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NAS PENSACOLA  
5090.3a

OCTOBER 1997 MONTHLY OPERATION AND MAINTENANCE REPORT ON THE  
DOMESTIC WASTEWATER TREATMENT PLANT GROUNDWATER REMEDIATION  
PROJECT FOR NAS PENSACOLA FL  
11/7/1997  
HRP SPECTRUM INC

# HRP/Spectrum

November 7, 1997

Commanding Officer  
Naval Public Works Center, Code 911.3  
310 John Tower Road, Building 3819  
Naval Air Station  
Pensacola, Florida 32508-6500

Attn: Mr. Tom Kelley

**RE: OCTOBER 1997 MONTHLY OPERATION AND MAINTENANCE REPORT  
ON THE DOMESTIC WASTEWATER TREATMENT PLANT (DWTP)  
GROUNDWATER REMEDIATION NAVAL AIR STATION (NAS)  
PENSACOLA, FLORIDA, JOB #NAV0303.FE**

Dear Sir:

**HRP/Spectrum** is pleased to submit the October 1997 Monthly and Quarterly Report for the operation and maintenance activities conducted on the DWTP Ground Water Treatment System for the above referenced project. The attached Table 1 contains a summary of the recovery well pumping data for the month of October 1997 and Attachment #1 contains a time series graph of the calculated biweekly pump flow rates to facilitate evaluation of the performance and maintenance requirements of the recovery wells and pumps. In addition, two (2) copies of the report have been sent to Mr. Maxie Keisler with Southern Division, Naval Facilities Engineering command and two (2) copies to Commander, Naval Air Station, Environmental Division, Attention: Mr. Bill Taylor. **HRP/Spectrum** has the following comments for the month of October 1997 and overall for the Fourth Quarter of 1997:

## RECOVERY WELL SYSTEM OPERATION STATUS

### RW-1, 2 AND 3

- On October 6, 1997, Pump B for RW-1, 2, and 3 was in operation. Upon departure, RW-1, 2, and 3 were operating normally. No leaks were detected on either the recovery wells or pumps.
- On October 27, 1997, Pump B for RW-1, 2, and 3 was shut off for rehabilitation of RW 4, 5A, and 6 and the cleaning of the Air Stripper. Upon departure, RW-1, 2, and 3 were operating, producing normal pressure and flow. No leaks were detected on either the recovery walls or pumps.

### **RW-4 AND 6**

- On October 6, 1997, Pump A for RW-4 and 6 was in operation. Upon departure, RW-4 and 6 were operating, producing normal flow and pressure. No leaks were detected on either the recovery wells or pumps.
- On October 27, 1997, Pump A for RW-4 and 6 was shut down to perform RW rehabilitation on RW- 4, 5A, and 6 and the cleaning of the Air Stripper. Recovery Wells 4 and 6 were cleaned according to the steps listed on the enclosed "Rehabilitation Procedures for Recovery Systems RW-4, 6 and RW-5A". Recovery Wells 4 & 6 were restarted and upon departure, no leaks were detected on either the recovery wells or pumps.

### **RW-5A**

- On October 6, 1997, both pumps for RW-5A were replaced and Pump B restarted. Upon departure, RW-5A was operating, producing normal flow and pressure. No leaks were detected on either the pump or well.
- Upon arrival to the site on October 27, 1997, Pump B for RW-5A was switched off for RW rehabilitation for RW-4; 5A, and 6 and the cleaning of the Air Stripper. Recovery Well 5A was cleaned according to the steps listed on the enclosed "Rehabilitation Procedures for Recovery Systems RW-4, 6, and RW-5A". Recovery well 5A was restarted and upon departure no leaks were detected on either the recovery well or pumps.

### **RW-7**

- On October 6, 1997, Pump A for RW-7 was operating with normal pressure and flow. Upon departure, no leaks were detected at the recovery well or pump.
- On October 27, 1997, RW-7 Pump was shut off for rehabilitation of RW-4, 5, and 6 and the cleaning of the Air Stripper. Upon departure, RW-7 was restarted and was operating normally. No leaks were detected on either of the recovery well or pumps.

