







WOODARDCUITAN.COM

Monthly Operating Report

July 2017

0217327.00 So. Sangamon August 15, 2017

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EXECUTIVE SUMMARY

Safety. Safety is the number one priority at Woodard and Curran. We continue to provide monthly training for employees at the plant, provide weekly safety updates and safety videos are assigned to all employees. The safety topic for this month was "Cleaning Up Small Chemical Spills". There were no lost time accidents in the month of July, 2017. Approximately 88 percent of the items identified in the combined list of safety items have been completed.

Compliance. The finished water quality was within regulatory limits and all reporting and sampling requirements were met for the month. A copy of the Operations Report submitted to the Illinois Environmental Protection Agency is included in this report as Attachment A.

<u>Pumping Information.</u> The plant pumped 52.3 million gallons of water from the well field. The facility filtered 48.4 million gallons and approximately 42.2 million was available for distribution.

Operations. There were 0 emergency call-outs for the month. There were 0 customer inquiries for the month.

Maintenance and Repair. For the month of July 2017, there were 8 inspections, 5 preventative and 1 corrective maintenance activities completed.

Budget. Through July 28, 2017, the project is currently \$40,604 under budget for the fiscal year.

Capital Planning. Woodard and Curran is working with Meco Engineering to update and prioritize the Capital Improvement Plan. The CIP is a planning document that includes all projects anticipated to exceed \$5,000 in cost over the next five years. The CIP is an ongoing process and will be refined from time to time as projects are completed and new issues are identified.



1. SAFETY

1.1 SAFETY TRAINING

Woodard and Curran continues to provide safety training for personnel at the plant. This is accomplished by requiring daily safety meetings, weekly safety updates are available to the plant, and safety videos are assigned to all employees and are required to be completed. The August, 2017 safety training topic was "Cleaning Up Small Chemical Spills".

1.2 LOST TIME ACCIDENTS

There were no lost time accidents in the month of July, 2017.

1.3 SAFETY AUDIT

Since Woodard and Curran assumed operational responsibility for the SSWC plant, two safety audits have been completed. The first audit was conducted in May 2015 and identified 89 items needing to be addressed. Approximately 86 percent of those items identified had been addressed when a second audit occurred in November 2016.

The finding for these two audits were combined to produce a list of 42 items needing to be addressed. A safety audit conference call with Shannon Eyler was held on January 25, 2017. To date, approximately 88 percent of the items have been addressed. Remaining items are being addressed at time permits and as funding and time becomes available.

1.4 MISCELLANEOUS SAFETY

There were no miscellaneous Safety items for the month.



2. COMPLIANCE, FLOWS AND LOADINGS

2.1 COMPLIANCE

The finished water quality was within regulatory limits and all reporting and sampling requirements were met for May, 2017. A copy of the Operations Report to the Illinois Environmental Protection Agency (IEPA) is included in Attachment A of this report

2.2 INFLUENT FLOWS AND LOADINGS

The total gallons pumped from the well field was 52.3 MG. The influent parameters were all within the normal range.

		Tab	le 2.2 Infl	uent Conce	entrations a	and Flow		
	рН	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Well Flow Gals (k)
Max.	7.63	15.7	1.87	0.240	-	388	296	2,048
Min.	7.30	14.4	0.62	0.191	-	354	290	1,219
Avg.	7.45	15.0	1.14	0.219	-	372	292	1,688
Total	-	-	-	-	-	-	-	52,333

The influent flow and loadings are summarized below in Table 2.2

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 48.4 MG during the month with a daily average of 1.562 MG and a min/max of 1.113/1.888 MG.

				Table	2.3 Fir	nished Wat	er Qualit	у							
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
Max.	1.3	1.5	8.01	16.7	0.02	0.024	0.98	124	294	1.69					
Min.	CL2														
Avg.	1.2	1.4	7.81	15.2	0.01	0.014	0.79	111	274	1.36					
MCL	-	-	-	-	1.00	-	4.00	-	-	-					
SMCL	-	-	-	-	0.30	0.050	2.00	-	-	-					



2.4 LAGOON DISCHARGE CONCENTRATIONS

The results for the NPDES lagoon discharge permit are summarized below.

