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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/782-1654

May 16, 2003

John M. Phillips
Baker Donelson Bearman & Caldwell, PC
1800 Republic Centre
633 Chestnut Street
Chattanooga, Tennessee 37450

RE: FREEDOM OF INFORMATION ACT (FOIA) REQUEST
Bureau of Water FOIA Log No. 2003-823
Documents/Files: Pekin Inspection Report

Dear Mr. Phillips:

The FOIA Sector, Bureau of Water, has processed your request dated May 13, 2003 for public records pursuant to the Freedom of Information Act ("FOIA") (5 ILCS 140/1 et. seq.). Information pertaining to the subject of your request, as referenced above, is enclosed.

If you require further assistance from the Bureau of Water, please contact Kelly Kates at (217)782-1636.

Sincerely,

Karen Cox

Karen Cox
Acting FOIA Coordinator
Division of Water Pollution Control
Bureau of Water

KAC/j:docs/FOIA 2003_823 Phillips.doc.

cc: File

Enclosures

MEMORANDUM

SUBJECT: Pekin -Wastewater Treatment Facilities (WWTF)
(Tazewell County) Compliance Inspection (CEI)
NPDES Permit No. IL0034495

TO: DWPC-FOS and RU

FROM: James E. Kammueller, DWPC-FOS, Peoria Region

DATE: February 19, 2003

INTERVIEWED: Dominick Gasper, Project Manager, United Water
Larry Wolfer, Operator, United Water
Don Hughes, Project Manager, United Water (also by phone subsequent to inspection)

On the above date, the writer, accompanied by ISU "Career Days" student Christina Armatys and Dunlap High School "Job Shadow" student Gareth Casady, conducted the subject inspection. Details of this WWTF may be found in my 5-17-00 CEI. This report will serve to update the files. An effluent grab sample was collected 2-24-03.

Sewer System:

The system is 35% combined with 4 CSO points all north of the WWTF. Four interceptors deliver flow to the WWTF including two 30" sewers from the north (one combined and one sanitary), a 27" sanitary from the south and a 24" sanitary from the east. Gates are provided on all interceptors to control flow into the WWTF, and into the 002 settling and chlorination basins. The two 30" sewers enter a junction box that contains 4 gates. These 4 gates are intended to control flow to 002 and to a 30" sewer that delivers flow to the WWTF. Reportedly, these 4 gates no longer work and 3 are chained in the open position and 1 is closed. This 30" sewer and the 27" from the south join at a downstream junction box with a manual gate that is used to control flow into the WWTF. The 24" from the east enters downstream of this gate and reportedly the manual gate on this sewer is rarely adjusted (refer to attached flow diagram).

Mr. Gasper indicated the last CSO events were Feb. 14 at Caroline (004) for 1 hour, 1.2 hours at Fayette (006) and 4.1 hours at 002. He didn't think any flow diversion had occurred into WWTF #2 for storage. I recommended that system CSO should not occur until the WWTF was continuously treating DMF, the WWTF #2 and State Street storage basins were in full use and 002 was in use. A CSO operational plan is needed.

Lift Stations:

There are approximately 14 stations on the sewer system. In 2002, under a grant, the City upgraded several of the lift stations to comply with IRSSW as follows (work includes new generator sets and telemetering at all stations except Cape Court):

STATION	WORK
State Street	New pumps, building, mechanical bar screen and flush system for excess flow storage tank
Brinkman	New pumps
El Camino	New pumps
Crescent	New Pumps
Rosewood	New pumps
Cape Court	New pumps

Industrial Wastes:

Recent problems have been experienced with slugs of grease entering the WWTF. There have been past problems with various types of industrial wastes entering the WWTF.

WWTF

Loading:

DAF is 4.5 mgd and DMF is 8.7 mgd. The files indicate design organic loading is 7902 lbs. BOD/day and 9612 lbs. TSS/day. WWTF flows are restricted by use of the inlet gate on the 30" and 27" interceptors, and the 4 upstream gates on the two 30" sewers. Mr. Gasper indicated they try to treat all they can before experiencing MLSS washout. Polymer is fed to the primary effluent to promote settling. Peak flows of around 10 mgd are at times allowed to enter the WWTF but it is uncommon to see 24-hour flows of much over 6 mgd receive full treatment. Full treatment of DMF over a 24-hour period is rare.

The 2000 census population of Pekin was 33,857 (see attached 3-20-03 e-mail from Dennis Kiefl. The North Pekin

population served by Pekin (formerly tributary to WWTF #2) is 1,574. There are around 12,150 water users in the City of Pekin and just a few less sewer users. Pekin water usage averages 2.9 mgd with about 26% of this being used by local industries including Pekin Paperboard and Williams Energy who have their own WWTF's but discharge sanitary wastes to Pekin.