### **PRE-TREATMENT AIR STRIPPER**

- On October 27, 1997, the Air Stripper was taken off-line to perform RW rehabilitation on Wells 4, 5A, and 6, as well as cleaning of the Air Stripper. The Air Stripper was cleaned on October 28, 1997 using the steps listed on the enclosed "Cleaning Procedures for the Air Stripper Unit". The Air Stripper was brought back on-line October 29, 1997. Prior to cleaning the Air Stripper, samples were taken from the inlet and outlet sample points. Upon departure, no leaks were detected.

## LABORATORY RESULTS - AIR STRIPPER ANALYTICAL RESULTS

During the October sampling event, samples were collected from the influent and effluent ports of the Air Stripper. A copy of the laboratory results for the month of October is provided in Attachment #3 to this report. The Air Stripper was found to be working effectively as the outlet sample yielded nondetectable levels of contaminants. Specific chemicals present in the inlet samples are provided below:

AIR STRIPPER ANALYTICAL RESULTS NAS-PENSACOLA October 1997		
CHEMICAL	INLET	OUTLET
Chlorobenzene (ug/l)	160	N/D
1,2-Dichlorobenzene (ug/l)	120	N/D
1,3-Dichlorobenzene (ug/l)	53	N/D
1,4-Dichlorobenzene (ug/l)	92	N/D
1,1 Dichloroethane (ug/l)	7	N/D
Toluene (ug/l)	2	N/D
Benzene (ug/l)	6	N/D

\*N/D-Not detected.

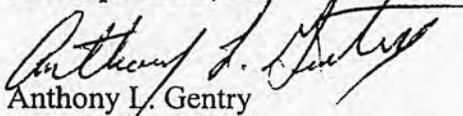
## GROUNDWATER LEVELS

- On October 29, 1997, the quarterly groundwater levels in all designated monitoring wells were measured. The results from these measurements are provided in Attachment #4. An electronic meter measuring device was used to measure the water level in each well.

If you have questions regarding this report or other matters pertaining to this project, please contact Tad Goetcheus or myself at (864) 298-0231.

Sincerely,

HRP/Spectrum, Inc.



Anthony L. Gentry  
Project Engineer

Enclosure

cc: Maxis Keisler-NAVFACENGCOM-Code 18213 (2 cys)  
Bill Taylor-NAS Pensacola-Code 00500 (2 cys)

HRP/Spectrum

**TABLE 1  
NAS PENSACOLA  
RECOVERY WELL PUMPING DATA**

PUMP STATION	DATE INSPECTED	TIME (MILITARY)	FLOW METER READING (GALLONS)	DISCHARGE PRESSURE (psig)	SUCTION VACUUM ("Hg)	INSTANTANEOUS PUMPING FLOW RATE (GPM)	CALCULATED BI-WEEKLY FLOW RATE (GPM)	PUMP IN USE (A or B)	ELAPSED TIME (HOURS)	TOTAL BI-WEEKLY FLOW (GALLONS)	WATER LEVEL BELOW TOP OF CASING (Ft) (RESPECTIVELY)
RW 1,2 & 3	10/6/97	15:40	13,075,950	6	17	6.9	7.06	B	456	193,180	N/A, N/A, 4.91
RW 4&6	10/6/97	15:50	4,367,500	4	13	4.3	4.32	A	456	118,120	2.70, 5.45
RW 5A	10/6/97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RW 7	10/6/97	16:02	6,561,770	6	22	2.3	2.49	A	456	68,230	23.00
RW 1,2 & 3	10/27/97	15:00	13,286,360	19	16	7.1	6.96	B	504	210,410	N/A, N/A, 4.61
RW 4&6	10/27/97	15:15	4,494,960	5	13	4.6	4.21	A	504	127,460	2.42, 5.01
RW 5A	10/27/97	15:22	7,290,370	44	13	9.2	9.12	B	504	275,934	4.15
RW 7	10/27/97	15:25	6,632,750	10	22	2.4	2.35	A	504	70,980	23.14

NOTES:

RW 1,2 3 - Recovery station for recovery wells RW 1, RW 2, and RW 3.  
RW 4 6 - Recovery well for wells RW 4 and RW 6.

