The Sunshine State

# Pretreatment Communicator

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## *THE COMMUNICATOR...*

"The Communicator" is a quarterly publication of the Pretreatment Program for the Florida Department of Environmental Protection. The Communicator encourages participation from its readership and any other individuals interested in pretreatment in the State of Florida. Individuals wishing to contribute letters, information, or articles should submit them to:

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Florida Department
of Environmental Protection
Domestic Wastewater Section
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Gary Millington
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## Summary of CAAA Requirements for Wastewater Treatment Plants

by Elizabeth Hardin and John Glunn, Division of Air Resources Management

There are a number of requirements based on the Federal Clean Air Act Amendments of

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## Pretreatment Training Who Needs It?

by John R. Parnell
City of St. Petersburg

If "location, location, location" means anything to a real-estate agent the same should be true for "education, education, education," to an existing or would-be pretreatment coordinator. The increasing complexity of the Federal regulations (40 CFR 403 and all that stuff) were all we had to deal with until a year or so ago when Florida obtained primacy for the NPDES program and the hitherto unknown 62-625, F.A.C. came on the scene. If I have lost anyone up to this point with just a few basic abbreviations and numbers, then we (or you) really are in need of training.

On a more serious note, the Industrial Pretreatment Program has now been in existence for over two decades and there are over 1,500 approved programs in the United States. These programs regulate over 80% of the 30 to 40 billion gallons of wastewater produced on a daily basis (gpd) throughout the country. Some are very large programs such as metro Chicago (1.4 billion gpd) and metro St. Louis (300 million gpd) employing more than 100 staff members, whereas other programs are medium or small, with

Please see **Training, page 2**

## Technical Tips:

Oil and Grease, TRPH, and other sticky stuff!

As many people already know, the use of EPA Method 413 to measure oil and grease in wastewater will soon be a thing of the past as part of the gradual phase out of the use of chlorofluorocarbons (CFCs). Because of the limited supply of some CFCs, laboratory's have experienced an increasingly difficult time and cost for obtaining Freon-113 which is used in Method 413. On January 23 EPA published a proposed rule to replace the existing oil and grease method with Method 1664. However, only Method 413 is approved for oil and grease analysis until the proposed method is promulgated as a final rule later this year or early in 1997.

On February 29, EPA Region IV addressed the immediate need for an alternative to the existing oil and grease method by providing interim approval of EPA Method 1664, April 1995 (EPA-821-B-94-004b) as a limited use alternate test procedure (LU ATP) subject to the following restrictions:

- the method must be used exactly as written during the interim approval period,
- laboratories must document the day that the switch is made to the new method,
- and, the use of freon-based methods must be discontinued since the new method may not produce equivalent results.

Region IV's interim LU ATP approval was effective February 29 and remains valid until the method is either promulgated or withdrawn by EPA. Copies of Method 1664 can be obtained (~ $5) from ERIC at (800) 276-0462. If you would like a copy of EPA's LU ATP approval letter, please contact one of the Department's pretreatment staff at (904) 488-4524.

## Training Opportunities

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some only having one staff member. The majority of Florida's 50 odd programs are in the small category and I would hasten to estimate that there are between 200 and 300 persons directly involved in pretreatment throughout the State. Our semi annual meetings regularly attract over 100 persons which is a good showing for this State.

With a lot of small programs, each managed by relatively few staff, the quality of each program will directly depend on several factors. To my way of thinking, the order of importance of these factors includes the level of experience of the person in charge, the ability of that person to organize and get things done with the available funding, and the attitude of the municipal officials to the overall program. In this article I want to deal with the first and most important of these factors, i.e., the experience of the person running the program.

Firstly, nobody that I know has a four year degree in Industrial Pretreatment, I don't believe such an animal exists as yet.....but just you wait a few years! Most pretreatment coordinators should have a science (hopefully at least some chemistry) background of some sort. My primary degree for instance was in Zoology, specializing in Applied Entomology, (killing bugs for short). Other coordinators have related natural science degrees and some have specialized in engineering. Still others have worked in wastewater treatment or drinking water treatment all their lives, and I know some ex-geologists that have now joined the elite pretreatment club. I have not yet come across an ex-attorney who has seen the light and turned to pretreatment, but I have met many attorneys who specialize in environmental and pretreatment litigation (usually on the industry's side.)