Loading Evaluation:

A DMR Summary is attached for the past 5 years and indicates BOD loading is 6275 lbs./day at an average flow of 3.5 mgd and average BOD concentration of 215 ppm (40,000 PE). A review of basic unit sizing is as follows:

Primary Tanks:

2 @ 45' dia. = 3179 ft^2
2 @ 55' dia. = 4749 ft^2
7928 ft^2

Final Clarifiers:

2 @ 70' dia. (in donuts) = 7480 ft^2
1 @ 70' dia. (FBOP) = 3790 ft^2
11,270 ft^2 (400gpd/ft^2 @ DMF)

Aeration:

2 contact tanks = 54,900 ft^3
2 reaeration tanks = 54,900 ft^3
1 FBOP = 23,200 ft^3
133,000 ft^3

(Assuming 35% BOD reduction in primaries, aeration loading is 30 lbs. BOD/1000 ft^3 at current BOD load)

Aerobic Digester:

1 tank = 23,200 ft^3

(Assuming 35% BOD reduction in primaries, only 1 ft^3/PE digester capacity is provided vs. 2 ft^3/PE per IRSSW)

Pekin (Tazewell County) -Wastewater Treatment Facilities Compliance Inspection (CEI) NPDES Permit No. IL0034495

Restricted Status:

This is again being recommended for reasons including the failure of the City to investigate the possible SSO on the 27" interceptor upstream of the WWTF, failure to treat DMF and failure to comply with CSO requirements of the NPDES Permit and PCB CSO exception.

WWTF Inlet and Preliminary Treatment:

A bottleneck reportedly exists at the inlet area. This is associated with grit tank hydraulic limitations as flows approach DMF, and with the aging mechanical bar screen that sometimes experiences missed cleaning cycles due to float system failure. The inlet channel just downstream of the WWTF interceptors will at times overflow. Sewage debris (paper and rubber goods) was present on top of channel grating during this visit. The overflow had reportedly occurred several weeks ago.

Screening:

A "Channel Monster" cutter and mechanical bar screen are provided.

Grit Tank:

In use.

Primary Clarifiers:

All 4 in use with minor repairs needed to one collector and one scum well valve. Partial bypassing of these units occurs at flows above approximately 7 mgd. Bypass flows are pumped to secondary treatment. The units are operated in pairs and the SE and NW units floated years ago and flow splitting is unequal. Shear gates are the only means of flow splitting.

Flow Measurement:

Influent flow was 6.6 mgd and effluent was 7.5 mgd. Influent flow readings are from in-line meters after the primary clarifiers. The influent meter readings are reportedly not as accurate as the effluent meter readings and are also influenced by lag time difference, side stream returns and partial bypassing of the primary clarifiers at flows above 7 mgd. As noted on DMR's, effluent flows are normally higher than influent

flows. DMR reported flows are the same when one meter is out of service and the same flows are reported for both using the meter in service. The air temperature was around 40 degrees and the approximately 6" recent snowfall was melting. The flow meters are calibrated quarterly by Koener Electric.

Primary Effluent Pump Station:

Contains 5-2000 gpm submersible pumps. Polymer feed is provided.

Activated Sludge Process:

Two concrete "donuts" built around 1970 are provided and operate in the contact stabilization mode, as there are no provisions for return sludge to enter the contact tank. However, primary effluent can be pumped to either the reaeration or contact tanks. Both donuts originally contained an aerobic digester but the digester in the north donut was converted to an aeration tank, and a 3rd final clarifier built, under the WWTF expansion that went on line in 1997 to accommodate the Federal (FBOP). The loss of this north digester capacity has reportedly created hydraulic capacity problems in the south digester. WAS from the original north aeration tank is pumped into the new FBOP aeration tank and sludge is wasted from the new final clarifier to the south digester. It is felt this enables the pumping of a "thicker" WAS to the south digester and reduces the time it takes to fill the digester. I recommended this practice be discontinued as it placed additional D.O. demand on the FBOP tank, and on an already stressed aeration system.

Observations indicated the activated sludge process was not producing an optimum effluent quality and was in need of improved operation and maintenance (O&M) as follows:

1. The effluent from all three Cl_2 contact tanks was gray and turbid with solids present. Some of these solids were due to sloughing of biological growths from the sides of the contact tanks located within the original 1970 "donut" activated sludge process "package plants" and highly visible solids loss from the new FBOP final Clarifier (possibly associated with the practice of putting WAS in the FBOP aeration tank). The FBOP final clarifier effluent was gray and turbid and the weirs and launders needed cleaning. Active gasification was noted within the new FBOP chlorine contact tank. Sludge is not routinely

removed from these 3 contact tanks, and the tanks within the donuts are not baffled at the outlet. The small intake area of the donut chlorine contact tank effluent pipes may be creating some velocity current conditions that helps to draw solids into the pipes. Mr. Gasper had previously expressed uncertainty that the donut tanks could be isolated and drained due to structural concerns from adjacent tankage. However, the divider walls are concrete and he indicated the City engineers (Farnsworth) now feel this draining can be done. The tanks within the donuts have apparently never been completely drained for cleaning and the FBOP contact tank has reportedly been cleaned 3 or 4 times since it went on line in 1997. This FBOP tank has provisions for draining and cleaning with no structural concerns.