<b>INSPECTOR'S NAME</b>	ANTHONY L. GENTRY
<b>DATE</b>	10/6/97
<b>AMBIENT TEMPERATURE</b>	75
<b>WEATHER CONDITIONS</b>	SUNNY

<b>ITEM</b>	<b>INSPECTION CHECK</b>	<b>INSPECTION FREQUENCY</b>	<b>DATA/ COMMENTS</b>
INFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	12,221,660
	SAMPLE COLLECTION	MONTHLY	N/A
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	13.9" WATER
	CLEAN / CHECK TRAYS	BI-WEEKLY	CHECKED
BLOWER	PIPING CONNECTIONS	MONTHLY	OK
EFFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	N/A
	SAMPLE COLLECTION	MONTHLY	N/A
SYSTEM COMPONENTS	EXPOSED PIPING CONNECTIONS	MONTHLY	OK

**SYSTEM DESCRIPTION:**

**ACTIVITIES PREFORMED:**

<b>INSPECTOR'S NAME</b>	ANTHONY L. GENTRY
<b>DATE</b>	10/27/97
<b>AMBIENT TEMPERATURE</b>	65
<b>WEATHER CONDITIONS</b>	SUNNY

<b>ITEM</b>	<b>INSPECTION CHECK</b>	<b>INSPECTION FREQUENCY</b>	<b>DATA/ COMMENTS</b>
INFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	12,815,050
	SAMPLE COLLECTION	MONTHLY	YES
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	20" WATER
	CLEAN / CHECK TRAYS	BI-WEEKLY	CLEANED
BLOWER	PIPING CONNECTIONS	MONTHLY	OK
EFFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	N/A
	SAMPLE COLLECTION	MONTHLY	YES
SYSTEM COMPONENTS	EXPOSED PIPING CONNECTIONS	MONTHLY	OK

SYSTEM DESCRIPTION:

ACTIVITIES PREFORMED:

**Attachment #1**  
**Time Series Graphs**

**ATTACHMENT 1  
GROUNDWATER FLOW READINGS**

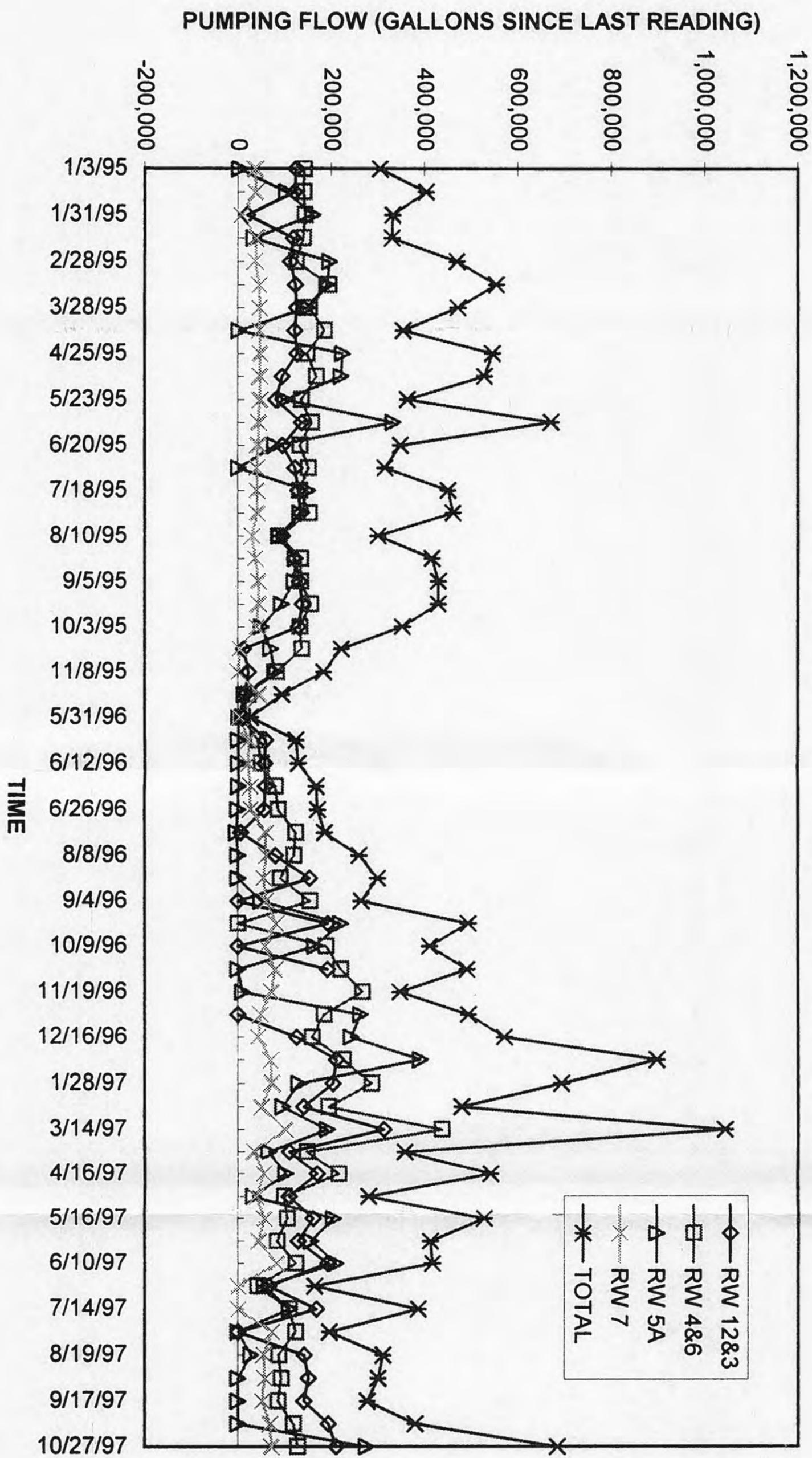
<b>DATE</b>	<b>RW 12&amp;3</b>	<b>RW 4&amp;6</b>	<b>RW 5A</b>	<b>RW 7</b>	<b>TOTAL</b>
1/3/95	124,006	141,588	2,629	36,814	305,037
1/17/95	121,155	141,168	103,562	37,668	403,553
1/31/95	20,528	143,045	160,533	7,741	331,847
2/14/95	118,171	139,268	33,440	39,172	330,051
2/28/95	112,145	124,628	195,889	37,053	469,715
3/14/95	123,141	194,925	190,593	45,607	554,266
3/28/95	125,571	152,781	147,296	46,200	471,848
4/11/95	121,568	184,651	2,015	45,893	354,127
4/25/95	126,623	147,850	224,282	47,128	545,883
5/9/95	94,185	167,684	220,647	46,206	528,722
5/23/95	80,867	135,931	100,613	46,105	363,516
6/6/95	136,660	157,320	332,514	44,446	670,940
6/20/95	94,863	132,718	78,605	42,396	348,582
7/4/95	122,115	150,562	1,577	40,923	315,177
7/18/95	128,917	131,634	148,926	41,204	450,681
8/1/95	134,318	152,703	132,928	41,322	461,271
8/10/95	94,856	88,538	87,222	29,445	300,061
8/22/95	122,086	134,403	123,028	37,154	416,671
9/5/95	131,628	133,923	120,794	43,401	429,746
9/19/95	137,823	155,558	93,131	43,165	429,677
10/3/95	129,645	132,519	50,273	40,028	352,465
10/25/95	12,024	136,159	69,476	3,701	221,360
11/8/95	22,566	82,653	78,603	0	183,822
11/21/95	15,068	20,731	13,571	45,233	94,603
5/31/96	9,722	10,033	2,577	4,760	27,092
6/6/96	59,060	42,822	439	22,325	124,646
6/12/96	56,952	49,788	460	21,626	128,826
6/19/96	59,513	80,468	1,555	26,465	168,001
6/26/96	56,512	86,242	0	28,001	170,755
7/11/96	6,264	123,432	-3,289	59,241	185,648
8/8/96	80,000	120,000	0	60,000	260,000
8/21/96	153,290	90,540	0	55,670	299,500
9/4/96	0	154,470	49,184	60,980	264,634
9/23/96	192,330	0	220,336	82,000	494,666
10/9/96	0	188,940	164,420	57,760	411,120
10/28/96	191,710	220,050	0	79,580	491,340
11/19/96		266,730	10,080	70,950	347,760
12/3/96	0	184,490	262,710	47,130	494,330
12/16/96	125,560	158,840	242,580	44,410	571,390
1/6/97	211,440	225,360	391,290	69,570	897,660
1/28/97	203,820	286,830	130,110	72,700	693,460
2/11/97	140,470	194,330	95,910	49,490	480,200
3/14/97	313,290	437,710	191,710	101,070	1,043,780
3/25/97	110,100	147,810	65,650	34,540	358,100
4/16/97	169,240	215,640	102,140	55,370	542,390
4/29/97	109,650	98,960	32,710	38,680	280,000
5/16/97	161,300	105,890	204,190	56,590	527,970
5/29/97	129,190	83,640	156,490	43,120	412,440
6/10/97	192,010	123,890	209,690	83,390	416,970