		Lagoon Eff	uent Results	;		
Date	Fe (mg/l)	Mn (mg/l)	Chloride (mg/l)	Cl² (mg/l)	pH (S.U.)	TSS (mg/l)
July 19, 2017	0.020	0.194	575	0.09	8.21	0.00
July 27, 2017	-	-	-	0.01	-	-
Minimum	-	-	-	-	-	-
Maximum	-	-	-	-	-	-
Average	0.020	0.194	575	0.05	8.21	0.00
Monthly Avg Limit	2.000	1.00	-	-	-	15
Daily Limit	4.000	2.000	500	0.05	6.0-9.0	30

Table 2.4 Weekly Grab Sample Analysis Results

The Chloride sample for the month of July, 2017, performed by the Springfield Metropolitan Sanitary District, was 19,500 mg/L. The limit for chloride discharge to the sanitary district is 30,000 mg/L

		FINISHED V	WATER PUMPI	NG HISTORY		
	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014	2012-2013
May	32,301,672	33,248,127	33,376,051	37,669,726	31,157,411	29,592,356
June	39,931,402	41,541,321	31,092,539	38,462,951	36,530,691	47,120,577
July	42,164,927	35,378,396	33,123,375	38,674,894	40,908,704	57,780,876
August		35,401,490	38,109,033	33,748,543	42,999,243	42,398,528
September		36,325,215	36,546,171	29,763,075	37,597,085	32,510,603
October		34,374,820	34,783,455	28,803,052	33,916,594	30,278,765
November		30,478,309	27,217,293	28,426,579	31,615,459	27,114,479
December		32,525,530	27,788,637	28,656,869	32,697,551	29,014,035
January		30,449,215	28,510,121	30,346,721	32,499,427	28,007,432
February		27,373,232	26,095,228	26,336,077	28,745,378	25,763,807
March		30,068,363	27,851,811	28,729,919	31,217,486	28,130,190
April		29,625,797	29,292,618	29,270,184	31,690,073	27,991,597
Totals	72,233,074	396,789,815	373,786,332	378,888,590	411,575,102	405,703,245
Average		1,087,095	1,022,702	1,038,051	1,127,603	1,111,516
Maximum		2,061,098	2,177,926	1,837,344	2,010,587	2,546,901
Minimum		275,315	-	349,690	363,767	142,411



3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

Leaks on WesTech System. Henson Robinson was on-site in late July to repair a leak that has occurred on the backwash line on Bank #2. There was no interruption in service.



Softener System Alarm. On July 21, 2017, the limit switch on IEX #4 caused an alarm. The limit switch was adjusted and the unit was placed back in service. There was no interruption in service.

3.2 EMERGENCY & SERVICE CALLS

Service Calls:

• Heartland Fired and Equipment was on-site to inspect the fire alarm and sprinkler systems July 17, 2017.

3.2.1 Emergency Call-outs

• There were 0 emergency call-outs for the month of July, 2017.



3.3 CUSTOMER INQUIRIES

There were no customer inquiries for the month of July, 2017:



4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of July, 2017, there were 8 inspections, 5 preventative and 1 corrective maintenance activities completed.

4.2 CORRECTIVE REPAIRS

• **Repairing Leaks.** A leak had developed on the backwash line near the backwash pumps. Pictured below is the backwash line with the broken coupler removed and a close-up of the broken coupler. This work was accomplished while flows were low. There was no disruption of service.







• Well Painting and Repair. Plant Operations staff made additional corrective repairs to areas where corrosion is taking place. All ten wells have been inspected and repaired where needed. Below are pictures of Well 9 prior to the repair and after repairs were made.











• Aerator Maintenance and Inspection. On July 7, 2017 Plant Operations staff performed maintenance on the Aerator. Maintenance Activities included cleaning of the screens around the motors with the Shop Vac as well as power washing the air intake screens. Inspection of the PVC tubing was also performed.



• Well Field Maintenance. Mike Summerfield mowed the well field the last week of July.