2. Low D.O. and D.O. control has been a continuing problem. Fine (to medium-fine) bubble diffuser sheaths were installed in all aeration compartments, except the south aerobic digester, around 1990 by Entech. The original Sparjair tube diffusers were left in the south digester. Around 1996 the fine bubble diffuser sheaths in the north aerobic digester were replaced with new ones as part of the FBOP upgrade when this digester became an aeration tank. In the fall of 1999 Entech installed new sheaths in the north and south contact and reaeration tanks. Therefore, the FBOP aeration tank sheaths are now over 6 years old and the other 4 aeration tank sheaths are about 3.5 years old (as compared to a typically life of about 2 years especially with lower output pressure centrifugal blowers). Mr. Gasper indicated sheath replacement work is difficult, as it requires a crane. I advised this was typical. The air patterns were coarse and non-uniform and appeared to be highly associated with "blow-out" conditions around failed and clogged sheaths. This condition, the age of the aeration blowers, lack of adequate process control testing (few D.O. tests with a field meter or MLSS tests via "Standard Methods") would appear to be contributing to the poor quality effluent with the gray color indicating lack of optimum BOD removal. Mr. Gasper didn't know what the MLSS concentration was without checking the lab data. It appeared to be around 2000 ppm and the MLSS had a dull brown color indicating lack of good aeration and control.

3. Process control testing was also in need of improvement and was unchanged from that reported in my 2-13-02 CEI. Routine field D.O. meter readings were not being made to verify accuracy of the stationary D.O. probes within the donuts, and conventional MLSS lab testing was not being routinely performed to verify the accuracy of the MLSS meter.

Blowers:

There are 3 centrifugal blowers - one is electric and 2 are Caterpillar natural gas engine driven units.

Chlorination:

Gas is provided and seasonal requirements apply to the fully treated 001 effluent.

002 Combined Sewage Outfall:

Observations of the CSO settling basin and chlorination basins (002) indicated that various waste streams from around the WWTF, such as grease and scum from the primary clarifier scum wells, were being dumped into the first basin, which is the settling basin. A trail of black scum/sludge was observed running down the access ramp to the basin. Mr. Gasper indicated Hunter Sewer had cleaned out the primary clarifier scum wells yesterday and it was the practice to dump such material into the basin. However, he said it was practice to limit the discharge into the basin to mostly decant and as few solids as possible. He did acknowledge that it was difficult to separate decant and solids in the tank truck. He said that as many solids as possible were dumped into the "vactor station dump pit" adjacent to the basin. Liquid from this pit is both piped and drains across the ground surface into this basin. We discussed proper disposal of such wastes and he was advised they should not be dumped into the basin as they could be discharged via 002. He felt that these waste were being returned to full treatment via the basin drain/pump system. However, I indicated this system would not collect all the settled waste solids unless they were actually flushed into the drain sump. No flushing system exists. According to Mr. Gasper, the dump pit was built in the 1980's at the time when the sidewalls of the settling and chlorination basins were being concrete lined. At this time, a drain line was installed from the pit to the settling basin but it has since become mostly plugged.

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The basin and the chlorine contact tank contained considerable sludge accumulations. Sludge appeared to be 2 to 3 feet deep in the south end of the settling basin. Mr. Gasper indicated they try to clean the settling basin 3 to 4 times/year (especially in the fall) but their end loader cannot maneuver in wet sludge. I advised that flushing water was needed for cleaning both basins after each use. The chlorination basin cannot be effectively cleaned as it has no bottom drain system (just a pipe about 12" above the bottom that drains out the side and back to the settling basin). Attempts are rarely made to clean this basin per Mr. Gasper.

Sludge Handling:

WAS from the south aerobic digester and primary sludge are sent to a belt thickener that reportedly produces a 6 to 8% sludge. This enters the 1988 anaerobic digester. Sludge from the 1988 digester is stored in the two 1939 digester tanks ahead of the sludge lagoon. The vacuum drying beds have not been used since 1998. Sludge from the lagoon is land applied by a contractor (Bontz). The belt press was in use and strong ammonia odors were present in the building. The sludge lagoon was ice/snow covered.

The 1964 digester tank is cracked and leaks. Repair of this unit was part of the 1996-97 Federal (FBOP) WWTF upgrade. The newest (1988) digester functions as the primary digester unit and the two oldest 1939 digesters serve only for sludge storage ahead of the sludge lagoon. The 1939 units are not heated or mixed but gas is returned back to the 1988 system. The Caterpillar generator, fired with 1988 digester gas, provides electricity for much of the WWTF, except the 200 HP blower for the activated sludge process. However, during the winter, the electric heaters in the WWTF buildings place an overload on the generator and it is only operated on 2nd and 3rd shifts when some heaters can be turned off. It was recommended the heaters be converted to line voltage. Hot water from this engine is circulated through the digester heat exchanger boiler tubes and used to heat the 1998 digester (sludge temperature was 99° F.). United Water is reportedly trying to reduce electrical costs wherever possible. The Cat. engine/generator were overhauled in 2001.

