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NAS PENSACOLA
5090.3a

APRIL 1997 MONTHLY OPERATION AND MAINTENANCE REPORT ON THE DOMESTIC
WASTEWATER TREATMENT PLANT GROUNDWATER REMEDIATION PROJECT FOR NAS
PENSACOLA FL
5/13/1997
HRP SPECTRUM INC

May 13, 1997

Commanding Officer
Naval Public Works Center, Code 911.3
310 John Tower Road, Building 3819
Naval Air Station
Pensacola, Florida 32508-6500
Attention: Mr. Tom Kelley

**RE: APRIL 1997 MONTHLY OPERATION AND MAINTENANCE REPORT ON
THE DOMESTIC WASTEWATER TREATMENT PLANT (DWTP)
GROUNDWATER REMEDIATION NAVAL AIR STATION (NAS)
PENSACOLA, FLORIDA, JOB# NAV0227.FE**

Dear Sir:

HRP/Spectrum is pleased to submit the April 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 April 1997 and Attachment #1 contains a time series graph of the calculated bi-weekly 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 April 1997 and overall for the first quarter of 1997:

RECOVERY WELL SYSTEM OPERATION STATUS

RW 1, 2 & 3

- Upon arrival to the site on April 16, 1997, RW 1, 2 & 3 were not in operation due to a tripped air stripper breaker. The breaker was reset, the system restarted, and bi-weekly data collected before the system was shutdown for quarterly O & M.
- On April 29, 1997, RW 1, 2 & 3 were not in operation due to a pipe rupture in the RW 5A system. The piping was repaired, and the system restarted, and bi-weekly data was collected. Upon departure RW 1, 2 & 3 was operating producing normal pressure, vacuum, and flow.

(klo#4april.wpd)

RW 4 & 6

- Upon arrival to the site on April 16, 1997, RW 4 & 6 were not in operation due to a tripped air stripper breaker. The breaker was reset, the system restarted, and bi-weekly data collected before the system was shutdown for quarterly O & M.
- Between the dates of April 16 and 18, 1997, RW 4 & 6 were cleaned as described in Attachment #2 "Rehabilitation Procedures for Recovery Systems RW 1, 2, 3, 4, 5A, 6, & 7."
- Upon departure on April 18, 1997, Pump A for RW 4 & 6 was operating properly producing normal pressure and flow.
- Upon arrival on April 29, 1997, RW 4 & 6 were shut down due to a rupture in the RW 5A system piping. After the ruptured pipe was fixed, the system was restarted and bi-weekly data was collected. Available data was insufficient to determine an effectiveness of the RW rehabilitation which was performed during the week of April 16, 1997.

RW 5A

- Upon arrival to the site on April 16, 1997 RW 5A was not in operation due to a tripped air stripper breaker. The breaker was reset, the system restarted and bi-weekly data collected before the system was shutdown for quarterly O & M.
- Between the dates of April 16 and April 18, 1997, RW 5A was cleaned as described in Attachment #2 "Rehabilitation Procedures for Recovery Systems RW 1, 2, 3, 4, 5A, 6, & 7."
- Upon departure on April 18, 1997, Pump B for RW 5A was operating properly producing normal pressure and flow.
- Upon arrival on April 29, 1997, RW 5A was shutdown due to a rupture in the pressure supply pipe for RW 5A. The rupture was repaired, the system restarted, and bi-weekly data was obtained. Upon departure Pump B for RW 5A was operating properly producing normal pressure and flow. Available data was insufficient to determine an effectiveness of the RW rehabilitation which was performed during the week of April 16, 1997.

RW 7

- Upon arrival to the site on April 16, 1997, RW-7 was not in operation due to a tripped air stripper breaker. The breaker was reset, the system restarted, and bi-weekly data collected before the system was shutdown for quarterly O & M.

- Upon departure on April 18, 1997, Pump B for RW 7 was operating properly producing normal pressure and flow.
- On April 29, 1997, RW 7 was shutdown due to a rupture in the RW 5A system piping. The ruptured pipe was repaired, the system restarted, and bi-weekly data was collected.
- Upon departure, Pump B for RW 7 was operating producing normal pressure and flow.