So, we have established that we are a mixed bag as far as original qualifications and backgrounds are concerned. If we are all to manage dynamic, challenging, cutting edge technology programs that meet and far surpass the interference, pass-through, public health and recycling goals of pretreatment, but are equally objective to all of the regulated industrial users across the State, then we must ensure that we are all on the same wavelength when it comes to program implementation. It is precisely for this reason that there is such a great need for "education, education and education" in the pretreatment business.

Because of my teaching background (22 years teaching entomology in Jamaica, W.I.), as far back as 1991, I was asked if I would be willing to hold day long Industrial Pretreatment Workshops all over Florida under the auspices of the Florida Water & Pollution Control Operators Association (FW&PCOA). Probably some of you attended these original workshops. These workshops led to the implementation of the Semi-Annual meetings that started in Ft. Myers in early 1993 with an attendance of just 10 people. By January 1994, the Hillsborough Semi-Annual meeting gave rise to the formation of the FW&PCOA Industrial Pretreatment Committee with myself as chairperson. At our

## Congratulations !

Congratulations go out to Victor Hernandez (Hillsborough County) and Rick Ruede (City of Lakeland) for being co-recipients of the 1996 Albert B. Herndon, P.E. Award. Two reasons cited for their selection include their efforts with the pretreatment coordinators group and their cooperative relationship with their industrial users. Way to go!

first meeting in March 1994, volunteer committee members approved the following mission statement: "To develop and manage an educational program on all aspects of the industrial pretreatment program with the aim of unifying the major procedures of the Florida program for the benefit of coordinators, field technicians, inspectors and any other interested parties." The major goal of the committee was to develop a curriculum, including both presentational material and field training techniques for adoption as a recognized "Industrial Pretreatment Certification Course."

The course was designed in three levels to address different aspects of the program. Since the collection of "representative" field samples is key to the implementation of a first class program, the introductory "C" course was designed to emphasize the importance of all procedures related to sample collection, sample preservation and chain of custody. In order to preserve a high standard for the certification, the committee decided that ANY person could take the course and receive an attendance certificate but only "qualified" students would be allowed to take the examination for the "C" certification. Qualification requirements for this course examination included being at least 18 years old, having a High School Diploma or equivalent, first aid and CPR certification, one year actual experience in the industrial pretreatment field, four years of constructive experience consisting of a variety of degrees, field courses, etc., and attendance at the "C" course. It is permissible for a student to take the course at one time and sit for the examination at a later date when all qualification parameters have been met. Further information on the course requirements and costs can be obtained from the FW&PCOA training catalogue or from application notices which are published in the Florida Water Resources Journal.

The first, four day short school, "C" course was held at Edison Community College in Ft. Myers in May 1995 and over 30 students attended the classes. The course consisted of presentations on a variety of sampling topics by committee members and each student received an attendance certificate and a comprehensive notebook covering the presentation material. An examination consisting of 100 questions based on the notebook was taken by all qualified students at the end of the course. Questions were multiple choice with four possible answers of which only one was correct. A passing grade of 70% was used to determine which students should be awarded "C" certificates in Industrial Pretreatment. Since this time the course has been repeated at Brevard Community College (Titusville) in August 1995 and at the Indian River Community College (Ft. Pierce) in March 1996.

The development of the "B" course is now underway and it will emphasize the importance of the industrial inspection program as its main theme. Once again, qualification will be required to sit for the examination requiring a higher degree of standards than for the "C" course. If all goes well, the first four day "B" course will be held at Brevard Community College in August 1996. The "A" course will be designed to specialize in permit and ordinance writing, enforcement procedures and program administration. At the present time, the first "A" course is envisaged for August 1997. It is hoped that as the three levels are developed, more persons will become involved in the teaching process so that all courses can be offered at the same time. So now is your big chance to get in on the ground floor in a program that we feel will become an essential (if not obligatory) part of the pretreatment program.

