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NAS PENSACOLA
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JULY 1996 MONTHLY OPERATION AND MAINTENANCE REPORT ON THE DOMESTIC
WASTEWATER TREATMENT PLANT GROUNDWATER REMEDIATION NAS PENSACOLA
FL
7/18/1996
RUST ENVIRONMENTAL & INFRASTRUCTURE INC

RUST Rust Environment & Infrastructure Inc.

A Rust International Company
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July 18, 1996

Commanding Officer
Naval Public Works Center, Code 480
Attn: Mr. Tom Kelley
Naval Air Station
Pensacola, FL 32508-6500

Re: July 1996 Monthly Operation and Maintenance
Report on the Domestic Wastewater Treatment Plant (DWTP)
Ground-Water Remediation (Final O&M Report)
Naval Air Station (NAS) Pensacola, Florida
Contract No. N62467-93-D-0662, Delivery Order No. 0045
Rust Project No. 33561.000

Dear Sir:

Rust Environment and Infrastructure (Rust) is pleased to submit the final monthly operation and maintenance report on the DWTP ground-water remediation for the above referenced project. The attached Table 1 contains a summary of the recovery well pumping data for the month of July 1996 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, 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. Rust has the following comments for the month of July 1996.

RECOVERY WELL SYSTEM OPERATION STATUS

RW 1, 2 & 3

- The Recovery Well System did not operate properly. The following comment is offered:
 1. On July 10, 1996 the pump station (Pump "A") for RW 1, 2 & 3 was running but not pumping upon arrival to perform the O&M service. Troubleshooting revealed a crack in the suction line of RW 2 at the 2" x 1 1/4" PVC bushing adjacent to the well vault. Rust representative replaced the cracked bushing, reprimed both pumps and placed Pump "A" back on-line at 1103 hours. The recovery well system was operating properly upon departure from the DWTP job site.

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RW 4 & 6

- The Recovery Well System operated properly.

RW 5A

- The Recovery Well System did not operate properly, the following comments are offered:

1. On July 10, 1996 RW 5A (Pump "A") was running but not pumping upon arrival to perform the O&M service. Rust representative observed a crack in the discharge pipe of Pump "A" and ground-water was spurting from the crack into the pump station enclosure. The ground-water stained the pumps, motors, piping, electrical service boxes and the concrete slab a black color. The flowmeter was reflecting negative flow due to the backflow from the other pump stations.

Rust representative re-installed Pump "B" (previously removed from the pump station enclosure to extract the sheared bolt from the pump housing) with a new impeller, diffuser plate with seal gasket and flange gasket; repaired the crack in the discharge piping of Pump "A"; reprimed both pumps and placed Pump "A" back on-line. The flowmeter reflected positive flow for a short period of time and then reflected zero flow. The same occurred when Pump "B" was placed on-line. RW 5A was placed "off-line" at this time.

2. RW 5A pumps have difficulties pumping against the pressures of the other pump stations. Rust representative recommends that RW 5A discharge pipeline be tied into the air stripper unit separately from the other pump station discharge pipelines.

RW 7

- The Recovery Well System operated properly.

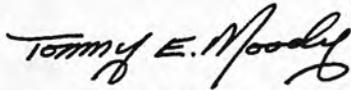
PRE-TREATMENT AIR STRIPPER

- The Pre-Treatment Air Stripper operated properly. See the enclosed ground-water pre-treatment system operation and maintenance checklist form for maintenance performed to the unit.

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As always, if there are any questions regarding this report or other matters pertaining to this project, please feel free to contact me at (803) 572-5600 or Susan Burdick at (804) 266-0332.

Sincerely,



Tommy E. Moody
Project O&M

Enclosure

c: Maxie Keisler - NAVFAC - Code 18213 (2 copies)
Bill Taylor - NAS, Environmental Division (2 copies)
Brian Caldwell - ENSAFE
Scott Ross - Rust

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DATE FLOWMETER DISCHARGE SUCTION INSTANTANEOUS CALCULATED PUMP PUMP ELAPSED TOTAL BI-WEEKLY WATER LEVEL BELOW

