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NAS PENSACOLA
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SEPTEMBER 1997 MONTHLY OPERATION AND MAINTENANCE REPORT ON THE
DOMESTIC WASTEWATER TREATMENT PLANT GROUNDWATER REMEDIATION
PROJECT FOR NAS PENSACOLA FL
9/24/1997
HRP SPECTRUM INC

September 24, 1997

Southern Division
NAVFACENGCOM
Attention: Maxie Keisler, Code 18213
2155 Eagle Drive
P.O. Box 190010
Charleston, SC 29419-9010

RE: SEPTEMBER, 1997 MONTHLY OPERATION AND MAINTENANCE REPORT ON THE DOMESTIC WASTEWATER TREATMENT PLANT (DWTP) GROUND-WATER REMEDIATION; NAVAL AIR STATION (NAS) PENSACOLA, FLORIDA, (JOB # NAV0303.FE)

Dear Sir:

HRP/Spectrum is pleased to submit the September 1997 monthly 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 September 1997 and Attachment "A" contains time series graphs of the calculated bi-weekly pump flow rates and measured well water levels to facilitate evaluation of the performance and maintenance requirements of the recovery wells and pumps. In addition, four (4) copies of the report have been sent to Mr. Tom Kelley, Naval Public Works Center 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 September:

RECOVERY WELL SYSTEM OPERATION STATUS

RW 1,2&3

- On September 3, 1997 RW 1,2, & 3 was in operation. The pumps and wells appeared to be in good condition producing normal pressure and flow. No leaks were observed.
- On September 17, 1997 Pump B for RW 1,2, & 3 was not in operation. The power to the pumps had been disconnected at the breaker box. RW 1, 2, & 3 were brought back on-line, readings were recorded, and upon departure appeared to be in good condition, producing normal pressure and flow. No leaks were observed or detected.

RW 4&6

- On September 3, 1997 Pump A for RW 4 & 6 was operating sufficiently with normal pressure and flow. No leaks were detected at either of the recovery wells or pumps.
- On September 17, 1997 Pump A for RW 4 & 6 was not in operation. The power to the pumps had been disconnected at the breaker box. RW 4 & 6 were brought back on-line, readings were recorded, and upon departure appeared to be in good condition producing normal pressure and flow. No leaks were detected at either of the recovery wells or pumps.

RW 5A

- On September 3, 1997 RW 5A was not in operation due to a malfunction in the pumps. RW 5A was taken off-line for the next two (2) weeks. Upon departure, RW 5A was not in operation and no leaks were noted.
- On September 17, 1997 both Pumps A and B of RW 5A were removed for maintenance. Upon departure, no leaks were detected at either the recovery well or pumps.

RW 7

- On September 3, 1997 Pump A appeared to be working properly producing normal pressure and flow. No leaks were detected in either the pumps or well.
- On September 17, 1997 Pump A appeared to be working properly producing normal pressure and flow. No leaks were detected in either the pumps or well.

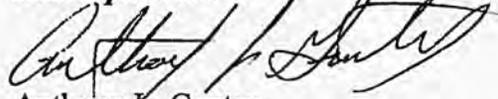
PRE-TREATMENT AIR STRIPPER

- On September 5, 1997 the Air Stripper was operating properly. No leaks were detected.
- On September 19, 1997 the Air Stripper was operating properly. No leaks were detected.

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

Sincerely,

HRP/Spectrum



Anthony L. Gentry
Project Engineer

Enclosure

cc: Tom Kelley-Naval Public Work Center- Code 480 (4 copies)
Bill Taylor - NAS Pensacola - Code 00500 (2 copies)

**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) ²	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	9/3/97	10:05	12,742,320	8	17.5	6.8	6.98	B	360	150,690	N/A, N/A, 5.0
RW 4&6	9/3/97	10:15	4,163,770	4	13	4.5	4.28	A	360	92,500	2.78, 5.45
RW 5A	9/3/97	10:17	7,014,436	N/A	N/A	N/A	0.01	B	360	176	4.15
RW 7	9/3/97	10:45	6,442,150	6	22	2.5	2.63	A	360	56,910	23.18
RW 1,2 & 3	9/17/97	11:07	12,882,770	7	16.5	7.1	6.97	B	336	140,450	N/A, N/A, 4.78
RW 4&6	9/17/97	11:15	4,249,380	5	13	4	4.25	A	336	85,610	2.51, 5.13
RW 5A	9/17/97	11:17	7,014,436	N/A	N/A	N/A	0.00	N/A	336	0	N/A
RW 7	9/17/97	11:25	6,493,540	6	22	2.4	2.55	A	336	51,390	23.19

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	9/3/97
AMBIENT TEMPERATURE	85
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	11,236,710
	SAMPLE COLLECTION	MONTHLY	N/A
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	14.5" 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 PERFORMED:

INSPECTOR'S NAME	ANTHONY L. GENTRY
DATE	9/17/97
AMBIENT TEMPERATURE	86
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	11,830,270
	SAMPLE COLLECTION	MONTHLY	N/A
AIR STRIPPER	PRESSURE GAUGE READING	BI-WEEKLY	17" 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 PERFORMED:

Attachment #1

Time Series Graphs

**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
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
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

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**

PUMPING FLOW (GALLONS SINCE LAST READING)

