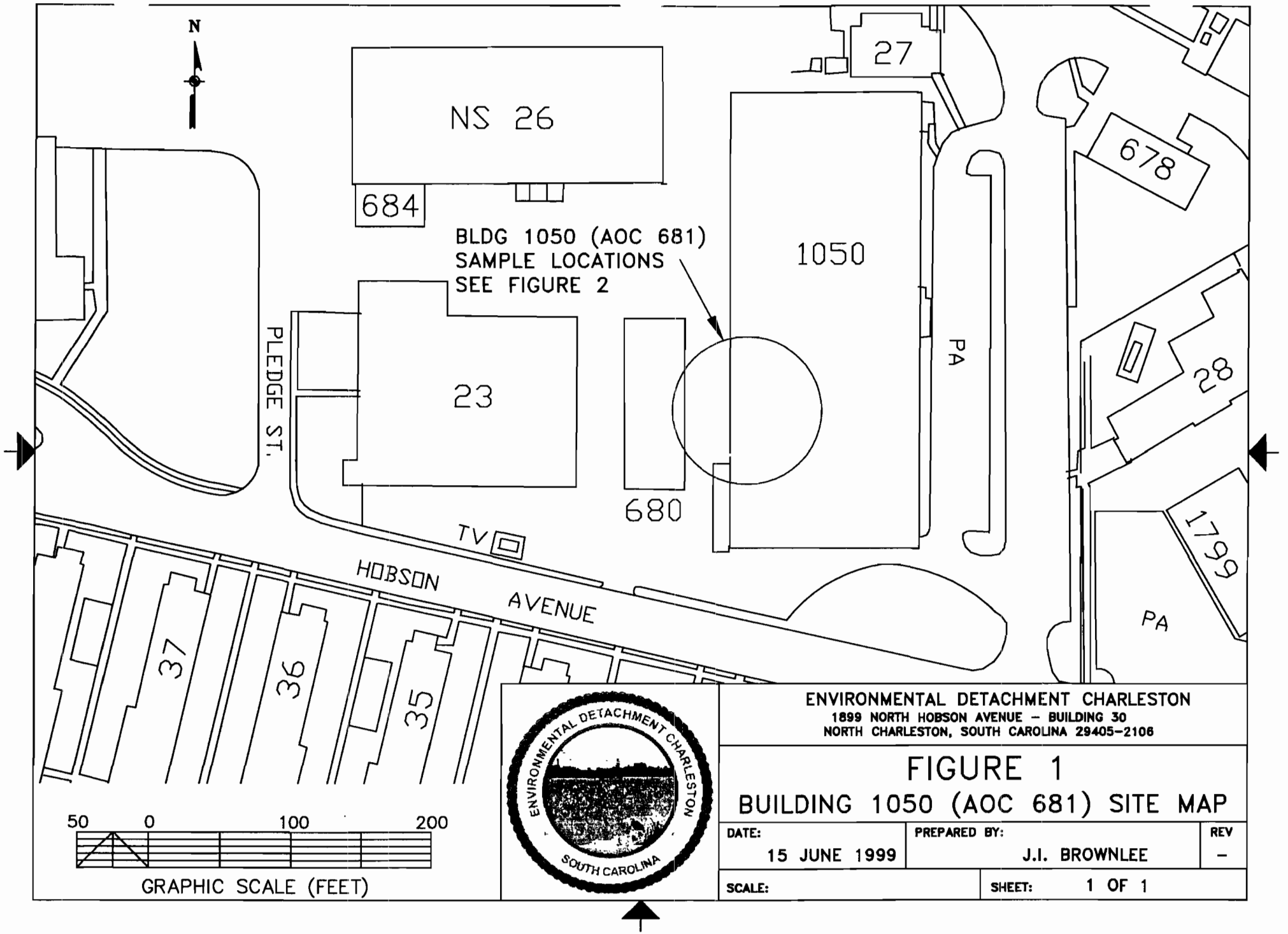
J. A. Heames

Copy:
EnSafe – Todd Haverkost

The below table outlines the sample results in units of parts per billion (ppb).
ND – non detects
(j) – j qualifier