Repair of the 1964 digester, and the operation of it and the 1988 unit as primary digesters, could possibly provide more

gas and enable operation of one of the aeration blowers on digester gas.

Standby Equipment:

Only one electrical service source is provided but the digester gas Caterpillar generator can provide power to the WWTF and 2 of the 3 activated sludge process blowers are natural gas powered.

Laboratory:

All NPDES testing is done by PDC labs, except for pH, Cl_2 residual, and most fecal coliform. Samples for BOD and TSS are collected Sunday through Thursday. A review of lab results from PDC indicates BOD and TSS monitoring was not performed Wed. Jan. 1, Mon. Jan. 13 or Mon. Jan. 27. Also, ammonia daily max. is being reported rather than weekly max.

Operations:

JMM and Pekin entered into a 10-year operations contract July 1993. This included operation of the WWTF's, lift stations and CSO monitoring. Around 1998 United Water purchased JMM. In Feb. 2003 the City gave United Water a 2-year contract extension with options for 2 additional 1-year extensions. Dom Gasper retired Feb. 28, 2003 leaving the WWTF without a Class I operator in charge. The nearest Class I United Water has is their Regional Manager Alice Ohrtman located in Freeport, Ill. Mr. Hughes reportedly holds an Ill. Class II certificate. I advised of the need for a Class I on site at least ½ time each day until he obtains a Class I license. Subsequent to this visit, I had several phone calls with Mr. Hughes regarding contracts for Agency approval for both the temporary Class I operator and for the 2-year extension.

SUMMARY

Apparent Violations:

1. A class I certified operator is not in responsible charge of the WWTF.

2. An investigation has not been completed as requested regarding the south interceptor SSO.

3. CSO's are occurring prior to maximum utilization of treatment capacity and system storage capacity.

4. DMF is not being given continuous treatment prior to use of 002, or the occurrence of system CSO.

5. The 001 final effluent was gray and turbid with visible solids.

6. Intermittent fecal coliform exceedences are noted on DMRs for 001 and 002.

7. Sludge, scum, and grease wastes and/or decant from such wastes, are being discharged into the 002 settling basin.

8. Leachate from the vactor pit adjacent to the 002 settling basin is being allowed to enter the basin.

9. Adequate routine O & M, including but not limited to the following, was not being provided to minimize the discharge of pollutants and optimize effluent quality:

- Cleaning of the 002 settling and chlorination basins after each use.
- Cleaning of the State Street and WWTF #2 storage facilities after each use.
- Routine cleaning of all three 001 chlorine contact tanks.
- Routine cleaning of final clarifier weirs and launders.
- Routine replacement of the aeration tank diffuser sheaths and maintenance of proper D.O. concentrations in aeration tanks.
- Adequate process control, including field and lab verifications of the accuracy of D.O. and mixed liquor suspended solids meter readings.
- Baffle installation at the 001 "donut" chlorine contact tanks (two west tanks).

- WAS from the north aeration tank is discharged into the FBOP aeration tank.

10. Lack of sufficient enforcement of the sewer use ordinance to control slugs of industrial waste, such as grease, entering the WWTF.

11. Accurate influent flow measurement is not provided for flows greater than 7 to 7.5 MGD when partial bypassing of the primary clarifiers occurs.

12. Upgrading of the 1964 digester has not been completed as part of the FBOP expansion project.

13. Adequate flood protection is not provided for WWTF #1.

14. The WWTF #2 lagoon is not properly sealed.

15. BOD and total suspended solids monitoring was only performed 4 times per week during the weeks of January 1, 12 and 26, 2003. Monitoring is required 5 times per week. Ammonia is also being reported as a daily maximum rather than a weekly average.

OPERATIONAL ITEMS

1. An operational plan is needed for all CSO discharges, and 002, to ensure compliance with Special Condition 11 of the NPDES Permit and PCB 85-226. This includes the following:

   - Repair of all automatic gates and control systems.
   - Accurate influent flow measurement at WWTF #1.
   - Full and continuous treatment of 8.7 MGD prior to CSO discharge.
   - Providing maximum system storage at State Street, WWTF #2 and the 002 basins prior to CSO discharge.
   - Possible installation of level sensors at all CSOs to determine that maximum treatment and storage is occurring prior to CSO discharge.

- CSO should initiate at 002 prior to system CSC.
- Diversion gates should be set to prioritize entry of flow from the 30" north sanitary sewer to full treatment rather than to 002.
- Other system and WWTF improvements as needed to ensure compliance with NPDES and PCB 85-226 requirements.

2. Establish a sewer system maintenance program whereby all sewers are cleaned and television inspected at least every three years with problem sewers being cleaned more often as needed.

3. Establish a systematic program of continued sewer separation, and reduction of infiltration and inflow.

4. Sewer system improvements should be scheduled such that first priority is given to areas of the City that experience bottlenecks, surcharging and basement backups during wet weather.

5. Investigate the purpose of the slide gates in the diversion structure upstream of the Fayette combined sewer overflow (CSO) point. These gates should routine receive routine operational attention as needed.

6. Unpermitted sewer system overflows need to be eliminated including the apparent overflow at a manhole just downstream of the Court Street diversion structure.