PRE-TREATMENT AIR STRIPPER

- Upon arrival on the site on April 16, 1997, the breaker for the Air Stripper was tripped. The breaker was reset, the system restarted, and bi-weekly data was collected. Samples were collected from both the influent and effluent points of the Air Stripper. Following sample collection, the Air Stripper was shutdown to perform quarterly O & M.
- On April 17, 1997, the Air Stripper unit was thoroughly cleaned using the steps listed on the attached "Cleaning Procedures" for the Air Stripper Unit provided in Attachment #2. The unit was placed back in operation and was operating properly upon departure on April 18, 1997.
- On April 29, 1997 the Air Stripper was shut down due to a rupture in the recovery well piping system at RW 5A. Upon fixing the ruptured pipe, the complete RW system as well as the Air Stripper were restarted. Upon departure the Air Stripper was operating normally.

LABORATORY RESULTS-AIR STRIPPER ANALYTICAL RESULTS

During the first visit of April, samples were collected from the influent and effluent ports of the Air Stripper. As of January 1997, only quarterly samples of the Air Stripper influent and effluent are required. A copy of the laboratory results for the month of April is provided in Attachment #3 to this report. The Air Stripper was found to be working effectively as the outlet sample yielded non-detectable levels of contaminants. Specific chemicals present in the inlet samples are provided below:

**AIR STRIPPER ANALYTICAL RESULTS
NAS-PENSACOLA
APRIL 1997**

Chemical	Inlet	Outlet
Chlorobenzene (ug/l)	120	N/D
1,2-Dichlorobenzene (ug/l)	51	N/D
1,3-Dichlorobenzene (ug/l)	30	N/D
1,4-Dichlorobenzene (ug/l)	43	N/D
1,1-Dichloroethane (ug/l)	3	N/D
Benzene (ug/l)	5	N/D

* N/D = Not detected

GROUNDWATER LEVELS

- On April 18, 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 any questions regarding this report or other matters pertaining to this project please contact Tad Goetcheus or myself at (864) 298-0231.

Sincerely,

HRP/Spectrum



Anthony L. Gentry
Project Engineer

Enclosure

CC: Maxie Keisler-NAVFACENGCOM-Code 18213 (2 copies)
Bill Taylor-NAS Pensacola-Code 00500 (2 copies)

(klo#4april.wpd)

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	4/16/97	16:28	11,816,280	8	17	7	5.34	B	528	169,240	N/A, N/A, 4.45
RW 4&6	4/16/97	16:35	3,421,740	7	18	8.1	6.81	A	528	215,640	5.32, 7.71
RW 5A	4/16/97	16:40	6,426,620	22	11	4.4	3.22	B	528	102,140	3.98
RW 7	4/16/97	16:48	6,064,000	5	27.5	2.2	1.75	B	528	55,370	23.19
RW 1,2 & 3	4/29/97	18:13	11,925,930	12	16	7	6.92	B	264	109,650	N/A, N/A, 3.73
RW 4&6	4/29/97	18:30	3,520,700	9	7.5	4.8	6.25	A	264	98,960	3.85, 2.85
RW 5A	4/29/97	18:35	6,459,330	22	11	9.4	2.07	B	264	32,710	3.85
RW 7	4/29/97	18:05	6,102,680	10	27	2.5	2.44	B	264	38,680	22.91

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.

INSPECTOR'S NAME	ANTHONY L. GENTRY
DATE	4/16/97
AMBIENT TEMPERATURE	75
WEATHER CONDITIONS	SUNNY

ITEM	INSPECTION CHECK	INSPECTION FREQUENCY	DATA/ COMMENTS
INFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	9093650
	SAMPLE COLLECTION	MONTHLY	YES
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	22" 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	YES
SYSTEM COMPONENTS	EXPOSED PIPING CONNECTIONS	MONTHLY	OK

SYSTEM DESCRIPTION: AIR STRIPPER BREAKER TRIPPED

ACTIVITIES PERFORMED: CLEANED TREYS FOLLOWING "CLEANING PROCEDURES FOR AIR STRIPPER" ON APRIL 17, 1997

INSPECTOR'S NAME	ANTHONY L. GENTRY
DATE	4/29/97
AMBIENT TEMPERATURE	78
WEATHER CONDITIONS	PARTLY SUNNY

ITEM	INSPECTION CHECK	INSPECTION FREQUENCY	DATA/ COMMENTS
INFLUENT PIPING	OPERATION OF BALL CHECK VALVE	MONTHLY	OK
	SAMPLE PORT OPERATION	MONTHLY	OK
	FLOW METER READING	BI-WEEKLY	9,357,910
	SAMPLE COLLECTION	MONTHLY	N/A
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	22" 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: AIR STRIPPER OPERATING PROPERLY; HOWEVER, TREYS ARE STARTING TO RUST

