N00204.AR.002348
NAS PENSACOLA
5090.3a

AQUIFER CHARACTERISTICS SAMPLING RESULTS SITE 15 NAS PENSACOLA FL
1/5/1998
ABB

ABB

5 January 1998 Doc. No. 07527-118

Mr. Eric Nuzie
Florida Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32301

Subject: **NADEP Pensacola Site 15 Status Letter**
Results of Aquifer Characteristics Sampling at Site 15
Naval Aviation Depot, Pensacola, Florida
Navy CLEAN Contract # N62467-89-D-0317/008

Dear Mr. Nuzie,

This letter summarizes the results of groundwater sampling activities performed at Site 15, Former Building 2662, Naval Aviation Depot (NADEP), Pensacola (Attachment A, Figure 1). The groundwater sampling activities were discussed during phone calls with John Mitchell of FDEP, Andy Hutto of SOUTHDIV, Pamela Wagner Jackson of ABB-ES, and myself on November 3, 1997. These sampling activities were performed both in response to previous comments concerning the CAR Addendums and for the specific purpose of determining if the surficial aquifer present at Site 15 could be classified as G-III.

The groundwater sampling was performed on November 24, 1997. Groundwater samples were collected from three site monitoring wells: MW-2, MW-3, and MW-6 (Attachment A, Figure 1). Prior to groundwater sampling, each monitoring well was purged using quiescent sampling techniques. Monitoring wells were purged until five volumes of groundwater had been removed. Groundwater samples were collected with a pre-cleaned, disposable Teflon bailer and placed into the appropriate container. Each groundwater sample container was then labeled and packed on ice for immediate delivery to the lab, American Environmental Network in Pensacola, FL. Each groundwater sample was analyzed for pH, salinity, and total dissolved solids (TDS). Analytical results are summarized in Table 1. Laboratory analytical data sheets are included in Attachment B.

Table 1
Laboratory Analytical Results, November 1997

Parameter	MW-2 (15G00200)	MW-3 (15G00300)	MW-6 (15G00600)
pH	9.9	9.5	10.1
Chloride	20 mg/L	26 mg/L	30 mg/L
Salinity	<3.64 g/L	<3.64 g/L	<3.64 g/L
Total Dissolved Solids	360 mg/L	440 mg/L	350 mg/L

Notes: mg/L = milligram per liter
g/L = gram per liter

A class G-III aquifer is defined in Rule 62-520.410 (Florida Administrative Code [FAC]) as having a TDS content of 10,000 mg/L or greater. The surficial aquifer present at Site 15 does not meet this definition. Because Site 15 groundwater cannot be defined as low yield or poor quality, the groundwater cleanup target levels (GCTL) listed in Table V of Rule 62-770 (FAC) must be met.

Past groundwater sampling has revealed lead concentrations exceeding the GCTL of 15 micrograms per liter in groundwater samples collected from monitoring wells MW-2, MW-3, and MW-6 (see the September 19, 1997, Contamination Assessment Report Addendum). Based on the classification of Site 15 groundwater, past groundwater analytical data, and FDEP comments (November 3, 1997) it appears that the best course of action for Site 15 would be monitoring of the groundwater. Specifically, site monitoring wells MW-2, MW-3, MW-6, and the downgradient well MW-1 should continue to be sampled for lead.

If you require additional information, please do not hesitate to call us at (904) 656-1293.

Very truly yours,

ABB ENVIRONMENTAL SERVICES, INC.