7. The WWTF #1 aeration blowers need to be rebuilt or replaced.

8. Provisions, including flushing water for both basins and a drain system for the chlorine basin, are needed to facilitate cleaning of the 002 basins after each use.

9. Undigested plant wastes including grease and scum need to be dewatered and taken to a landfill. The decant from such wastes needs to be returned to full treatment.

10. Process control testing needs to include the following:

- Maintain at least 2 ppm of DO in the aeration tanks at all times.

- Perform the MLSS test daily via the dried residue procedure.
- Perform DO testing daily with a field meter.
- Expand the process control program to include F/M.

11. North aeration tank WAS needs to be discharged directly to the digester, or primary clarifiers, and not to the FBOP aeration tank.

12. Control the return of digester supernatant so that there is no adverse impact on the activated sludge process.

13. Sewage debris needs to be removed from the inlet channel grating when influent overflows the channel. The hydraulic bottleneck in this area needs to be eliminated. Long term solutions may include grit tank and screening equipment improvements. Short term work may include replacement of the float control with an improved differential pressure control system for the bar screen.

14. Investigate the need for replacement of the diffusers in the aerobic digester.

15. If used, polymer feed to the final effluent should be directed to the inlet pipe from the activated sludge contact tanks to the clarifiers.

WWTF UPGRADING

1. Refer to June 7, 2000 letter and continue with plans to upgrade WWTF. Design work should include a first flush analysis at both WWTF's and all four CSO points. The south interceptor SSO issue also needs to be resolved so that a rational design for new WWTF DAF, DMF, and first flush treatment requirements can be determined.

Pekin
(Tazewell County)

-Wastewater Treatment Facilities
Compliance Inspection (CEI)
NPDES Permit No. IL0034495

James E. Kammueller

JEK

Attachment: Form 3560
DMR Summary
Agency Grab Sample Summary
Flow Diagram of WWTF Interceptors
March 20, 2003 e-mail From D. Kief

cc: DWPC/CAS
Peoria File

United States Environmental Protection Agency
Washington, D. C. 20460

EPA NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2 5	3 I L 0 0 3 4 4 9 5 11	12 0 3 0 2 1 9 17	18 C	19 S	20 1

Remarks

21

Reserved	Facility Evaluation Rating	BI	CA	Reserved	
67 69	70 3	71 N	72 N	73 74	75 80

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time / Exit Time/Date	Permit Effective Date / Permit Expiration Date
City of Pekin WWTF #1 606 S. Front Street Pekin, Tazewell County, IL	Entry Time ☐ AM ☒ PM 1:00P.M. Exit Time/Date 3 P.M. 2/19/03	Permit Effective Date 6/09/98 Permit Expiration Date 5/31/03

Name(s) of On-Site Representative(s)	Title(s)	Phone No(s)
See Memo		(309) 477-2333

Name, Address of Responsible Official	Title	Phone No.	Contacted
Mayor & Council City of Pekin 400 Margaret St., Pekin, IL 61554		(309) 477-2300	☐ Yes ☒ No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	M	Flow Measurement	U	Pretreatment	U	Operations & Maintenance
U	Records/Reports	N	Laboratory	U	Compliance Schedules (CSO)	S	Sludge Disposal
U	Facility Site Review	U	Effluent/Receiving Waters	N	Self-Monitoring Program		Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Refer to attached inspection memo.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
James E. Kammueller	IEPA/Peoria Region/(309) 693-5463	2-19-03
Signature of Reviewer J E Kammueller	Agency/Office IEPA/Peoria Region/(309) 693-5463	Date 3-19-03

Regulatory Office Use Only

Action Taken	Date	Compliance Status
		☐ Noncompliance ☐ Compliance

EPA Form 3550-3 (Rev. 3-85) Previous editions are obsolete

Note: Column heading for discharge 002 changed to report number of days of discharge and total flow for month.