NAS PENSACOLA DOMESTIC WASTEWATER TREATMENT PLANT
RECOVERY WELL PUMPING DATA

TABLE 1

**GROUNDWATER PRETREATMENT SYSTEM
OPERATION AND MAINTENANCE CHECKLIST
NAVAL AIR STATION
PENSACOLA, FLORIDA**

INSPECTOR'S NAME Tommy Moody - Rust E&I			
AMBIENT TEMPERATURE 92 degrees			
WEATHER CONDITIONS Sunny and hot @ 1145 hrs on 10 July 1996 (Wed.)			
ITEM	INSPECTION CHECK	INSPECTION FREQUENCY	DATA/ COMMENTS
Influent Piping	Operation of Ball Check Valve	Monthly	OK
	Sample Port Operation	Monthly	OK
	Flow Meter Reading	Weekly	1,192,315 GALS
	Sample Collection	Monthly	No - N/A
Air Stripper	Pressure Gauge Reading	Weekly	17.0" H ₂ O
	Clean/Check Trays	Weekly	Checked - OK
Blower	Piping Connections	Monthly	OK
Effluent Piping	Operation of Ball Check Valve	Monthly	OK
	Sample Port Operation	Monthly	OK
	Flow Meter Reading	Weekly	N/A - None
	Sample Collection	Monthly	No - N/A
System Components	Exposed Piping Connections	Monthly	OK
System Description: LP500 Injector Systems Cascade Air Stripper			
Activities Performed: Checked baffle tubes and trays - OK			
Data collection			
Next sample scheduled last week of July 1996			

NAS PENSACOLA IWTP RCRA RECOVERY WELL FLOW DATA

DATE	RW 1,2,&3** FLOW (GALS/2wks)	RW 4&6 FLOW (GALS/2wks)	RW 5A* FLOW (GALS/2wks)	RW 7 FLOW (GALS/2wks)	TOTAL FLOW (GALS/2wks)
9/2/93	142110	162340	24760	53830	383040
9/16/93	135670	149590	-30700	49630	304190
9/28/93	116270	134810	14330	43120	308530
10/12/93	136130	152720	13160	46830	348840
10/26/93	142140	154940	14830	45010	356920
11/9/93*	149620	158140	26400	46350	380510
11/23/93*	146570	157290	31320	43950	379130
12/7/93	144880	154010	16110	44160	359160
12/21/93	139320	153600	13510	42630	349060
1/4/94	149060	158250	11050	46720	365080
1/18/94	123050	154960	5120	47100	330230
2/1/94	133870	154620	24713	47830	361033
2/15/94	125390	155560	26547	47110	354607
2/28/94	123660	142080	4750	42250	312740
3/14/94	113800	156140	51810	45330	367080
3/28/94	129980	149390	26114	45340	350824
4/11/94	62480	185229	0	46667	294376
4/26/94	114540	192381	0	47693	354614
5/10/94	95550	176590	-13904	44760	302996
5/24/94	94640	159660	5466	43110	302876
6/7/94	95650	153210	674	43420	292954
6/20/94	94086	137550	41772	40140	313548
7/5/94	122174	165870	-3652	50170	334562
7/19/94	102520	152770	71814	48230	375334
8/2/94	114960	146980	8396	46040	316376
8/16/94	120305	147250	314706	43740	626001
8/30/94	28735	146150	259724	43840	478449
9/13/94	109247	143172	1300	41266	294985
9/27/94	19933	146778	240010	38974	445695
10/11/94	38450	150690	24290	43310	256740
10/25/94	136920	145910	168195	8650	459675
11/8/94	137634	143830	159625	39953	481042
11/22/94	130526	140433	143430	36652	451041
12/6/94	126543	140687	2578	35103	304911
12/20/94	123081	141034	66629	36927	367671
1/3/95	124006	141588	2629	36814	305037
1/17/95	121155	141168	103562	37668	403553
1/31/95	20528	143045	160533	7741	331847
2/14/95	118171	139268	33440	39172	330051
2/28/95	112145	124628	195889	37053	469715
3/14/95	123141	194925	190593	45607	554266