These courses are all very well you say, but my boss tells me that I need to develop a new program from scratch and have it up and running in six months time. In this case, your main source of reference will be the many EPA guidance manuals that have been produced since the early 1980's on pretreatment program implementation. Further information on these manuals can be obtained by writing to the, Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402 or phoning (202) 783-3238. Also, if you are an internet junkie, some EPA manuals can be downloaded from the EPA web page:

http://www.ehsg.saic.com/pipes.html

The only other true courses that I know of are the home-study training programs developed by the California State University, Sacramento. A complete list of operator training manuals are available from Ken Kerri, California State University, Sacramento, 6000 J Street, Sacramento, CA 95819-6025, (phone (916) 278-6142). The manuals of interest to pretreatment personnel include, "Pretreatment Facility Inspection, a field study training program", "Industrial Waste Treatment", and "Treatment of Metal Wastestreams". These manuals can be purchased for a relatively small fee and the student then completes an examination based on each chapter of the manual. Once all of the examination answer sheets have been returned to Dr. Kerri, a certificate is issued if a certain passing grade is attained. Although these manuals cover specific topics like industrial inspections and treatment processes in a detailed manner, they would not be sufficient to cover all aspects of the pretreatment program.

At the Industrial Wastes Congress in Anaheim, California in 1993, the Water Environment Federation's (WEF) Industrial Waste Committee presented a draft Pretreatment Training Package consisting of a

series of overheads and slides to be covered in a 4 to 8 hour session. I am not aware that anything further has transpired with this course since then. The WEF is also offering a two day course in "Pretreatment Regulatory Compliance" in Chicago in May 1996, and more details can be obtained from, WEF, Professional Development Courses, 601 Wythe St., Alexandria, VA 22314-1994, or phone 1-800-666-0206.

To finish up, comprehensive pretreatment program educational courses are essential if programs are to be similar across Florida, and, furthermore, across the USA. The Association of Metropolitan Sewerage Agencies (AMSA) is a powerful organization of cities and counties across the country that monitors all Congressional rule-making pertaining to wastewater and pretreatment issues. Annual pretreatment workshops are held in major cities across the country in November each year. This year the meeting is in Miami Beach, so plan to be there if you can, it is a very worthwhile experience. Anyway, last years meeting in San Francisco discussed training and came to the conclusion that: "Nationally, there is a lack of organization to pretreatment training resources and a lack of available/accessible training." The meeting attendees agreed that this lack of training leads to inconsistencies in program implementation, additional costs to reinvent/develop training, and additional costs to POTWs and to the State/EPA when staff are not adequately trained. Consensus on recommendations was that training should be a fundamental/high priority function of AMSA and several solutions/options were put forward.

So, at this stage, I believe that Florida is leading the way in the pretreatment program education field. I have received letters from all over the country inquiring about our courses and requesting curricula. We still have a long way to go and need all the help we can get, so the call goes out to all of you to "get involved" and get ahead of the crowd.♦

## CAAA of 1990

(continued from page 1)

1990 (CAAA) which may affect publicly-owned treatment works (POTWs). Among those requirements are provisions related to air toxics in Title III and air operating permits in Title V. Currently, the Department (i.e., DEP) is in the process of obtaining final approval for implementation of the Title V program from EPA.

**I. Title III - Air Toxics**

**A. POTW NESHAP**

In an attempt to control releases of hazardous air pollutants (HAPs) from POTWs, the EPA has developed a Presumptive Maximum Achievable Control Technology (pre-MACT) standard for these facilities which receive and treat sewage and/or wastewater from residential, commercial, and industrial sources. Based upon the 1992 Needs Survey Report to Congress, there are approximately 15,600 POTWs nationwide, treating approximately 29.5 billion gallons of wastewater per day. The majority of facilities treat 1 million gallons per day (MGD) or less.

A presumptive MACT standard establishes the initial criteria for determining source applicability, potential control measures, and record keeping and reporting requirements in lieu of an actual standard. EPA has utilized such pre-MACTs in an effort to conserve resources and identify issues associated with each source category in advance of developing an emission standard. The National Emissions Standard for Hazardous Air Pollutants (NESHAP) for this source category should be proposed in June 1996 and finalized in 1997.