Table 1

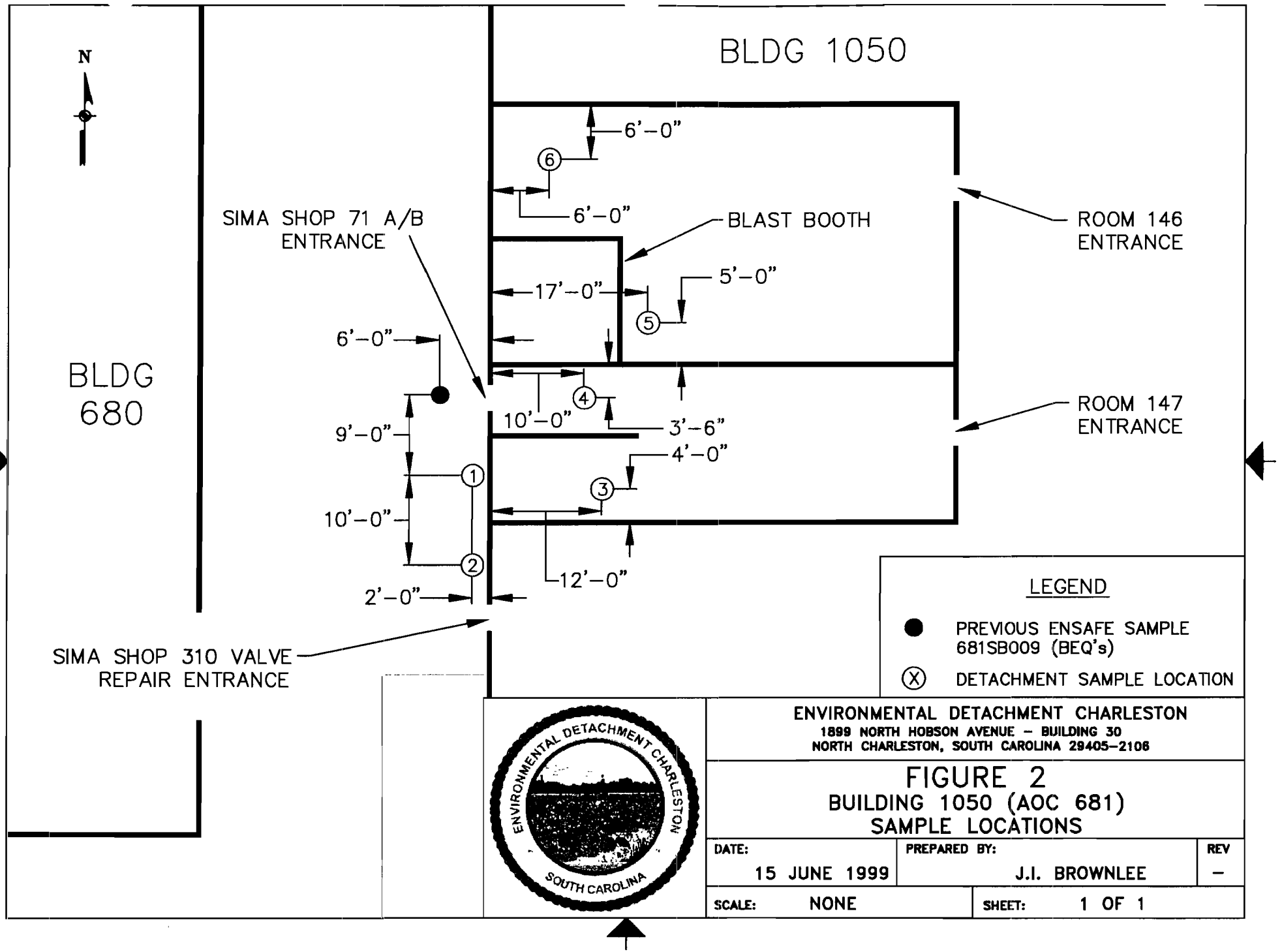
SVOC	Sample #1 ppb	Sample #2 ppb	Sample #3 ppb	Sample #4 ppb	Sample #5 ppb	Sample #6 ppb
Acenaphthene	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	57.2	ND	81.6 (j)	ND	ND	ND
Benzo(a)pyrene	57.0	17.5 (j)	78.1 (j)	ND	ND	ND
Benzo(b)fluoranthene	142	20.0 (j)	74.7 (j)	ND	ND	ND
Benzo(ghi)perylene	37.2	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	17.0 (j)	99.2 (j)	ND	ND	ND
Chrysene	74.5	17.4 (j)	152	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND
Fluoranthene	116	19.9 (j)	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND
Indeno(123-c,d)pyrene	26.5 (j)	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND
Phenanthrene	27.5 (j)	ND	ND	ND	ND	ND
Pyrene	116	25.6 (j)	ND	ND	ND	ND