ACTIVITIES PERFORMED:

**Attachment #1
Time Series Graphs**

(kio#4april.wpd)

HRP/Spectrum

**ATTACHMENT 1
GROUNDWATER FLOW READINGS**

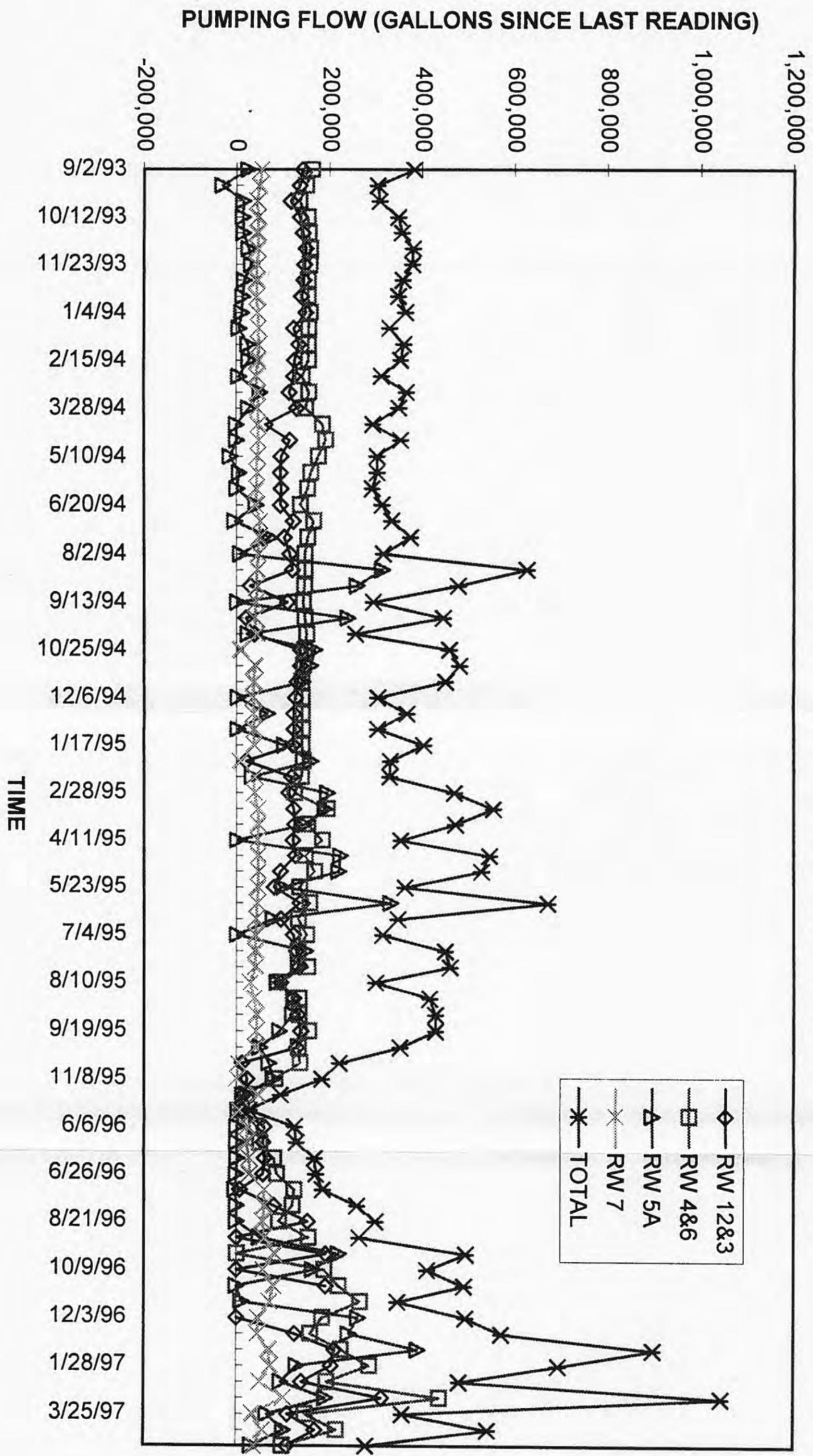
DATE	RW 12&3	RW 4&6	RW 5A	RW 7	TOTAL
9/2/93	142,110	162,340	24,760	53,830	383,040
9/16/93	135,670	149,590	-30,700	49,630	304,190
9/28/93	116,270	134,810	14,330	43,120	308,530
10/12/93	136,130	152,720	13,160	46,830	348,840
10/26/93	142,140	154,940	14,830	45,010	356,920
11/9/93	149,620	158,140	26,400	46,350	380,510
11/23/93	146,570	157,290	31,320	43,950	379,130
12/7/93	144,880	154,010	16,110	44,160	359,160
12/21/93	139,320	153,600	13,510	42,630	349,060
1/4/94	149,060	158,250	11,050	46,720	365,080
1/18/94	123,050	154,960	5,120	47,100	330,230
2/1/94	133,870	154,620	24,713	47,830	361,033
2/15/94	125,390	155,560	26,547	47,110	354,607
2/28/94	123,660	142,080	4,750	42,250	312,740
3/14/94	113,800	156,140	51,810	45,330	367,080
3/28/94	129,980	149,390	26,114	45,340	350,824
4/11/94	62,480	185,229	0	46,667	294,376
4/26/94	114,540	192,381	0	47,693	354,614
5/10/94	95,550	176,590	-13,904	44,760	302,996
5/24/94	94,640	159,660	5,466	43,110	302,876
6/7/94	95,650	153,210	674	43,420	292,954
6/20/94	94,086	137,550	41,772	40,140	313,548
7/5/94	122,174	165,870	-3,652	50,170	334,562
7/19/94	102,520	152,770	71,814	48,230	375,334
8/2/94	114,960	146,980	8,396	46,040	316,376
8/16/94	120,305	147,250	314,706	43,740	626,001
8/30/94	28,735	146,150	259,724	43,840	478,449
9/13/94	109,247	143,172	1,300	41,266	294,985
9/27/94	19,933	146,778	240,010	38,974	445,695
10/11/94	38,450	150,690	24,290	43,310	256,740
10/25/94	136,920	145,910	168,195	8,650	459,675
11/8/94	137,634	143,830	159,625	39,953	481,042
11/22/94	130,526	140,433	143,430	36,652	451,041
12/6/94	126,543	140,687	2,578	35,103	304,911
12/20/94	123,081	141,034	66,629	36,927	367,671
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