City of PeKin WWTP #1 - NPDES Permit No. IL0034495 - DMR Summary

	Influent				Discharge 001 Effluent												Discharge 002 Effluent							
	Flow (MGD)		BOD	TSS	Flow (MGD)		CBOD (mg/l)		TSS (mg/l)		Amm. (mg/l)		Cl Res.	F. Col	pH		Number of days	Flow Tot Mo.	BOD	TSS	Cl Res	F. Col	pH	
	Mo Avg	Daily Max	Mo Avg	Mo Avg	Mo Avg	Daily Max	Mo Avg	Weekly Avg	Mo Avg	Weekly Avg	Mo Avg	Weekly Avg	Mo Avg mg/l	Max #/100 ml	Min	Max		MG	Mo Avg	Mo Avg	Mo Avg mg/l	Max #/100 ml	Min	Max
Permit Limits	4.5	8.7			4.5	8.7	70	40	25	45			0.75	400	6.0	- -					0.75	400	6.0	9.0
Jan 98	3.63	6.40	221	373	3.82	5.80	9	17	35	84	8.0	16.0	NR	NR	7.0	7.7	NR	7.18	30	84	0.69	9999	6.8	7.6
Feb	4.31	6.64	222	330	4.31	6.64	10	15	51	46	4.7	9.6	NR	NR	7.4	7.7	NR	6.047	18	73	1.41	50	6.6	7.0
Mar	4.06	5.92	144	236	4.60	6.67	11	18	27	41	5.8	12.0	NR	NR	7.4	7.7	6	12.53	41	58	1.32	10	6.9	7.2
Apr	4.10	6.47	146	232	4.01	6.47	5	8	8	11	1.4	5.0	0.39	10	7.2	7.7	4	3.512	25	51	1.24	60000	6.4	7.0
May	5.92	7.98	118	176	5.92	8.43	[illegible]	8	[illegible]	10	10.7	14	10.5	99999	7.4	7.6	NR	13.98	10	23	1.70	10	6.8	7.6
Jun	4.28	5.03	148	220	4.87	6.68	4	5	5	9	1.6	4.2	0.67	40	7.1	7.6	9	10.06	25	46	0.83	9999	6.3	7.0
July	3.53	5.10	137	183	4.30	6.73	3	4	5	6	1.4	7.5	10.75	40	7.2	7.6	7	1.665	14	58	0.85	6533	[illegible]	[illegible]
Aug	3.49	5.34	141	214	4.32	6.82	3	3	5	7	2.3	12.0	0.68	40	7.2	7.5	4	3.586	27	56	0.85	9999	6.3	6.8
Sep	3.37	4.58	143	235	4.95	6.04	5	5	3	22	3.4	6.5	0.72	400	7.0	8.6	2	1.802	22	53	0.70	9999	6.8	6.6
Oct	3.53	5.46	210	352	4.09	6.56	11	14	17	21	5.0	8.4	0.70	20	7.2	7.7	3	4.11	13	59	1.40	10	5.9	7.0
Nov	3.79	4.58	203	227	4.02	6.47	6	5	18	25	3.8	4.2	NR	NR	6.8	7.3	2	3.70	34	70	3.10	9999	6.8	6.8
Dec 98	3.08	4.86	183	184	3.26	5.47	9	12	15	18	7.2	18.0	NR	NR	7.1	7.4	1	3.52	35	170	1.80	10	6.7	6.7
Jan 99	3.53	6.77	327	373	3.79	6.72	9	13	10	16	22.7	47.0	NR	NR	6.9	7.7	4	19.264	18	116	1.40	20	5.9	6.7
Feb	3.56	4.57	151	211	3.56	4.57	10	13	17	20	9.9	25.0	NR	NR.	7.2	7.5	3	0.854	39	78	0.92	30	6.5	7.1
Mar	3.32	4.57	185	148	3.52	4.07	7	12	10	15	8.1	8.3	NR	NR	7.2	7.5	3	0.354	22	48	2.20	30	7.0	7.0
Apr	4.04	8.39	161	169	3.93	8.76	5	6	10	13	5.9	15.0	NR	NR	6.9	7.5	5	6.902	21	39	1.15	800	6.5	7.4
May	4.73	8.53	194	209	4.20	7.02	14	20	13	22	8.5	19.0	0.75	99999	7.1	7.9	5	4.22	35	40	1.51	10	7.4	7.5
June	3.81	5.20	179	179	3.70	5.09	10	18	13	21	7.7	16.0	0.75	40	7.1	7.8	4	1.17	39	65	1.42	370	6.6	7.4
Jul	3.60	5.11	176	179	3.71	5.59	8	10	10	18	8.9	20.0	0.75	40	7.4	7.7	4	2.448	11	42	1.56	10	6.5	6.8
Aug	3.63	5.14	160	252	3.61	5.14	11	14	14	16	7.2	16.0	0.72	1300	7.4	7.7	3	1.915	20	55	1.55	20	6.6	6.7
Sept	3.52	4.30	317	389	3.65	4.75	7	[illegible]	7	[illegible]	6.5	8.3	0.76	2500	7.3	7.7	6	0.46	28	107	1.35	10	6.0	6.6
Oct	3.07	4.89	321	292	3.09	5.20	9	12	9	9	7.7	20.0	0.72	60	7.4	7.7	1	1.31	50	47	1.50	10	6.8	6.8
Nov	2.88	3.34	200	193	3.08	4.02	9	12	12	14	7.0	12.0	NR	NR	7.4	7.8	0							
Dec 99	3.31	5.65	235	232	3.06	4.03	9	11	19	26	7.0	14.0	NR	NR	7.4	7.6	2	1.01	21	55	1.85	10	6.0	6.6
Jan 00	3.72	3.82	182	243	3.06	3.78	9	13	15	17	8.9	15.0	NR	NR	7.3	7.6	0							
Feb	3.44	4.86	281	207	3.32	4.85	8	10	15	19	9.3	13.0	NR	NR	7.4	7	1	1.011	72	12	1.36	20	7.2	7.2
March	3.49	5.07	279	315	3.30	3.67	9	10	17	18	17.2	[illegible]	NR	NR	7.2	7.7	1	1.232	20	49	1.20	60	6.5	7.6
April	3.52	5.11	251	310	3.28	4.74	8	11	14	17	14.5	36.0	NR	NR	7.4	7.7	2	0.305	35	71	0.78	12000	7.1	7.1