During the pre-MACT process, EPA identified HAPs of concern, emission points, and potential control options. Emission points include the headworks (e.g., bar screens and grit chambers), clarifiers (e.g., where solids settle out from wastewater), aeration basins (e.g., activated sludge processes where bacteria digest/remove organics from wastewater), and the solids handling operations (e.g., sludge treatment).

EPA determined that 76 HAPs are pollutants of concern for these facilities; however, AMSA has provided data which could shorten the list to 29 compounds. The list discrepancies reflect alternative modeling and the proposed removal of compounds reporting zero discharge in the 1992 Toxics Release Inventory System. Negotiations between EPA and AMSA on shortening the list will continue. The pollutants of concern will be used to determine the applicability of control requirements in the proposed NESHAP.

During the pre-MACT process, EPA developed six model POTWs to represent the range of facility sizes and treatment processes (e.g., represents 3, 30, and 200 MGD plants). EPA also developed three conservative model wastestreams (strong, medium, and weak), based upon industrial discharges of HAPs to the POTW. Emissions from the model plants and their wastestreams were estimated using emission factors based on the WATER7 model. Information indicates that weak model wastestream conditions are more representative of actual conditions.

The two main control options for this source category are pretreatment and the use of control devices. Pretreatment would

control pollutant discharges at the source by limiting the amount of HAPs in the wastestream. Control devices would suppress emissions at the POTW by covering treatment processes through the stage in which complete destruction/removal of the HAP occurs. Examples of covers are fixed/floating roof tanks, equipping surface impoundments with floating membrane covers or air-supported structures, and equipping other units (e.g., sumps) with fixed enclosures or covers. EPA may also consider requiring process modifications, such as lowering weir height or replacing coarse bubble aeration with fine bubble systems.

For more information on this NESHAP, please contact Mr. Eric Crumph of EPA's Office of Quality Analysis and Planning Standards at (919) 541-5032. A copy of the pre-MACT is available on EPA's Technology Transfer Network (TTN) under the CAAA/Title III/Policy Guidance and Documents submenu.

**B. Section 112(r) - Accidental Release Prevention Program**

Wastewater treatment plants (both publicly and privately owned facilities) will be subject to the requirements of the Accidental Release Prevention Program under section 112(r) of the CAAA if they use, store, process, or manufacture any of the listed substances at, or above, the specified threshold quantities. Based upon their inherent properties, substances are classified into two groups: toxics and flammables. While the threshold limit for toxic substances varies according to the potential health threat, the limit for all flammable substances is 10,000 pounds. The list of 112(r) substances was finalized on January 31, 1994.

Facilities subject to this program will have three years from the date of rule promulgation to come into compliance with all applicable requirements. These requirements include notifying the implementing agency that they are subject to the program, developing and implementing a risk management program, and submitting a summary of that program to that agency. The risk management program should integrate aspects of prevention, process safety management, and emergency response. EPA has created a tiered program in the final rule--one in which the complexity of the risk management program reflects the probability of a release from the facility.

Wastewater treatment plants will typically be subject to this program if the quantity of chlorine stored on-site exceeds 2,500 pounds, although the complete list should be reviewed to determine program applicability. EPA is developing a model risk management plan for POTWs, which will be released for comment this spring.

As of early April, the 112(r) rule was scheduled for promulgation on May 24, 1996. Facility notification and compliance for the 112(r) program will likely be required three years after the date of rule promulgation (May 1999). DEP is sponsoring a 2-day workshop on this rule sometime in late July or early August. For more information on Departmental implementation of the accidental release prevention program or the upcoming workshop, please contact Ms. Beth Hardin at (904) 488-0114.

**II. Title V - Operating Permits**

A POTW should apply for a Title V permit if it **emits or has the potential to emit** 10 or more tons per year (tpy) of any single HAP or 25 or more tpy of any combination of HAPs. The NESHAP for this source category will not likely be finalized until 1997; however, POTWs emitting more than the amount of HAPs indicated above should submit a Title V application by June 15, 1996.