**ATTACHMENT 1
GROUNDWATER FLOW READINGS**

DATE	RW 12&3	RW 4&6	RW 5A	RW 7	TOTAL
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

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 & Air Stripper
REHAB Procedures

(klo#4april.wpd)

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
April 1997**

(klo#4april.wpd)

HRP/Spectrum

Lab Report



Full Service Analytical & Environmental Solutions

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

April 21, 1997

To: HRP/Spectrum
 Attn: Tad A. Goetcheus
 5 Century Dr. Suite 230
 Greenville, SC 29607
 PO# NAV0227.FE NAS Pensacola

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

Sample I.D. AA67349 Customer Code: HRPSPEC
 Login Group #: 3225C2 Customer Reference: PENSACOL
 Phone Number: (864)298-0231/fax(864)242-6243
 Customer Sample I.D#: INFLUENT
 Sample collection date: 04/16/97 Time: 17:20
 Lab submittal date: 04/17/97 Time: 08:30
 Received by: CP Validated by: JAS

Parameter: VOLATILES BY 601/602
 Method reference: EPA 601/602
 Result: see below
 Date started: 04/19/97
 Time started: 12:26

Unit: ug/L

Date finished: 04/20/97
 Analyst: MJB

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
CHLOROENZENE	120	1
CHLOROETHANE	Not detected	5
CHLOROFORM	Not detected	1
CHLOROMETHANE	Not detected	5
DIBROMOCHLOROMETHANE	Not detected	1
1,2-DICHLOROENZENE	51	1
1,3-DICHLOROENZENE	30	1
1,4-DICHLOROENZENE	43	1
DICHLORODIFLUOROMETHANE	Not detected	5
1,1-DICHLOROETHANE	3	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
FOR	Not detected	1

Lab Report

HRP/Spectrum Sample I.D. AA67349 (continued)
Page: 2
April 21, 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	5	1
ETHYLBENZENE	Not detected	1
IPE	Not detected	5
MTBE	Not detected	5
TOLUENE	Not detected	1
TOTAL XYLENES	Not detected	3