**ATTACHMENT 1  
GROUNDWATER FLOW READINGS**

<b>DATE</b>	<b>RW 12&amp;3</b>	<b>RW 4&amp;6</b>	<b>RW 5A</b>	<b>RW 7</b>	<b>TOTAL</b>
6/26/97	65,640	41,840	56,390	0	163,870
7/14/97	167,630	109,340	109,800	0	386,770
8/5/97	290	123,010	0	72,580	195,880
8/19/97	141,650	86,850	28,060	54,660	311,220
9/3/97	150,690	92,500	176	56,910	300,276
9/17/97	140,450	85,610	0	51,390	277,450
10/6/97	193,180	118,120	0	68,230	379,530
10/27/97	210,410	127,460	275,934	70,980	684,784

NOTE: Large peak on 3/14/97 is due to no second site visit during the month of February.

# NAS PENSACOLA GROUNDWATER RECOVERY WELL FLOW RATES



**Attachment #2**

**Recovery Well and Air Stripper  
REHAB Procedures**

**HRP/Spectrum**

**REHABILITATION PROCEDURES FOR RECOVERY SYSTEMS  
RW-1, 2, 3 AND RW-7**

- Shut down recovery system, disconnect suction piping, and remove suction piping and sensor probes from well.
- Install tremie pipe with "swab" attachment into recovery well.
- Inject 15 gallons of sodium hypochlorite (bleach - 3000 to 4000 ppm) through tremie pipe and swab into well. Bleach solution must have a contact time of at least 12 hours.
- Inject 15 gallons of bleach solution into discharge piping and allow the solution to sit until well rehabilitation is complete.
- Inject 5 gallons of water through tremie pipe and initiate swabbing of well.
- Swab well for 5 to 10 minutes at 20 minute intervals for 4 to 6 hours. (If necessary, well can sit overnight with solution in place).
- If well is allowed to sit overnight, swabbing should be performed for at least one (1) hour prior to evacuating solution from well.
- Remove tremie pipe and disconnect swab. Re-install tremie pipe and connect pipe to pump and recovery system discharge line.
- Pump excess bleach solution out of well, flushing discharge piping.
- Disconnect and remove tremie system from well.
- Re-install suction piping and sensor probes and re-start recovery system.

**REHABILITATION PROCEDURES FOR RECOVERY SYSTEMS  
RW-4, 6 AND RW-5A**

Each of these wells will first go through the same "bleach" process as RW-3 and RW-7. After the bleach solution is pumped out of the well and flushed through the discharge piping, the following activities will be performed.

- Re-install tremie pipe with "swab" attachment into recovery well.
- Inject 15 gallons of Well Klean II and muriatic acid solution (1 part Well Klean II to four (4) parts muriatic acid (31.5% HCL) through tremie pipe and swab into well.
- Inject 15 gallons of Well Klean II and muriatic acid solution into discharge piping and allow the solution to sit until well rehabilitation is complete.
- Swab well for 5 to 10 minutes at 20 minute intervals for several hours. This solution must have, at a minimum, a 12 hour contact time. (If necessary, well can sit overnight with solution in place).
- If well is allowed to sit overnight, swabbing should be performed for at least one (1) hour prior to evacuating solution from well.
- Remove tremie pipe and disconnect swab. Re-install tremie pipe and connect pipe to pump and recovery system discharge line.
- Pump excess bleach solution out of the well, flushing discharge piping.
- Disconnect and remove tremie system from well.
- Re-install suction piping and sensor probes and re-start recovery system.

## Cleaning Procedures for the Air Stripper Unit, Naval Air Station, Groundwater Pretreatment System, Pensacola, Florida.

1. Switch all pumps to the Off position.
2. Turn all influent valves to the Closed position.
3. Turn Off blower.
4. Take Off top of unit.
5. Using Wet/Dry vacuum, remove all water from Top shelf. All water and debris removed from Air Stripper should be drummed.
6. Drain and remove the 3" influent pipe.
7. Remove Top level and place in the sun to dry.
8. Vacuum water from next the level, remove and place in the sun to dry.
9. Repeat step #8 for all levels.
10. Once all the levels are dry, brush the trays to loosen remaining debris and vacuum again.
11. Replace levels in the order they came Off.
12. Replace influent pipe.
13. Replace top.
14. Turn on blower.
15. Open influent valves and turn On pumps.
16. Check unit for leaks and proper operation.