• **Backup Generator Maintenance.** Cummins was on site July 24, 2017 to do maintenance on the backup generator located on the east side of the building. As part of the inspection, it was recommended the existing rain cap be replaced. A new rain cap was ordered and has arrived at the plant. Plant Operations staff will install the cap as time allows.





5. PROJECT MANAGEMENT & SUPPORT

5.1 STAFFING & TRAINING

- Woodard and Curran continues to train and provide staffing to the plant as needed.
- Woodard and Curran IT staff are working with plant personnel on Hach Wims. Hach Wims is the programmed utilized by Woodard and Curran for developing IEPA Monthly Operating Reports and storage of test data. We are working through the issues discovered with the reporting earlier in the year as time allows.

5.2 CORPORATE SUPPORT

The following individuals, either on-site or remotely, provided assistance in operation and/or maintenance of the plant in July, 2017.

- Marc Thomas
- Joe Hurley
- Ray Giguere
- Brian Ravens
- Shannon Eyler
- Celina McManus

- Wendy Foreman
- Renee Lanza
- Chip Ridlon
- Stephanie Crowell
- Jackie Smith
- Steve Niro



5.3 BUDGET

Table 5.3 below is a breakdown of the current budget through the 1st quarter of the 2017-2018 budget.

Budget Category	Month Budget	Month Actual	YTD Budget	YTD Actual	Annual Budget	Over (under)	% of budget
Labor (D.L. + OH)	\$24,213	\$19,780	\$72,638	\$60,416	\$290,551	(\$12,222)	21%
Utilities	\$8,150	\$2,260	\$24,450	\$18,316	\$97,800	(\$6,134)	19%
Chemicals	\$14,583	\$2,046	\$43,750	\$25,777	\$175,000	(\$17,973)	15%
Maintenance & Repair	\$9,102	\$4,783	\$27,306	\$51,073	\$109,225	\$23,767	47%
Chloride	\$13,522	\$1,148	\$40,565	\$13,672	\$162,260	(\$26,893)	8%
Lab Supplies and Equipment	\$1,882	\$2,321	\$5,646	\$4,911	\$22,584	(\$735)	22%
Office Supplies	\$216	\$1,129	\$647	\$2,340	\$2,586	\$1,694	90%
Miscellaneous Expenses	\$1,141	\$609	\$3,424	\$4,195	\$13,695	\$771	31%
Other Operating Costs	\$1,398	\$1,080	\$4,194	\$5,006	\$16,776	\$812	30%
Subtotal of Costs for Contract Year 2	\$74,206	\$35,156	\$222,619	\$185,706	\$890,477	(\$36,913)	21%
Fixed Fee for Contract Year 2	\$7,421	\$5,892	\$22,262	\$18,571	\$89,048	(\$3,691)	21%
Year One Transition	\$1,366	\$1,366	\$4,097	\$4,097	\$16,389	\$0	25%
Total	\$82,993	\$42,414	\$248,979	\$208,374	\$995,914	(\$40,604)	21%

Table 5.3 Budget Table



6. CAPITAL PLANNING

6.1 APPROVED CIP PROJECTS CURRENT STATUS

No new information is available.

6.2 DRAFT CAPITAL IMPROVEMENT PLAN

The CIP is a planning document that includes all projects anticipated to exceed \$5,000 in cost over the next five years. The CIP is an ongoing process and will be refined from time to time as projects are completed and new issues are identified.