NAS PENSACOLA IWTP RCRA RECOVERY WELL FLOW DATA

DATE	RW 1,2,&3** FLOW (GALS/2wks)	RW 4&6 FLOW (GALS/2wks)	RW 5A* FLOW (GALS/2wks)	RW 7 FLOW (GALS/2wks)	TOTAL FLOW (GALS/2wks)
3/28/95	125571	152781	147296	46200	471848
4/11/95	121568	184651	2015	45893	354127
4/25/95	126623	147850	224282	47128	545883
5/9/95	94185	167684	220647	46206	528722
5/23/95	80867	135931	100613	46105	363516
6/6/95	136660	157320	332514	44446	670940
6/20/95	94863	132718	78605	42396	348582
7/4/95	122115	150562	1577	40923	315177
7/18/95	128917	131634	148926	41204	450681
8/1/95	134318	152703	132928	41322	461271
8/10/95***	94856	88538	87222	29445	300061
8/22/95	122086	134403	123028	37154	416671
9/5/95	131628	133923	120794	43401	429746
9/19/95	137823	155558	93131	43165	429677
10/3/95	129645	132519	50273	40028	352465
10/25/95	12024	136159	69476	3701	221360
11/8/95	22566	82653	78603	0	183822
11/21/95	15068	20731	13571	45233	94603
05/31/96****	9722	10033	2577	4760	27092
06/06/96(A)	59060	42822	439	22325	124646
06/12/96(A)	56952	49788	460	21626	128826
06/19/96(A)	59513	80468	1555	26465	168001
06/26/96(A)	56512	86242	0	28001	170755
07/11/96	6264	123432	-3289	59241	185648

* RW 5 relocated and pump replaced 11/12/93, renamed RW 5A.

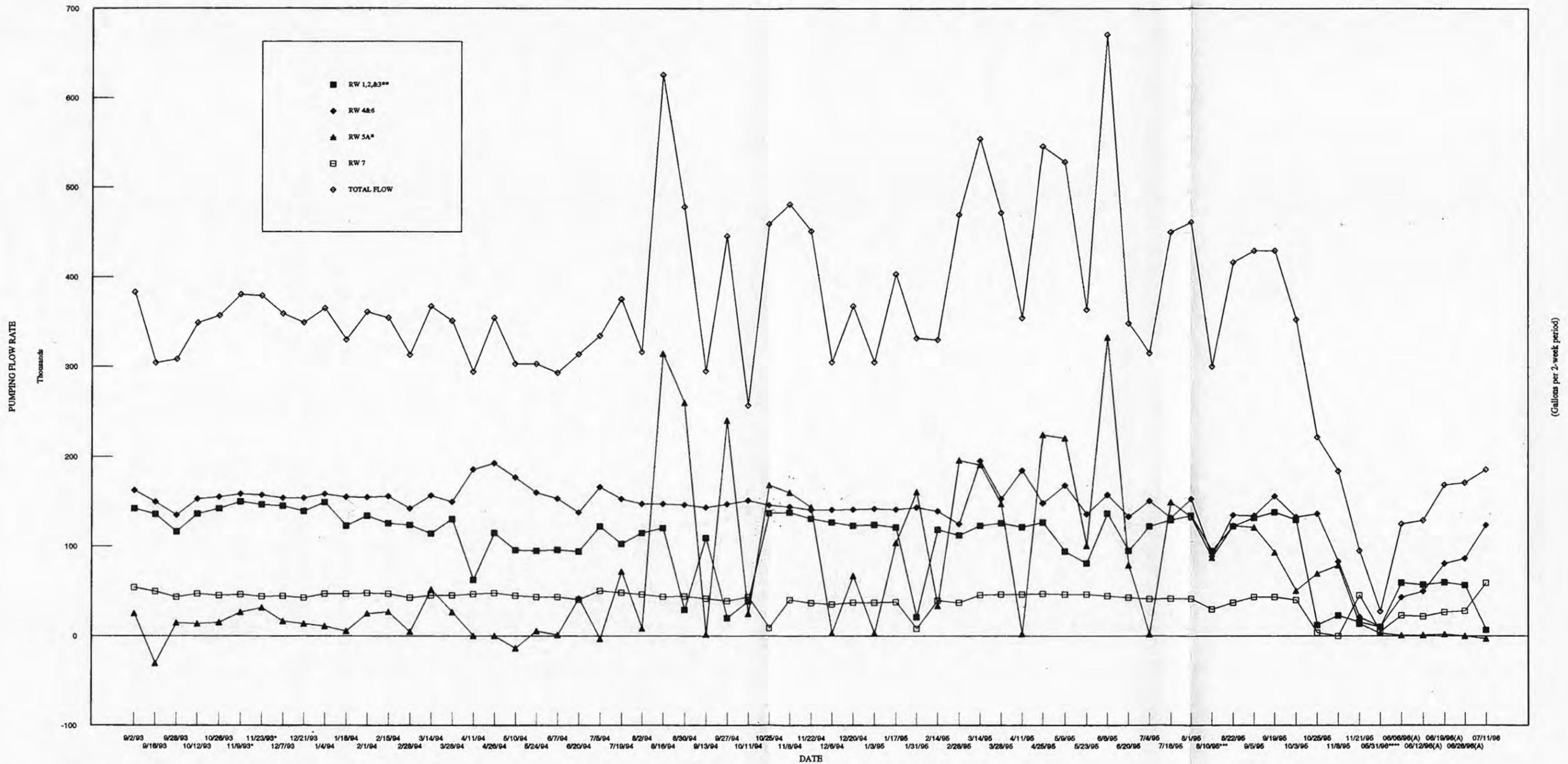
** RW 2 only being purged 9/2/93 thru 3/28/94; RW 3 only being purged 3/28/94 to present. (RW 1 suction valve is presently in the closed position; RW 2 suction valve is presently in the slightly opened position; RW 3 suction valve is presently in the full open position.)