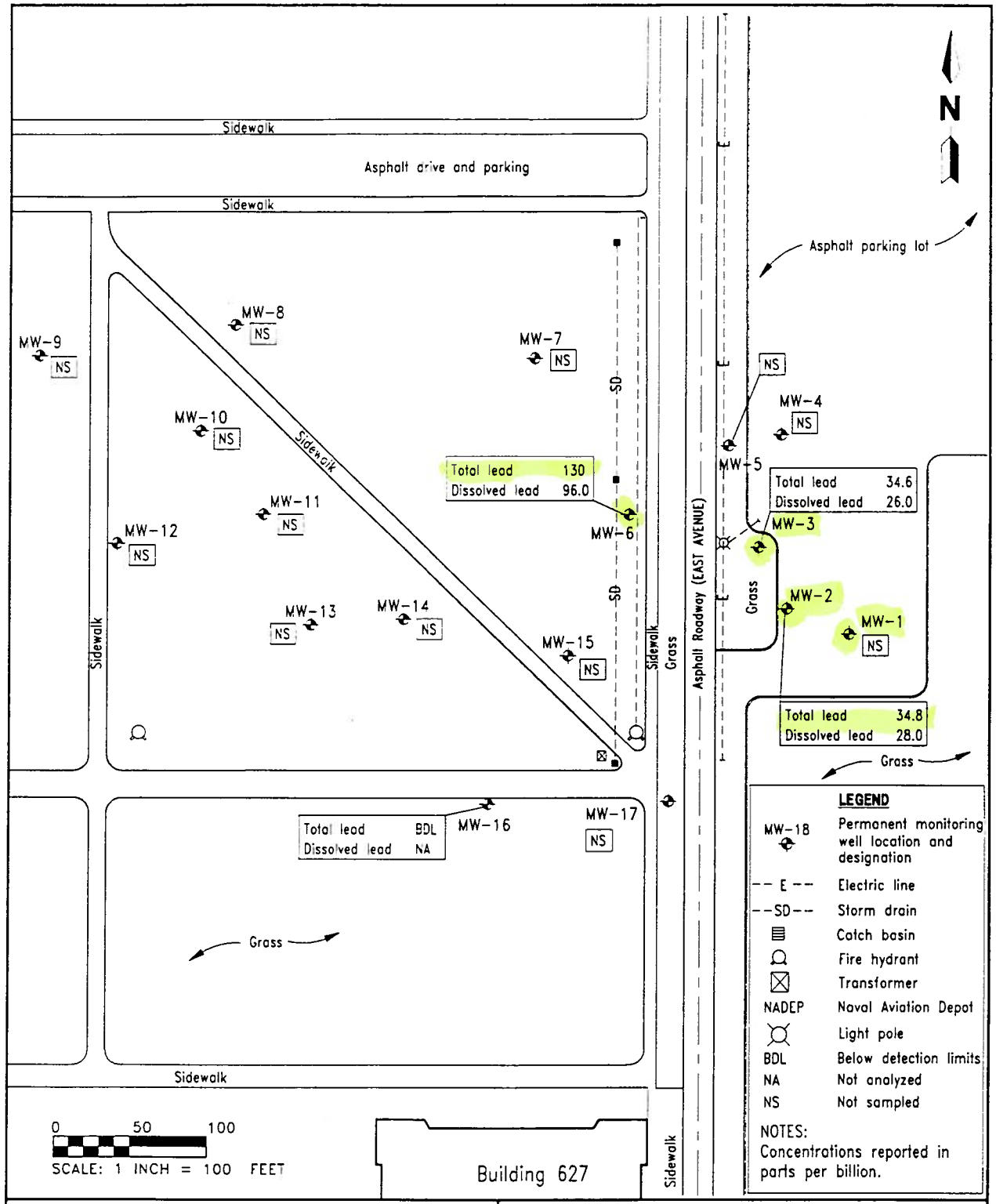
Kathy Hodak

Kathy Hodak
Project Manager

Pamela J. Wagner, P.G.
Senior Geologist

cc: John Mitchell, FDEP
Byas Glover, Southdiv
Dean Spencer, NADEP
File

ATTACHMENT A



MONITORING WELL LOCATION MAP AND GROUNDWATER SAMPLING ANALYTICAL RESULTS

H:\PEN\CAR2662W.DWG, NAB-PDP 09/17/97 15:38:24, AutoCAD R12

SITE 15, FORMER BUILDING 2662W

NADEP PENSACOLA
PENSACOLA, FLORIDA

ATTACHMENT B

Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

November 3, 1997

Mr. Andy Hutto
Code 1844
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Contamination Assessment Report Addendum, Additional Groundwater Sampling at Site 15, Former Building 2662W, Naval Air Station Pensacola
Pensacola, Florida
FDEP #179202973

Dear Mr. Hutto:

I have completed the technical review of the Contamination Assessment Report (CAR) Addendum and No Further Action Proposal (NFAP) dated September 19, 1997 (received September 19, 1997), submitted for this site 15. Based upon our telephone conference of November 3, 1997, a Site Assessment Report (SAR) Addendum should be submitted to either recommend monitoring of groundwater with adequate delineation of the lead exceeding 15 $\mu g/L$ in the most downgradient wells, or evaluate the groundwater parameters to determine if the aquifer is of low yield/poor quality. If the aquifer meets the low yield/poor quality requirements, then a no further action proposal may be submitted.