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7:00 20:0 17:10 14:49 0.014 14:10 1.24 7:70 0.02 19:00 1.26 0.75	1.52 40.00		0.75 0.75	0.167	-		-	6,843 31,050	50		_
7:00 19.2 1.667 1.497 0.018 22.30 1.407 0.018 22.90 2.77 0 2.70 2.17 0 0.75 <t< td=""><td>0.82 19.00</td><td></td><td>0.75 0.75</td><td>0.186</td><td>-</td><td>-</td><td>28 25</td><td>9,124 41,400</td><td>00</td><td></td><td></td></t<>	0.82 19.00		0.75 0.75	0.186	-	-	28 25	9,124 41,400	00		
7:00 18.6 1.6.4 1.4.68 0.009 2000 1.24 38.0 1.29 28.00 1.34 0.75	1.40 32.00		0.75 0.75	0.189	-	30	26	4,562 20,700	00		
7:00 18.1 1.567 1.388 0.018 188.0 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 0.75	1.29 28.00		0.75 0.75	0.164	-	29 32	29 28	9,124 41,400	00		_
7:00 11:1 14.1 1.267 0.009 17.20 12.87 0.009 17.20 12.87 0.009 17.20 12.87 0.009 17.81 12.87 0.009 17.81 12.87 0.009 17.81 12.87 0.013 11.81 12.87 0.013 11.81 12.87 0.013 11.81 0.075 0.75	1.16 25.00	-	0.75 0.75	0.183		-+	34	+	00		-
7:00 17.8 1.327 0.013 181.0 2.00 1.33 2.00 2.13 0.075 0.75 0.75 7:00 18.9 1.422 1.41 1.33 2.00 1.33 2.00 2.73 0.075 0.75	1.19 22.00		0.75 0.75	0.138	+	33	-	-	00		_
7/00 18.2 1.442 U/10 2.59 40.0 1.24 1.242 0.15 <	1.35 26.00	-	0.75 0.75	0.139	-	40	35 36	-	00		-
7:00 18.1 1.4.2 1.4.3 0.009 20.1/0 2.18 38.0 1.1.5 0.00 0.75 0.75 0.75 7:00 12.0 1.5.1 1.30 0.011 1.33 0.011 1.32 0.009 20.7 31.0 0.92 19.00 1.42 0.75	00.00		c/.n c/.n	811.0	+	+	39	+	8		
7:00 16.0 1.191 1.040 0.016 229.0 1.89 43.0 1.64 51.0 1.94 30.00 2.92 0.75	0.92 19.00	4	67.0 67.0	75 0.147 1.003	0.516	32 39	33 32	9.124 41.400	00		-
43.30 <th< td=""><td>1.94 30.00</td><td>-</td><td>0.75</td><td>0.118</td><td>+</td><td>8</td><td>+</td><td>+</td><td>50</td><td></td><td></td></th<>	1.94 30.00	-	0.75	0.118	+	8	+	+	50		
166 RTW Sample Timp 15.1 *C Atraining 88.0 mp/L 0.99 TDS 48.0.0 mg/L calcum Hardness 59.8 mg/L 1.40 PH 7.35 SU calcum Hardness 59.8 mg/L ar Final Reading Last Month PH 7.35 SU calcum Hardness 59.8 mg/L ar TO APPLICATION PH 7.35 SU calcum Hardness 51.9 mg/L					-	1	-	-			
0.99 TDS 40.0 mg/L Calcium Hardness 59.8 1.40 pH 7.85 SU Choinde 40.4 rf To E APPLICATION rt OF APPLICATION rt OF APPLICATION rt OF APPLICATION rt OF APPLICATION	Alkalinity	0 mg/L	Sulfate	9.1 mg/L							
1.40 pH 7.85 SU Chloride 40.4 ar Final Reading Last Month TT G APPLICATION	Calcium Hardness										
					and the second				-		
		Tune of C	horino I lead		Turne of Eluoride	Turne of Elioside Head					
			Chlorine Gas		in add	Hydrofluosilicic Acid	ic Acid 23	3%F			
rine Solution Fed 1 certify that the information in this report is complete	ort is complete			%		Sodium Fluoride	1				
% Fluoride Solution Fed and accurate to the best of my knowledge	dge		odium Hypochlorite _12.5	%		Other					
40 % BisulfiteSolution Fed	or Req:		Chlorine Test Kit Used:			Type of Test Instrument Used:	Instrument	Used:			
4. 33 % Phosphate Solution Fed Bacterials Sent:					_						