*** The O&M Inspection scheduled for 8/15/95 was moved forward to 8/10/95 to check on the status of the recovery well system following Hurricane Erin; no significant damage was observed.

**** Total flow from 11/21/95 to 5/31/96.

(A) Total flow (Gallons per Week)

NAS PENSACOLA IWTP RCRA SITE
RECOVERY WELL FLOW DATA



* RW 5 relocated and pump replaced 11/12/93, renamed RW 5A.
 ** RW 2 only being purged 9/2/93 thru 3/28/94; RW 3 only being purged 3/28/94 to present.
 *** The O&M inspection scheduled for 8/15/95 was moved forward to 8/10/95 to check on the status of the recovery well system following Hurricane Erin; no significant damage was observed.
 **** Total flow from 11/21/95 to 5/31/96.
 (A) Total flow (Gallons per Week)

(Gallons per 2-week period)

NAS PENSACOLA IWTP RCRA RECOVERY WELL WATER LEVEL BELOW TOP OF CASING

DATE	RW 1** WLBTC (feet)	RW 2** WLBTC (feet)	RW 3** WLBTC (feet)	RW 4 WLBTC (feet)	RW 5A* WLBTC (feet)	RW 6 WLBTC (feet)	RW 7 WLBTC (feet)
9/2/93	3.78	12.71	4.61	2.30	5.61	11.30	24.15
9/16/93	3.02	11.95	3.68	1.41	2.01	10.80	23.70
9/28/93	3.77	12.21	4.38	2.50	7.41	11.36	23.99
10/12/93	4.05	13.01	4.83	2.45	5.55	11.71	23.30
10/26/93	3.72	12.62	4.39	2.06	5.63	11.47	23.97
11/9/93*	3.71	12.83	4.25	1.97	0.00	11.22	24.28
11/23/93*	4.10	13.07	4.72	2.40	5.47	11.61	24.61
12/7/93	4.31	13.44	5.01	2.66	5.60	11.26	24.50
12/21/93	2.87	11.95	3.38	1.29	4.01	10.21	24.70
1/4/94	4.03	13.32	4.52	2.23	5.14	11.46	24.45
1/18/94	4.15	12.18	4.69	2.35	6.68	10.25	24.90
2/1/94	3.69	12.75	4.19	1.89	3.59	11.45	25.49
2/15/94	4.20	12.28	4.68	2.36	5.75	11.30	24.55
2/28/94	4.20	13.15	4.82	2.49	5.65	11.65	23.49
3/14/94	4.01	12.26	4.54	2.25	5.41	11.59	23.58
3/28/94	3.42	12.91	4.05	1.88	3.68	10.80	24.19
4/11/94	4.15	5.16	4.90	9.60	4.21	9.11	25.23
4/26/94	3.64	4.67	16.99	8.30	3.75	9.18	24.12
5/10/94	3.97	5.09	15.52	7.30	3.95	9.88	23.91
5/24/94	4.36	5.40	16.53	5.35	4.35	10.97	24.13
6/7/94	3.06	4.04	16.72	1.96	3.28	10.56	23.95
6/20/94	2.58	4.16	16.31	1.20	4.21	10.80	23.67
7/5/94	2.31	3.71	15.65	0.71	2.21	10.80	23.20
7/19/94	2.85	6.66	18.92	1.03	2.71	10.60	24.55
8/2/94	3.44	5.36	15.38	1.47	3.06	11.15	24.65
8/16/94	3.49	5.62	15.42	1.91	5.05	10.88	23.89
8/30/94	3.67	7.19	12.51	1.99	3.91	11.65	24.29
9/13/94	3.87	7.51	15.45	2.28	3.85	11.70	24.51
9/27/94	2.83	7.71	11.64	1.16	2.90	10.31	24.48
10/11/94	1.75	8.20	9.30	0.30	3.75	5.49	23.67
10/25/94	3.12	9.21	10.31	1.26	3.45	10.45	0.60
11/8/94	3.75	9.71	11.11	2.01	4.18	11.10	25.28
11/22/94	4.14	10.93	12.61	2.45	4.61	12.35	25.76
12/6/94	3.74	11.09	12.01	2.05	3.71	11.79	25.09
12/20/94	3.98	11.40	13.02	2.22	5.61	11.71	25.42
1/3/95	3.81	11.21	13.16	2.16	4.94	12.05	25.18
1/17/95	3.91	11.30	13.05	2.31	4.39	12.05	24.19
1/31/95	3.95	9.05	9.27	2.46	4.30	12.01	25.63
2/14/95	4.19	5.18	12.74	3.80	4.07	11.45	24.21
2/28/95	4.41	8.09	11.70	7.78	5.62	7.21	24.20
3/14/95	3.49	7.34	12.10	7.80	3.88	8.19	24.70
3/28/95	3.70	7.65	12.94	6.25	3.91	7.53	24.70
4/11/95	3.71	7.69	12.69	6.29	3.58	9.16	23.73
4/25/95	2.64	6.47	11.75	3.68	2.88	7.86	23.58
5/9/95	3.81	10.95	10.77	4.15	4.30	10.31	23.85
5/23/95	3.31	9.29	9.35	1.80	2.99	9.25	23.84
6/6/95	3.97	10.70	9.91	1.90	5.09	11.20	23.79