Sample comments:

PO# NAV 0227.FE
Project Name: NAS Pensacola

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


J. Allen Spivey
Quality Assurance Manager

Lab Report



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

April 21, 1997

To: HRP/Spectrum
 Attn: Tad A. Goetcheus
 5 Century Dr. Suite 230
 Greenville, SC 29607
 PO# NAV0227.FE NAS Pensacola

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

Sample I.D. AA67350 Customer Code: HRPSPEC
 Login Group #: 3225C2 Customer Reference: PENSACOL
 Phone Number: (864)298-0231/fax(864)242-6243
 Customer Sample I.D#: EFFLUENT
 Sample collection date: 04/16/97 Time: 17:20
 Lab submittal date: 04/17/97 Time: 08:30
 Received by: CP Validated by: JAS

Parameter: VOLATILES BY 601/602 Unit: ug/L
 Method reference: EPA 601/602
 Result: see below
 Date started: 04/19/97 Date finished: 04/19/97
 Time started: 11:28 Analyst: MJB

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
END	Not detected	1

Lab Report



HRP/Spectrum Sample I.D. AA67350 (continued)
Page: 2
April 21, 1997

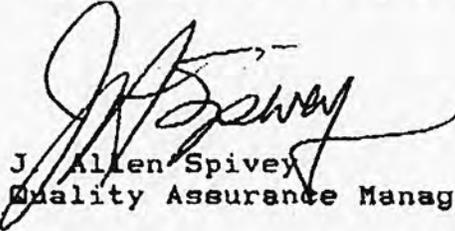
Data for VOLATILES BY 601/602 (continued):

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

Sample comments:

PO# NAV 0227.FE
Project Name: NAS Pensacola

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


J. Allen Spivey
Quality Assurance Manager

Attachment #4
Quarterly Groundwater Level Measurements
April 1997

(klo#4april.wpd)

HRP/Spectrum

April 1997

PROJECT: <u>WATER LEVEL MEASUREMENTS</u>					DATE: <u>04/19/97</u>	
LOCATION: <u>NAS - PENSACOLA FLORIDA</u>					TIDE: <u>Warrington: Low Tide 4:58 am</u>	
JOB NUMBER: <u>NAV0227.FE</u>					MEASURED BY: <u>JLT/ALG</u>	
MEASUREING DEVICE: <u>Electronic Meter</u>						
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	7.11	-0.51	8:30	Well Casing Damaged
GM-72	TOC	7.25	6.93	0.32	7:49	
GM-73	TOC	12.23	11.92	0.31	7:36	
GM-76	TOC	8.12	6.46	1.66	7:11	
GM-77	TOC	5.27	4.36	0.91	7:09	
GM-78	TOC	6.86	5.90	0.96	7:03	
GM-79	TOC	4.60	3.94	0.66	7:01	
GM-80	TOC	4.56	3.95	0.61	6:48	
GM-81	TOC	4.21	3.58	0.63	6:41	
GM-82	TOC	3.59	3.62	-0.03	6:53	
GM-83	TOC	4.74	4.44	0.30	6:45	
GM-84R	TOC	12.26	12.01	0.25	7:36	
33G01	TOC	7.35	6.46	0.89	8:29	
33G02	TOC	7.82	6.68	1.14	8:36	
33G03	TOC	6.28	5.14	1.14	7:06	
33G04	TOC	11.78	11.54	0.24	7:45	
33G05	TOC	7.44	7.25	0.19	7:52	
33G08	TOC	6.02	4.98	1.04	7:06	
33G09	TOC	7.53	5.90	1.63	7:15	
33G10	TOC	10.73	8.83	1.90	7:20	
33G11	TOC	7.60	6.41	1.19	7:22	
33G12	TOC	7.33	7.22	0.11	7:52	
33G14	TOC	10.51	10.15	0.36	8:15	
33G15	TOC	5.28	4.57	0.71	7:56	
33G16	TOC	7.84	6.73	1.11	8:38	
33G17	TOC	7.75	6.68	1.07	8:23	
33G18	TOC	12.05	11.59	0.46	7:45	
33G20	TOC	3.73	3.53	0.20	7:57	Well Lock Cut
13G06	TOC	6.99	6.73	0.26	7:29	Well Casing Damaged
13G07	TOC	10.59	10.13	0.46	6:30	
13G19	TOC	7.35		7.35		DESTROYED