Attachment A

WOODARD

Membrane Integrity Test	er		Bank 1 Bank 2 Bank 3			S PASS								PASS					PASS						PASS												
ine Inte	Post Filter		Bank			PASS								PASS					PASS						PASS												
Membra			Bank 1			OA55								PASS					PASS						PASS												
	T	PO4 3-		1.41	1.69	1.35	1.51	1.32	1.26	1.43	1.30	1.21		1.39	1.39	1.45	1.39	1.30		1.39	1.43	1.39	1.37	1.62	1.28		1.32	1.14	1.30	1.24	1.43				3%		sed:
				-	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.5	1.4	1.3	-	+	1.3	-	+	1.3	1.4	+	1.4	-	1.3	-	1.4	+	+	1.3	1.3				id 23	%F	ument []
		Dist. Cl res F = Free	T = Total F mg/L T mg/L	1.3	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.3	1.2	1:1		1.2	1.3	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	12	1.2	1.2	1.2			Used	Hydrofluosilicic Acid	luoride	est Instr
		u	_	0.79	0.90	0.71	0.73	0.80	0.80	0.81	0.75	0.80	0.79	0.84	0.87	0.78	0.77	0.77	0.79	0.76	0.71	0.98	0.79	0.81	0.77	0.74	0.77	0.77	0.78	0.72	0.77		NOLLON	Type of Fluoride Used	lydrofluo	Sodium Fluoride	Type of Test Instrument Used:
	Finished	Total	mg/L	0.014	0.008	0.010	0.012	0.010	0.014	0.015	0.014	0.024				-	0.008		+	0.019	-	-	0.015	-	0.015		0.016	-	-	0.013	0.015		FLUORIDATION	Type of F	т	w c	
	E	Total Fe	mg/L	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.00		0.02			0.01	-		0.00		-	0.01	-	0.01		0.01	-	-	0.01	0.01		-			_	
		Total Hard.	mg/L	108	116	110	120	100	108	110	104	118	110	110	-	+	108	+	+		-	+	118	+	120	-	122	+	+	120	120					%	
			mg/L	270	272	280	272	280	278	280	264	292	278	270	270	282	912	278	262	274	294	260	270	272	266	286	272	264	268	264	270					rite 12	lsed:
		Ha		7.84	7.80	7.76	7.79	7.85	7.79	7.84	7.91	7.79	7.86	7.90	7.84	7.51	7.80	17.7	7.70	7.52	7.85	7.80	7 70	7.80	7.78	7.78	7.79	7.98	7.97	8.01	7.96				Gas	Hypochlo Ivnochlo	Chlorine Test Kit Used:
	EX	Mn	mg/L													1	+	T	T			1	1				1	1	T						Chlorine Gas	Calcium Hypochlorite 2 Sodium Hypochlorite 12.5	Chlorine
est	Post IEX	Total Total Fe Mr	mg/L														1	T					T						T					Used	0	0 0.	0
Chemical Test	-	Mem	NTU	0.12	0.11	0.14	0.13	0.16	0.12	0.14	0.21	0.13	0.11	0.14	0.13	0.20	0.11	0.22	0.12	0.14	0.15	0.12	0.15	0.10	0.14	0.24	0.13	0.15	0.11	0.11	0.15		INATION	Type of Chlorine Used			
o	Post Filter	Total	тgл	0.031	0.022	0.028	0.026	0.039	0.030	0.036	0.032	0.084	0.037	0.034			0.111		0.030	0.032			0.032		0.043		0.028			0.030	0.033		CHLORINATION	Type of			
	•	Total Fe	mg/L																																		
	ter	Sol	-	2 0.036	0.385 0.020	0.368 0.029	0.370 0.033	0.390 0.035	0.305 0.042	7 0.037	0.350 0.029	0.297 0.086	0.394 0.032	0.389 0.020	0.295 0.017	0.357 0.025	0.308 0.035	0.379 0.036	0.381 0.033	0.393 0.031	0.395 0.026	0.395 0.038	0.379 0.032	0.382 0.027	0.386 0.042	0.368 0.033	0.368 0.035	0.029	2 0:029	0.376 0.025	0.384 0.043						