**Attachment #3**

**Air Stripper  
Laboratory Results**

**October 1997**

**HRP/Spectrum**

# Lab Report

From: NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735  
 FL Certification No. E87519



November 7, 1997

To: HRP/Spectrum  
 Attn: Tad A. Goetcheus  
 5 Century Dr. Suite 230  
 Greenville, SC 29607  
 PO# NAV0303

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA80587                      Customer Code: HRPSPEC  
 Login Group #: 8167C2                    Customer Reference: NAV0303  
 Phone Number: (864)298-0231/fax(864)242-6243  
 Customer Sample I.D#: INLET  
 Sample collection date: 10/27/97      Time: 15:30  
 Lab submittal date: 10/28/97          Time: 10:00  
 Received by: SMV                          Validated by: ADO

Parameter: VOLATILES BY 601/602  
 Method reference: EPA 601/602                      Unit: ug/L  
 Result: see below  
 Date started: 11/01/97                              Date finished: 11/05/97  
 Time started: 15:10                                  Analyst: ARV

Data for VOLATILES BY 601/602 ug/L:

Component Name	Result	Component MDL
BROMODICHLOROMETHANE	Not detected	1
BROMOFORM	Not detected	1
BROMOMETHANE	Not detected	5
CARBON TETRACHLORIDE	Not detected	1
CHLOROBENZENE	160	1
CHLOROETHANE	Not detected	5
CHLOROFORM	Not detected	1
CHLOROMETHANE	Not detected	5
DIBROMOCHLOROMETHANE	Not detected	1
1,2-DICHLOROBENZENE	120	1
1,3-DICHLOROBENZENE	53	1
1,4-DICHLOROBENZENE	92	1
DICHLORODIFLUOROMETHANE	Not detected	5
1,1-DICHLOROETHANE	7	1
1,2-DICHLOROETHANE	Not detected	1
1,1-DICHLOROETHENE	Not detected	1
TRANS-1,2-DICHLOROETHENE	Not detected	1
1,2-DICHLOROPROPANE	Not detected	1
CIS-1,3-DICHLOROPROPENE	Not detected	1
TRANS-1,3-DICHLOROPROPENE	Not detected	1
EDB	Not detected	1

# Lab Report

HRP/Spectrum Sample I.D. AA80587 (continued)  
Page: 2  
November 7, 1997



Full Service Analytical & Environmental Solutions

Data for VOLATILES BY 601/602 (continued):

Component Name	Result	Component MDL
METHYLENE CHLORIDE	Not detected	5
1, 1, 2, 2-TETRACHLOROETHANE	Not detected	1
TETRACHLOROETHENE	Not detected	1
1, 1, 1-TRICHLOROETHANE	Not detected	1
1, 1, 2-TRICHLOROETHANE	Not detected	1
TRICHLOROETHENE	Not detected	1
TRICHLOROFLUOROMETHANE	Not detected	5
VINYL CHLORIDE	Not detected	5
BENZENE	6	1
ETHYLBENZENE	Not detected	1
IPE	Not detected	5
MTBE	Not detected	5
TOLUENE	2	1
TOTAL XYLENES	Not detected	3
CIS-1, 2-DICHLOROETHENE	Not detected	1

Sample comments:

PO #NAV0303  
Project: NAS-Pensacola

If there are any questions regarding this data, please call.

Angela D. Overcash  
Laboratory Director

# Lab Report

From: NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735  
 FL Certification No. E87519



November 7, 1997

To: HRP/Spectrum  
 Attn: Tad A. Goetcheus  
 5 Century Dr. Suite 230  
 Greenville, SC 29607  
 PO# NAV0303

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA80588 Customer Code: HRPSPEC  
 Login Group #: 8167C2 Customer Reference: NAV0303  
 Phone Number: (864)298-0231/fax(864)242-6243  
 Customer Sample I.D#: OUTLET  
 Sample collection date: 10/27/97 Time: 15:35  
 Lab submittal date: 10/28/97 Time: 10:00  
 Received by: SMV Validated by: ADO