ENVIRONMENTAL DETACHMENT CHARLESTON
1899 NORTH HOBSON AVENUE – BUILDING 30
NORTH CHARLESTON, SOUTH CAROLINA 29405–2106

FIGURE 1
BUILDING 1050 (AOC 681) SITE MAP

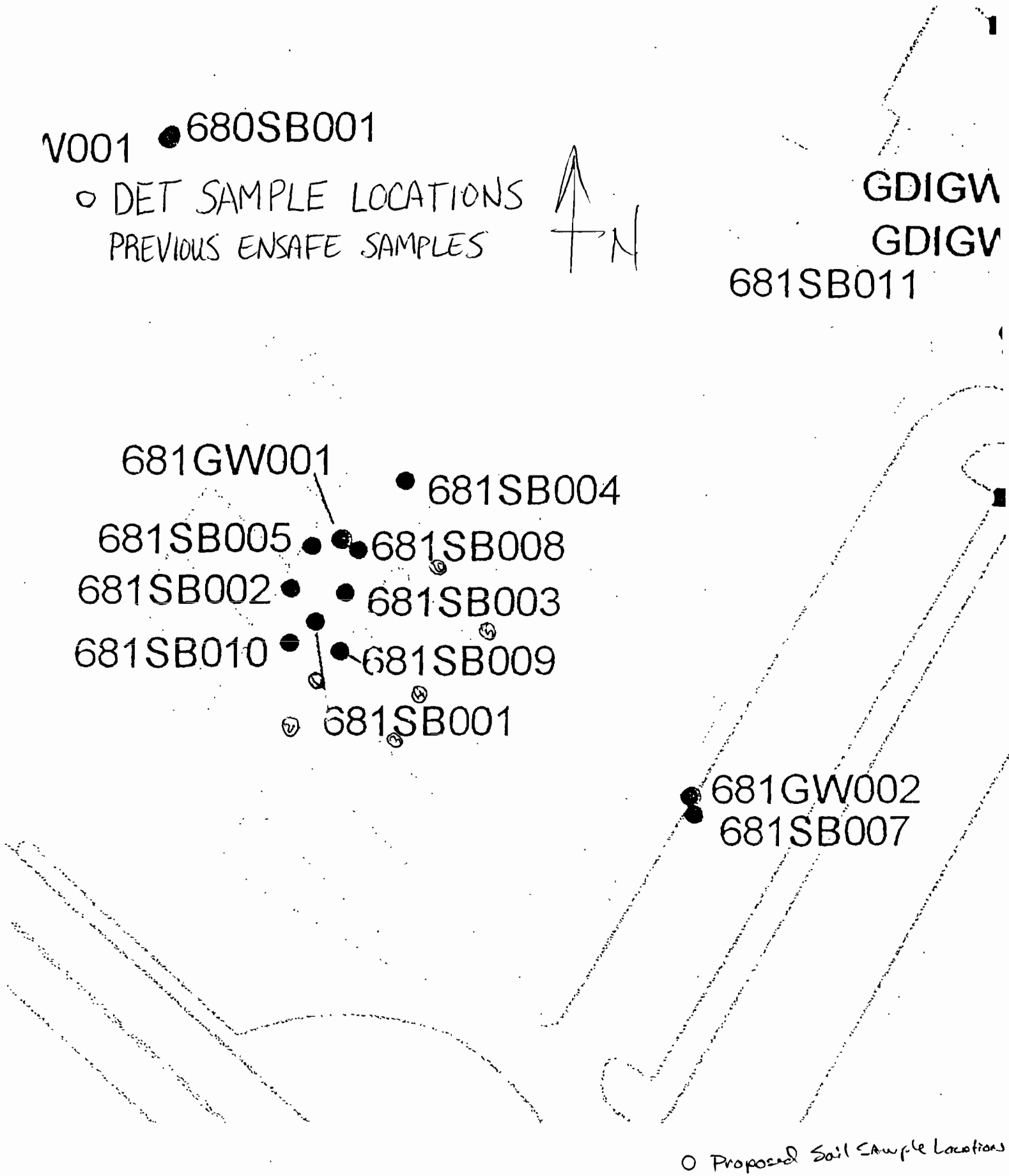
DATE:	PREPARED BY:	REV
15 JUNE 1999	J.I. BROWNLEE	–
SCALE:	SHEET: 1 OF 1	



ENVIRONMENTAL DETACHMENT CHARLESTON
1899 NORTH HOBSON AVENUE – BUILDING 30
NORTH CHARLESTON, SOUTH CAROLINA 29405-2106

FIGURE 2
BUILDING 1050 (AOC 681) SAMPLE LOCATIONS

DATE:	PREPARED BY:	REV
15 JUNE 1999	J.I. BROWNLEE	–
SCALE: NONE	SHEET: 1 OF 1	



LEGEND

SOUTHERN DIVISION