	Pre Filter	Tot	L mg/L	0.382	0.38	0.36	0.37(0.39(0:30	0.377	0.35(0.29	0.39	0.38	0.29	0.35	10.305	0.37	0.38	0.39	0.39	0.39	0.375	0.382	0.386	0.368	0.368	0.412	0.372	0.376	0.384						
	-	al Tot	/L mg/L	31	33	10	25	1	31	8	60	00	5	0	4 5	- 2	2 0	5	82	3	2	2 9	3 1	22	4	2	0 0	8	5	3	0		-	_			
		al Total			2 0.203										7 0.204	-			-		-	677.0 2		7 0.225	-	-	6 0 233	-	9 0.225	7 0.233	5 0.240					omplete	:De
		Total Total Hard. Fe		-	4 1.12			0 1.68	8 1.16					-	1.87	+	-	+	-		-	1.22	-	0 1.07	-	+	4 1.16	+	8 0.99		2 1.25		-	_		port is co	Cert or Rea:
	Raw	Total Total Alk. Hard.			296 374		-						-	-	292 366 204 380	+		-	-		-	370	-	370		-	94 3/6 374	+	368	370	372					n this re nv know	
		Temp A	12	-	14.7 29							-	-	-	15.6 292 14.8 204	-	-	-	-		-	767 7.61	-	15.3 292			14.9 290 14.9 290	-	14.7 292	15.0 292	14.9 292		-	-		best of r	
		pH Te		-	7.39 1-		-			-			-	-	-	-	-	-	-	-	-			7.48 15		-	-	-	-	7.52 15	7.52 14					t the info	2
<u></u>	-			_	.017 7	0.017 7.38	1.600 0.018 7.36	0.013 7.48	0.004 7.42	0.017 7.39	0.018 7.42	0.012 7.42	.010 7	1.661 0.017 7.50	1.440 0.017 7.38	1.1/3 0.011 1.44	1.310 0.014 1.43	1.491 0.018 7.45	1.561 0.018 7.47	1.524 0.014 7.30		0.017	1.505 0.018 7.47 1.499 0.014 7.47	0.018 7.	0.009 7.	0.018 7	0.009 1.41	1.042 0.015 7.63	0.009 7.50	0.011 7.	-		_			I certify that the information in this report is complete and accurate to the best of mv knowledge	Reported by:
tals	-		(M gal) (M gal)	1.336 0.	1.572 0.017	1.367 0.	600 0	1.524 0.	1.447 0.	0.989 0.	1.514 0.	1.539 0.	1.595 0.	661 0	440 0	1/3 0	319 0	491 0.	561 0.	524 0.	1.171 0.	1.316 0.	1.505 0.		1.468 0.	1.398 0.	1.267 0.	042 0.	1.312 0.	1.336 0.	1.040 0.016	43.30 1.66 0.99	1.40			and	Re
Pumping Totals	4	Gallons Water Filtered Treated		-			-					-		-+		-		+	-			-		1			_	-	-							papa	p
Pun			(M gal) (M gal)	-	1.784	-	70 1.819	17 1.648	30 1.656	19 1.113	1.666	35 1.643		39 1.833		-	35 1543		+	1.705	-	-	24 1 710	+	54 1.614	-	1.414 8 1.355	-	+	28 1.519	1.191		Aonth			lution Fe	% Bisulfite Solution Fed
		rs Total			9 1.946	-	-	-	-	-		-	-	-	1.771		-	+	-			1.001		2 1.796			1.240	-	9 1.546	2 1.628	1.245		Ave. *Enter Final Reading Last Month	POINT OF APPLICATION	ż	12.5 % Chlorine Solution Fed 23 % Fluoride Solution Fed	ulfite Sol
L	I	E C	Ran	20.2	21.9	19.0	21.5	19.6	20.3	14.8	22.2	21.6	21.7	20.6	19.3	15.2	21.5		21.0	20.9		18.3	20.9	19.2	18.6		17.8		18.9	20.2	16.0		eadir	PLIC	METER LOCATION:	% Flu	% Bis
L	L	Time Hours Meter Filter	Read F		2:00	7:00	7:00	7:00	7:00	7:00	7:00	7:00				00:7	00:/		7:00	7:00	7:00	7:00	7:00	7:00	7:00	7:00	7-00	7:00	7:00	7:00	7:00		I R	AP	S	5	

Attachment A

South Sangamon Water Commission July Monthly Operation Report

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