Parameter: VOLATILES BY 601/602  
 Method reference: EPA 601/602 Unit: ug/L  
 Result: see below  
 Date started: 11/01/97 Date finished: 11/03/97  
 Time started: 12:10 Analyst: ARV

Data for VOLATILES BY 601/602 ug/L:

Component Name	Result	Component MDL
BROMODICHLOROMETHANE	Not detected	1
BROMOFORM	Not detected	1
BROMOMETHANE	Not detected	5
CARBON TETRACHLORIDE	Not detected	1
CHLOROBENZENE	Not detected	1
CHLOROETHANE	Not detected	5
CHLOROFORM	Not detected	1
CHLOROMETHANE	Not detected	5
DIBROMOCHLOROMETHANE	Not detected	1
1,2-DICHLOROBENZENE	Not detected	1
1,3-DICHLOROBENZENE	Not detected	1
1,4-DICHLOROBENZENE	Not detected	1
DICHLORODIFLUOROMETHANE	Not detected	5
1,1-DICHLOROETHANE	Not detected	1
1,2-DICHLOROETHANE	Not detected	1
1,1-DICHLOROETHENE	Not detected	1
TRANS-1,2-DICHLOROETHENE	Not detected	1
1,2-DICHLOROPROPANE	Not detected	1
CIS-1,3-DICHLOROPROPENE	Not detected	1
TRANS-1,3-DICHLOROPROPENE	Not detected	1
EDB	Not detected	1

# Lab Report

HRP/Spectrum Sample I.D. AA80588 (continued)  
Page: 2  
November 7, 1997



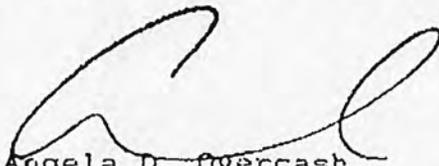
Data for VOLATILES BY 601/602 (continued):

Component Name	Result	Component MDL
METHYLENE CHLORIDE	Not detected	5
1, 1, 2, 2-TETRACHLOROETHANE	Not detected	1
TETRACHLOROETHENE	Not detected	1
1, 1, 1-TRICHLOROETHANE	Not detected	1
1, 1, 2-TRICHLOROETHANE	Not detected	1
TRICHLOROETHENE	Not detected	1
TRICHLOROFLUOROMETHANE	Not detected	5
VINYL CHLORIDE	Not detected	5
BENZENE	Not detected	1
ETHYLBENZENE	Not detected	1
IPE	Not detected	5
MTBE	Not detected	5
TOLUENE	Not detected	1
TOTAL XYLENES	Not detected	3
CIS-1, 2-DICHLOROETHENE	Not detected	1

Sample comments:

PO #NAV0303  
Project: NAS-Pensacola

If there are any questions regarding this data, please call.



Angela D. Overcash  
Laboratory Director

# CHAIN OF CUSTODY RECORD

PAGE        OF         
 449 Springbrook Road ▲ Charlotte, NC 28217  
 P.O. Box 240543 ▲ Charlotte, NC 28224-0543  
 Phone: 704/529-6364 ▲ Fax: 704/525-0409

**PRESS DOWN FIRMLY - 3 COPIES**

LAB USE ONLY			
	YES	NO	NA
Samples INTACT upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received ON WET ICE? Temp _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER PRESERVATIVES indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received WITHIN HOLDING TIMES?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CUSTODY SEALS INTACT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VOLATILES rec'd W/OUT HEADSPACE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER CONTAINERS used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State Certification  
 Requested NC  SC  Other FLA NA   
 Water Chlorinated Yes  No  NA   
 Sample Iced Upon Collection Yes  No   
 CMUD  NPDES  OTHER

REPORT TO: Name Tod A. Goetchus  
 Address HRP/Spectrum  
 BILL TO: Name Tod A. Goetchus  
 Address HRP/Spectrum  
 Requested Due Date Std. Turnaround

(SEE REVERSE SIDE FOR RUSH TURNAROUND FEES)

Service Analytical & Environmental Solutions

at HRP/Spectrum  
 Physical Address 5 Century Dr.  
Greenville SC Sta. 230  
 Phone 864-298-0231 Fax 864-292-6243  
 Billing Reference NA0303  
 Project Name NAS Pensacola