If I can be of any further assistance with this matter, please contact me at (904) 921-9989.

Sincerely,

John W. Mitchell
Remedial Project Manager

cc: Dean Spencer, NAS Pensacola
Kathy Hodak, ABB Environmental, Tallahassee
Tom Moody, FDEP Northwest District

TJB TB JJC JJC ESN ESN

American Environmental Network, Inc.
11 East Olive Road • Pensacola, FL 32514 • (850) 474-1001

SIGNATURE PAGE

Reviewed by: Linda Lofton
AEN Project Manager

Client:	ABB ENVIRONMENTAL TALLAHASSEE, FLORIDA
Project Name:	NADEP PENSACOLA
Project Number:	2502.02
Project Location:	SITE 15, 2662W, NAS PENSACOLA, FL
Accession Number:	711507
Project Manager:	KATHY HODAK
Sampled By:	P. JACKSON

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Analysis Report

Analysis: SALINITY BY CALCULATION

Accession:	711507
Client:	ABB ENVIRONMENTAL
Project Number:	2502.02
Project Name:	NADEP PENSACOLA
Project Location:	SITE 15, 2662W, NAS PENSACOLA, FL
Department:	WET CHEM

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: SALINITY BY CALCULATION
QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	Q:
Client ID: 15G00200			Lab ID: 001		
CHLORIDE (325.3)	MG/L	20	1	CIW114	
SALINITY	G/L	ND	3.64	CIW114	
Comments:					
Client ID: 15G00300			Lab ID: 002		
CHLORIDE (325.3)	MG/L	26	1	CIW114	
SALINITY	G/L	ND	3.64	CIW114	
Comments:					
Client ID: 15G00600			Lab ID: 003		
CHLORIDE (325.3)	MG/L	30	1	CIW114	
SALINITY	G/L	ND	3.64	CIW114	
Comments:					

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: SALINITY BY CALCULATION

Client ID:	Lab ID:	Matrix:	Date/Time Sampled:	Date Received:
15G00200	001	WATER	24-NOV-97 1307	24-NOV-97
15G00300	002	WATER	24-NOV-97 1303	24-NOV-97
15G00600	003	WATER	24-NOV-97 1342	24-NOV-97

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Method Report Summary"

Accession Number: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: SALINITY BY CALCULATION

Client Sample Id:	Parameter:	Unit:	Result:
15G00200	CHLORIDE (325.3)	MG/L	20
15G00300	CHLORIDE (325.3)	MG/L	26
15G00600	CHLORIDE (325.3)	MG/L	30

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Analysis Report

Analysis: Group of Single Wetchem

Accession:	711507
Client:	ABB ENVIRONMENTAL
Project Number:	2502.02
Project Name:	NADEP PENSACOLA
Project Location:	SITE 15, 2662W, NAS PENSACOLA, FL
Department:	WET CHEM

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: Group of Single Wetchem
QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	Q:
Client ID: 15G00200			Lab ID: 001		
PH (150.1)	UNITS	9.9	NA	PHW245	
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	360	5	TDW068	
Comments:					
Client ID: 15G00300			Lab ID: 002		
PH (150.1)	UNITS	9.5	NA	PHW245	
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	440	5	TDW068	
Comments:					
Client ID: 15G00600			Lab ID: 003		
PH (150.1)	UNITS	10.1	NA	PHW245	
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	350	5	TDW068	
Comments:					

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - MULTIPLE"

Accession: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: Group of Single Wetchem

Client ID:	Lab ID:	Matrix:	Date/Time Sampled:	Date Received:
15G00200	001	WATER	24-NOV-97 1307	24-NOV-97
15G00300	002	WATER	24-NOV-97 1303	24-NOV-97
15G00600	003	WATER	24-NOV-97 1342	24-NOV-97

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Method Report Summary"

Accession Number: 711507
Client: ABB ENVIRONMENTAL
Project Number: 2502.02
Project Name: NADEP PENSACOLA
Project Location: SITE 15, 2662W, NAS PENSACOLA, FL
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
15G00200	PH (150.1)	UNITS	9.9
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	360
15G00300	PH (150.1)	UNITS	9.5
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	440
15G00600	PH (150.1)	UNITS	10.1
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	350

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Rd Pensacola, FL 32514 (850) 474-1001

Data Qualifiers for Final Report

AEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and **All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters**

J4	(For positive results) Temperature limits exceeded (≤2°C or ≥ 6°C)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded (≤2°C or ≥ 6°C)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit.