May	3.75	5.74	284	284	3.34	6.00	8	16	11	15	9.7	34.0	0.75	60	7.4	7.8	3	2.363	18	77	1.15	600	6.7	7.8
June	3.34	5.20	249	202	3.26	5.56	9	11	16	20	9.6	26.0	0.73	20	7.2	7.5	3	1.668	52	87	1.32	30	6.3	6.8
July	3.79	4.84	232	345	3.08	5.13	7	11	12	20	8.9	25.0	0.56	60	7.1	7.5	4	0.92	36	32	0.81	9999	6.6	7.0
July	3.19	4.64	222	312	3.60	5.18	7	11	12	20	6.9	26.0	0.66	60	7.1	7.5	4	0.92	36	32	0.91	9999	6.6	7.0
August	3.27	4.74	236	270	3.74	5.07	6	7	12	14	6.0	8.5	0.74	40	7.2	7.5	1	0.34	38	44	0.91	50	6.9	6.9
September	3.02	4.05	288	296	3.06	4.98	7	7	12	13	3.6	8.8	0.72	40	7.2	7.4	4	0.56	43	53	0.61	9999	6.1	7.1
Oct	2.89	4.10	282	319	2.90	4.60	7	9	11	11	6.9	7.8	0.74	70	6.9	7.4	2	3.23	37	27	1.32	10	6.3	6.4
Nov	2.90	4.48	276	286	3.03	5.81	11	14	21	32	7.6	15.0	0.69	60	7.0	7.5	2	1.31	29	45	1.30	10	6.3	7.3
Dec-00	2.87	4.19	216	227	2.80	3.11	9	11	15	17	7.7	30.0	NR	NR	7.0	7.4	0							
Jan-01	3.20	8.93	202	240	3.51	8.96	5	11	15	20	8.6	14.0	NR	NR	7.0	7.5	3	6.48	42	102	0.67	9999	8.0	7.1
Feb	3.81	8.74	158	195	4.30	8.30	9	22	18	27	10.6	25.0	NR	NR	7.0	7.3	4	9.72	25	105	0.93	10	6.0	7.3
March	3.44	6.36	167	230	3.48	6.20	7	8	15	16	9.1	31.6	NR	NR	7.3	7.5	2	0.36	10	22	0.90	20	6.9	7.1
April	3.59	4.84	222	252	3.56	10.10	8	9	15	22	5.0	7.8	NR	NR	6.5	7.4	6	2.78	38	79	0.81	9999	6.0	6.8
May	3.55	5.13	258	241	3.81	8.08	7	15	14	23	6.1	13.0	0.75	80	6.5	7.5	7	2.12	34	57	0.74	9999	6.0	6.7
June	3.23	5.95	259	244	3.28	5.85	8	12	12	17	3.1	8.7	0.75	40	6.6	7.8	4	2.40	34	63	1.44	10	6.2	6.8
July	3.22	4.46	264	714	3.17	4.99	13	16	16	20	6.0	12.0	0.75	140	7.0	7.3	2	0.26	60	104	1.23	10	6.1	6.8
August	3.40	4.32	224	200	3.77	4.39	7	17	12	18	5.8	7.5	0.56	60	6.9	7.2	4	1.75	22	43	1.38	40	6.1	6.5
Sept	3.31	5.30	221	225	3.33	5.66	6	8	8	10	4.8	7.1	0.75	70	6.6	7.1	2	0.84	33	51	0.56	10	6.1	6.1
Oct	3.61	6.20	222	223	3.72	5.74	8	8	10	12	5.0	7.3	0.72	110	6.8	7.2	9	3.58	37	50	0.88	9999	6.0	7.0
Nov	3.08	4.01	242	314	3.17	4.56	7	12	10	13	4.5	6.2	NR	NR	7.0	7.2	3	0.87	33	30	0.81	50	6.8	7.1
Dec-01	3.19	4.88	320	270	3.30	4.51	8	8	11	15	6.6	9.6	NR	NR	7.1	7.3	2	0.53	35	67	0.77	10	6.2	7.0
Jan-02	3.23	7.02	235	266	3.57	9.57	10	17	15	22	9.5	18.0	NR	NR	7.1	7.7	3	2.09	16	56	1.50	10	6.6	6.8
Feb	3.62	5.07	220	249	3.08	5.83	9	12	24	35	11.4	20.0	NR	NR	7.4	7.7	2	1.20	39	49	1.92	10	7.3	7.1
March	3.61	4.90	249	304	3.78	5.29	8	10	17	24	7.6	8.5	NR	NR	7.4	7.7	2	0.52	14	77	1.67	10	7.2	7.3
April	3.90	6.49	288	251	3.40	7.22	7	9	13	15	6.9	9.8	NR	NR	7.4	7.7	6	4.90	27	90	1.50	200	6.9	7.3
May	5.10	7.49	172	240	5.10	8.82	8	18	17	25	4.6	14.0	0.75	210	7.3	7.8	10	13.63	11	39	0.84	9999	6.5	7.4
June	5.82	8.98	173	381	2.62	8.98	9	7	11	12	5.7	7.2	0.75	190	7.5	7.7	2	0.52	55	49	0.83	300	6.2	7.0
July	3.47	4.81	226	265	3.31	4.63	5	6	12	13	4.5	8.7	0.75	120	7.1	7.7	5	1.09	50	51	1.50	60	6.5	7.0
August	3.57	5.28	209	289	3.45	5.24	3	4	8	10	2.8	5.8	0.72	130	7.2	7.3	3	2.98	25	52	1.51	170	6.7	7.1
Sept	3.11	3.04	259	302	3.14	3.94	3	5	10	16	3.5	6.0	0.68	120	7.4	7.8	0							
Oct	3.09	3.83	283	259	3.38	4.58	8	9	14	25	4.0	5.1	0.74	110	7.4	8.1	4	0.24	31	58	0.85	3030	7.2	6.7
Nov	2.96	3.78	203	449	3.15	4.71	5	5	12	17	6.1	10.0	NR	NR	7.2	7.9	1	0.02	84	77	0.61	10	7.1	7.1
Dec-02	3.15	6.88	237	313	3.58	6.88	8	11	25	45	11.3	22.0	NR	NR	7.5	7.8	3	1.50	87	150	0.85	300	7.3	7.1
Jan-03	2.05	3.59	244	242	3.21	4.22	5	9	15	17	13.6	48.0	NR	NR	7.7	7.5	0							
Avg.	3.47	5.27	[illegible]	237	3.60	4.76	8	10	14	20	7	14	1	250	7.2	7.6	3.00	3	22	8.32	1	3644	6.5	6.9