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED		REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
				TYPE SEE BELOW	NO.	SIZE						
<u>inlet</u>	<u>10/27/97</u>	<u>1530</u>	<u>water</u>	<u>G</u>	<u>3</u>	<u>40ml</u>	<u>HCl</u>	<u>X</u>	<u>X</u>			<u>60157</u>
<u>outlet</u>	<u>10/27/97</u>	<u>1535</u>	<u>water</u>	<u>G</u>	<u>3</u>	<u>40ml</u>	<u>HCl</u>	<u>X</u>	<u>X</u>			<u>60158</u>

Collector's Signature: [Signature] Sampled By (Print Name) Anthony Genkey Affiliation HRP/Spectrum Inc.

Requested By: (Signature) <u>[Signature]</u>	Received By: (Signature) _____	Date _____	Military Hours _____
Requested By: (Signature) _____	Received By: (Signature) _____	Date _____	Military Hours _____
Requested By: (Signature) _____	Received For Prism Laboratories By: <u>[Signature]</u>	Date <u>10/28/97</u>	Military Hours <u>1000</u>
Method of Shipment: _____		Log-In Group No. <u>816702</u>	

DES. NC SC OTHER    GUST. NC SC OTHER    GROUNDWATER. NC SC OTHER → OTHER FLA    DRINKING WATER. NC SC OTHER    SOLID WASTE. NC SC OTHER    OTHER. NC SC OTHER

11-07-1997 2:30PM FROM PRISM LABORATORIES 1 704 525 0409

P. 5

**Attachment #4**

**Quarterly Ground Water Level Measurements**

**October 1997**

**HRP/Spectrum**



PROJECT: <b>WATER LEVEL MEASUREMENTS</b>	DATE: <u>10/29/97</u>
LOCATION: <b>NAS - PENSACOLA FLORIDA</b>	TIDE: <u>Warrington: High Tide 5:54 AM</u>
JOB NUMBER: <b>NAV0227.FE</b>	MEASURED BY: <u>ALG/BWH</u>
MEASUREING DEVICE: <b>Electronic Meter</b>	

Measuring Point						
Well Number	Description	Elevation (ft)	Depth to Water (ft)	Elevation of Water (ft)	Time	Comments
GM-70	TOC	6.96				DESTROYED
GM-71	TOC	6.60	6.00	0.60	8:56	Well Casing Damaged
GM-72	TOC	7.25	6.50	0.75	8:28	
GM-73	TOC	12.23	11.45	0.78	8:16	
GM-76	TOC	8.12	6.38	1.74	7:45	
GM-77	TOC	5.27	4.14	1.13	7:43	
GM-78	TOC	6.86	5.55	1.31	7:38	
GM-79	TOC	4.60	3.43	1.17	7:15	
GM-80	TOC	4.56	3.39	1.17	7:21	
GM-81	TOC	4.21	2.99	1.22	7:19	
GM-82	TOC	3.59	3.12	0.47	7:26	
GM-83	TOC	4.74	3.85	0.89	7:28	
GM-84R	TOC	12.26	11.58	0.68	8:15	
33G01	TOC	7.35	6.10	1.25	8:53	
33G02	TOC	7.82	6.48	1.34	9:05	
33G03	TOC	6.28	4.92	1.36	7:40	
33G04	TOC	11.78	11.03	0.75	8:23	
33G05	TOC	7.44	6.95	0.49	8:30	
33G08	TOC	6.02	4.75	1.27	7:41	
33G09	TOC	7.53	5.83	1.70	7:52	
33G10	TOC	10.73	8.69	2.04	7:56	
33G11	TOC	7.60	6.00	1.60	8:00	
33G12	TOC	7.33	6.87	0.46	8:30	
33G14	TOC	10.51	9.69	0.82	8:14	
33G15	TOC	5.28	4.10	1.18	7:34	
33G16	TOC	7.84	6.50	1.34	9:06	
33G17	TOC	7.75	6.43	1.32	8:47	
33G18	TOC	12.05	11.22	0.83	8:24	
33G20	TOC	3.73	3.00	0.73	8:34	Well Lock Cut
13G06	TOC	6.99	6.35	0.64	8:07	Well Casing Damaged
13G07	TOC	10.59	9.61	0.98	7:06	
13G19	TOC	7.35		7.35		DESTROYED