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit
MDL = Laboratory Method Detection Limit
RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)
CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)
CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Quality Control Report

Analysis: SALINITY BY CALCULATION

Accession:	711507
Client:	ABB ENVIRONMENTAL
Project Number:	2502.02
Project Name:	NADEP PENSACOLA
Project Location:	SITE 15, 2662W, NAS PENSACOLA, FL
Department:	WET CHEM

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"WetChem Quality Control Report"

Parameter:	CHLORIDE
Batch Id:	CIW114
Blank Result:	<1
Anal. Method:	325.3
Prep. Method:	N/A
Analysis Date:	25-NOV-97
Prep. Date:	25-NOV-97

Sample Duplication

Sample Dup:	711519-1
Rept Limit:	<1
Sample Result:	228.6
Dup Result:	228.7
Sample RPD:	0
Max RPD:	6
Dry Weight%	N/A

Matrix Spike

Sample Spiked:	711519-1
Rept Limit:	<1
Sample Result:	228.6
Spiked Result:	281.7
Spike Added:	55.0
% Recovery:	97
% Rec Limits:	88-113
Dry Weight%	N/A

ICV

ICV Result:	97.3
True Result:	100
% Recovery:	97
% Rec Limits:	90-110

LCS

LCS Result:	
True Result:	
% Recovery:	
% Rec Limits:	

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Quality Control Comments"

Batch Id:	Comments:
CIW114	711507-1,2,3; 711550-2 WERE ADDED TO BATCH ON 26-NOV-97

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DISTILLATION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.
# = ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE (DILUTION PRIOR DIGESTION AND/OR ANALYSIS).
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX (DILUTION PRIOR TO DIGESTION AND/OR ANALYSIS).
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER, THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL". SAMPLE IS NON-HOMOGENEOUS.
(*) = REPORTING LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
(CA) = SEE CORRECTIVE ACTIONS FORM.
**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
EPA 600/4-79-020, Revised March 1983.
STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
NIOSH Manual of Analytical Methods, 4th Edition.
ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES, EPA600/R-93/100, AUGUST 1993
METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBILOGICAL PROPERTIES, 2ND EDITION.
AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG	RB = REBECCA BROWN	JL = JANET LECLEAR
MM = MIKE MCKENZIE	ED = ESTHER DANTIN	CR = CYNTHIA ROBERTS
PLD = PAULA L. DOUGHTY	LV = LASSANDRA VON APPEN	JTZ = JONATHAN T. ZIENTARSKI
RH = RICKY HAGENDORFER	MG = MARY GUTIERREZ	AB = AMY BRADLEY
NK = NIKKI KILBURN		

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Quality Control Report

Analysis: Group of Single Wetchem

Accession:	711507
Client:	ABB ENVIRONMENTAL
Project Number:	2502.02
Project Name:	NADEP PENSACOLA
Project Location:	SITE 15, 2662W, NAS PENSACOLA, FL
Department:	WET CHEM

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"WetChem Quality Control Report"

Parameter:	PH	TDS
Batch Id:	PHW245	TDW068
Blank Result:	N/A	<5
Anal. Method:	150.1	160.1
Prep. Method:	N/A	N/A
Analysis Date:	24-NOV-97	25-NOV-97
Prep. Date:	24-NOV-97	24-NOV-97

Sample Duplication

Sample Dup:	711502-1	711478-1
Rept Limit:	N/A	<5
Sample Result:	8.40	560
Dup Result:	8.39	600
Sample RPD:	0.01	7
Max RPD:	0.12	15
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	N/A	N/A
Rept Limit:	N/A	N/A
Sample Result:		
Spiked Result:		
Spike Added:		
% Recovery:		
% Rec Limits:		
Dry Weight%		

ICV

ICV Result:	10.05	
True Result:	10.00	
% Recovery:	101	
% Rec Limits:	90-110	

LCS

LCS Result:	7.07	284
True Result:	6.87	293
% Recovery:	103	97
% Rec Limits:	96-104	77-122