Date	SS	pH	BOD	NH3	NH2 + NH3
3-12-01	8	7.8	6	0.76	
10-22-01	21	7.3	33	1.7	

Pekin #1 D-57 17c

DATE	SS	pH	CBOD	NH (NH^3)
7-18-01	19	7.7	8	6.1
8-15-01	13	7.8	3	5.2
9-24-01	13	7.9	4	2.5
10-22-01	12	7.7	6	1.0
11-20-01	14	7.8	5	3.6
1-7-02	45	7.7	12	17
2-13-02	17	7.7	8	9.7
3-19-02	24	7.5	7	2.4
4-9-02	9	7.7	3	2.1
5-15-02	15	7.9	3	4.5
6-20-02	7	8.0	3	2.3
7-25-02	10	7.9	10	3.6
8-21-02	7	7.7	2	1.6

Pekin #1 D-03 178

DATE	SS	pH	CBOD	NH (NH^3)
10-7-02	9	8.0	5	3.8
11-12-02	12	7.8	5	3.2
12-16-02	23	7.9	10	6.4
1-27-03	9	7.7	5	9.7

Pekin #1 D-03 179

DATE	SS	pH	CBOD	NH (NH^3)
4-19-00	11	8.0	4	3.4
5-16-00	18	7.8	9	4.6
6-26-00	17	7.8	9	12
7-24-00	10	7.8	3	5.6
8-22-00	8	7.9	9	3.9
9-21-00	6	7.7	4	3.3
10-24-00	10	7.9	5	3.6
11-29-00	12	7.7	9	4.9
2-15-01	7	7.6	5	4.4
3-12-01	22	7.6	8	11
4-12-01	7	7.6	5	2.3
5-9-01	8	7.9	4	2.6
6-12-01	10	7.7	6	5.0

Pekin #1 D-03 179

From: "Kief, Denny" <dkief@ci.pekin.il.us>
To: "James Kammueller" <James.Kammueller@epa.state.il.us>
Date: Thu, Mar 20, 2003 12:51 PM
Subject: request

Jim,

This email is intended to serve as a follow-up to our phone conversation of this morning. I would like to addfress each of your questions individually.

1) The 2000 Census listed the population of Pekin at 33,857. Inasmuch as North Pekin's wastewater comes to the Pekin Wastewater Treatment Plant, that 2000 Census figure is 1,574.

2) Our Wastewater Billing records indicate that we have approximately 12,150 users (City of Pekin only).

3) Our best estimate for Water users is only slightly more than wastewater, less than 50. Several of those 50 are signficant water users, i.e. Williams Company. By our records (see 2 attached charts) the amount of water going to the wastewater users was approximately 2.90 MGD in 2001. By our records 47% of the water goes to Residential Users, 18% to Commercial Users, 26% to Industrial Users and the remainder to "other" users and leakage.

4) Our Wastewater records indicate that in 2001 the Average Influent at the Wastewater Treatment Plant was 3.42 MGD and the Effluent 3.50 MGD. I have attached the spreadsheet I used to derive this data.

Hopefully this information answers your questions.

Dennis Kief

<<2001stpbillingsqtrly.doc>> <<2001stpbillingsmonthly.doc>> <<PKWWTF2001DATA.xls>>