NAS PENSACOLA IWTP RCRA RECOVERY WELL WATER LEVEL BELOW TOP OF CASING

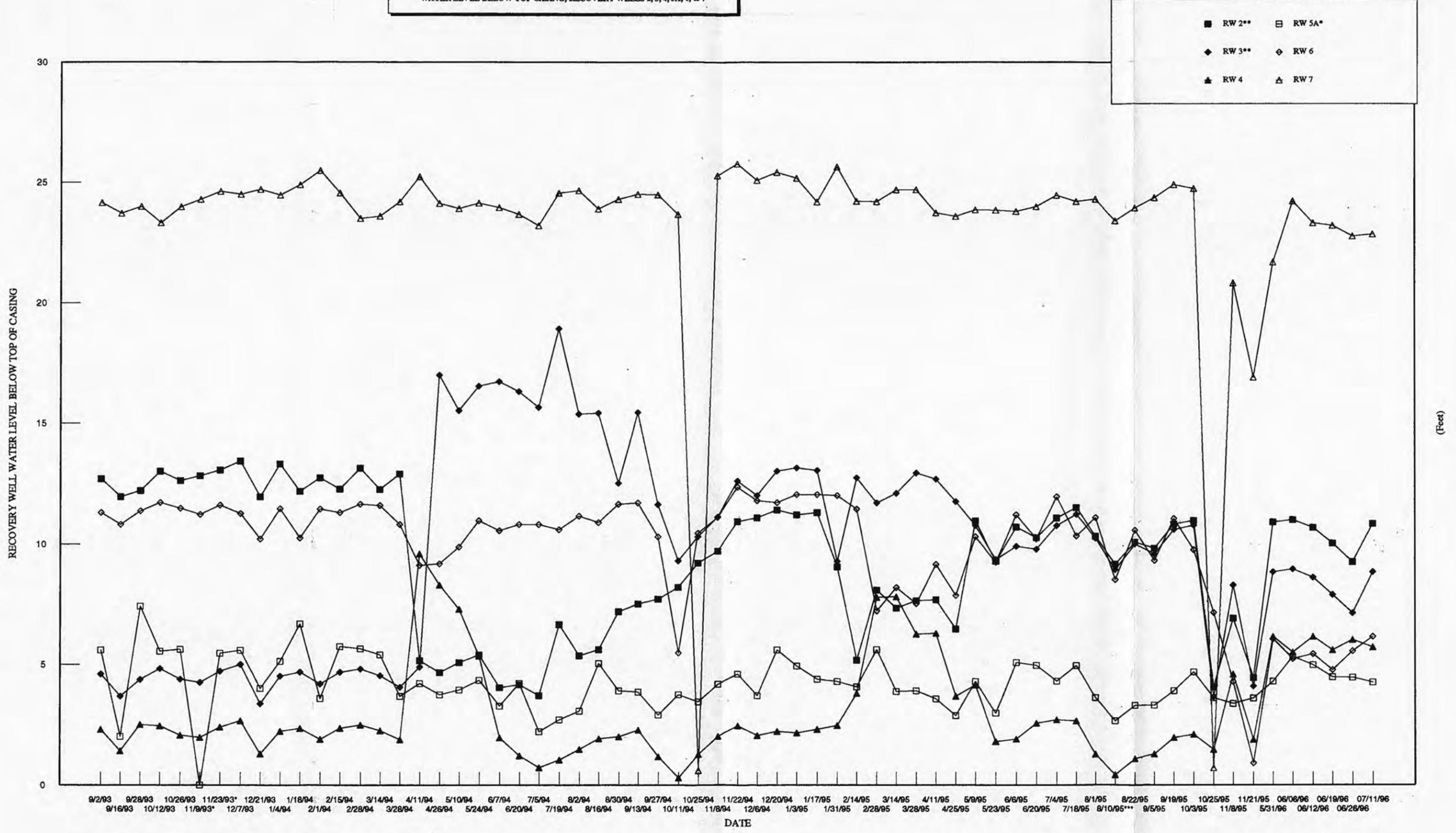
DATE	RW 1** WLBTC (feet)	RW 2** WLBTC (feet)	RW 3** WLBTC (feet)	RW 4 WLBTC (feet)	RW 5A* WLBTC (feet)	RW 6 WLBTC (feet)	RW 7 WLBTC (feet)
6/20/95	4.31	10.27	9.78	2.56	4.97	10.21	23.99
7/4/95	4.35	11.07	10.75	2.70	4.31	11.96	24.45
7/18/95	4.28	11.50	11.22	2.65	4.95	10.33	24.20
8/1/95	2.73	10.32	10.24	1.26	3.61	11.09	24.31
8/10/95***	2.81	9.15	8.93	0.42	2.65	8.52	23.40
8/22/95	2.91	10.08	10.00	1.09	3.31	10.57	23.92
9/5/95	2.91	9.82	9.58	1.27	3.30	9.32	24.35
9/19/95	3.61	10.82	10.60	1.96	3.91	11.05	24.89
10/3/95	3.42	10.97	10.76	2.09	4.69	9.76	24.74
10/25/95	3.22	4.05	3.64	1.46	3.61	7.15	0.70
11/8/95	2.51	6.91	8.28	4.59	3.38	4.28	20.80
11/21/95	3.59	4.45	4.10	1.87	3.60	0.90	16.90
5/31/96	4.24	10.90	8.84	6.14	4.30	6.05	21.67
06/06/96	4.17	10.99	8.96	5.50	5.33	5.23	24.22
06/12/96	4.03	10.67	8.61	6.15	4.98	5.43	23.31
06/19/96	4.06	10.03	7.89	5.60	4.47	4.76	23.20
06/26/96	3.89	9.25	7.12	6.01	4.46	5.56	22.76
07/11/96	4.09	10.83	8.84	5.70	4.26	6.15	22.83

* RW 5 relocated and pump replaced 11/12/93, renamed RW 5A.

** RW 2 only being purged 9/2/93 thru 3/28/94; RW 3 only being purged 3/28/94 to present.
(RW 1 suction valve is presently in the closed position; RW 2 suction valve is presently in the slightly opened position; RW 3 suction valve is presently in the full open position.)

*** The O&M Inspection scheduled for 8/15/95 was moved forward to 8/10/95 to check on the status of the recovery well system following Hurricane Erin; no significant damage was observed.

NAS PENSACOLA IWTP RCRA SITE
WATER LEVEL BELOW TOP CASING, RECOVERY WELLS 2, 3, 4, 5A, 6, & 7



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