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Quality Control Comments"

Batch Id:	Comments:
TDW068	711454-1; 711480-1; 711507-1,2,3; 711519-1 WERE ADDED TO
TDW068	BATCH ON 25-NOV-97
TDW068	711581-1 WAS ADDED TO BATCH ON 26-NOV-97

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
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F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
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NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL". SAMPLE IS NON-HOMOGENEOUS.
(*) = REPORTING LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
(CA) = SEE CORRECTIVE ACTIONS FORM.
**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
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STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
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METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES, EPA600/R-93/100, AUGUST 1993
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AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG	RB = REBECCA BROWN	JL = JANET LECLEAR
MM = MIKE MCKENZIE	ED = ESTHER DANTIN	CR = CYNTHIA ROBERTS
PLD = PAULA L. DOUGHTY	LV = LASSANDRA VON APPEN	JTZ = JONATHAN T. ZIENTARSKI
RH = RICKY HAGENDORFER	MG = MARY GUTIERREZ	AB = AMY BRADLEY
NK = NIKKI KILBURN		

American Environmental Network of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 711 507 Date Received: 24- NOV-97

1. Was there a Chain of Custody? (Yes) No♣
2. Was Chain of Custody properly filled out and relinquished? (Yes) No♣
3. Were samples received cold? (Criteria: 1° - 4°C: AEN-SOP 1055) (Yes) No♣ N/A
4. Were all samples properly labeled and identified? (Yes) No♣
5. Did samples require splitting? Yes♦ (No)
   Req By: PM Client Other♦
6. Were samples received in proper containers for analysis requested? (Yes) No♣
7. Were all sample containers received intact? (Yes) No♣
8. Were samples checked for preservative? *(Check pH of all H_2O requiring preservative except VOA vials that require zero headspace)*+ (Yes) No♣ N/A
9. Is there sufficient volume for analysis requested? (Yes) No♣
10. Were samples received within Holding Time? (REFER TO AEN-SOP 1040) (Yes) No♣
11. Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section. Yes♣ No (N/A)
12. If sent, were matrix spike bottles returned? Yes No♣ (N/A)
13. Was Project Manager notified of problems? (initials:_____) Yes No♣ (N/A)

Airbill Number(s): N/A

Shipped By: HD

Cooler Number(s): N/S

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 2°c - CCK6

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: PHC **Date:** 11/24/97 **Logged By:** PHC **Date:** 11/24/97

♣ *Note all Out-of-Control and/or questionable events on Comment Section of this form.*

♦ *Note who requested the splitting of samples on the Comment Section of this form.*

\+ *All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (AEN-SOP 938, section 2.2.9).*

* *According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).*

ABB ENVIRONMENTAL SERVICES, INC.

SDG # COC #

Task Order #: 8
Job #: 2502.02
Office Ph #: 8506561293
Field Office Ph #: —

PROJECT NAME: NADEP PENSACOLA
SITE NAME: Site 15, 2662W
PROJECT MANAGER: K. HODAK
COPY TO: n/a
REQ. COMPLETION DATE: STANDARD

A 0307

LAB BATCH NO: 711507

LAB TEST CODES

Comments	SAMPLE IDENTIFIER	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	TICS (Y/N)	TOTAL CONTAINERS	1 Total Dissolved Solids	2 Salinity	3 pH	4	5	6	7	8	LAB CODE PARAMETER METHOD PRESERVATIVE VOLUME	Comments
1.	15G00200	11-24	1307	N		✓	N	1	✓	✓	✓							
2.	15G00300	11-24	1303	N		✓	N	1	✓	✓	✓							
3.	15G00600	11-24	1342	N		✓	N	1	✓	✓	✓							
TOTAL PARAMETERS PER COLUMN																		

NEESA QC LEVEL

NOTES:

LAB COMMENTS:

SAMPLED BY:	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
[signature]							
RELINQUISHED BY: [signature] DATE 11-24-97 TIME 1430	RECEIVED BY: [signature] 11-24-97 1430	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
RELINQUISHED BY: DATE TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME

SHIPPING AIRBILL NUMBER:

SHIPPED VIA:

WHITE/YELLOW COPY – LABORATORY PINK COPY – ABB – ES

PAGE ___ OF ___