In the pre-MACT document, EPA provided criteria on NESHAP applicability for affected sources. Each facility should calculate all HAP emissions to determine if they will exceed major source status for one or more HAPs. The facility should then determine the average daily flow rate, influent concentrations of volatile organic HAPs, and the percentage of industrial contributions to the wastestream. The three applicability criteria are: exceeding a 50 MGD flow rate, exceeding 5

## Regulatory Updates:

- The Department has recently completed a revision to its reuse rules in Chapter 62-610, F.A.C. These "Phase 1" revisions were effective January 9, 1996. Most changes were minor; however, utilities having reuse projects are now required to submit annual reuse reports. Please see the inset provided by David York entitled "DEP Annual Reuse Reports" for additional information.

- The Committee for the National Institute for the Environment (CNIE) has recently initiated a first step toward the formation of a planned "National Library for the Environment." CNIE has made over 100 Congressional Research Service (CRS) environmental reports available on-line from their World Wide Web (WWW) site: http://WWW.CNIE.ORG

  One of the most recent CRS environmental reports discusses toxics and the pretreatment program. CNIE is an key promoter of federal legislation (HR 2827) which would create a nonregulatory science agency, the National Institute for the Environment.


**So Joey, you didn't really expect the Director to pay for your "inspection" trip to Vacation Isle !**

ppm concentration of volatile organic HAPs, and exceeding an industrial contribution of 30%. If a facility meets two out of three applicability criteria, it must either commit to federally enforceable limits to maintain its emissions below the major source level, modify its processes, install control equipment, or achieve equivalent reduction through pretreatment.

POTWs required to obtain operating permits may **also** be subject to the upcoming 112(r) program if it **stores, uses, processes, or manufactures** one of the 112(r) substances above the threshold quantity. If a facility anticipates that it will also be subject to the 112(r) program, it should indicate this on its Title V permit application form. Approximately 30% of 112(r) sources in Florida will also be subject to the requirements of the Title V program and must obtain a operating permit.

Questions or discussions on permit applications should be directed to the Title V permit section for the Department in Tallahassee at (904) 488-1344.♦

## Industrial User Effluent Limit Development

## - Part III -

by John Coates

This (as promised!) is the third and final installment in this series of articles intended to assist in the preparation of discharge limits for industrial user permits. Many pretreatment coordinators in the state provided comments and information which have been essential to the development of the examples in these articles. Clearly, the value of these examples have been increased by the willingness of these coordinators to share their experience with the rest of us.

In Part II, we worked with categorical pretreatment standards for the coil coating point source category that were expressed in terms of the facility's production rate. However, there was only one set of applicable standards in each subpart of this category. In the aluminum forming category, each subpart contains a set of production-based standards applicable to the core operation (e.g., extrusion) and additional sets of standards for various ancillary operations which may be performed at a facility.

For the example in Part III, let's review the "permit meeting" with Slick Aluminum Company, Inc. As you may recall, all the permitting staff of Concreteopolis were gathered for the Eighth Semi-Annual Industrial Pretreatment Workshop on April 26 in Orlando. During the workshop, representatives from Slick Aluminum presented information on their operations and production rates for 1995...

Wow! Apparently, the facility is a bit larger than we previously thought... According to the information, the company extrudes over 88 million pounds of aluminum per year! In addition to their extrusion operation, the facility also has four ancillary operations that are regulated under the aluminum forming point source category. The pretreatment standards for existing sources at 40 CFR 467.35 apply since the source was constructed prior to 11-22-82, the proposed new source rule date.

Well, after hearing the production information, the permitting folks in Concreteopolis scrutinized the industry's numbers to ensure that they represented production rates for each operation at the facility. It seems, the representatives from Slick Aluminum were under the impression that the production normalized categorical standards for their "cleaning and etching bath" operation applied on a per tank basis. Since they had four tanks, they effectively wanted to multiply these standards by four.

Fortunately, after a little research, you were able to show the people from Slick Aluminum the discussion on page 49130 in the preamble to the promulgated rule (48 FR 49125, October 24, 1983). The discussion states that an aluminum forming plant is permitted to discharge a mass of pollutants equivalent to the sum of mass limitations for the core (i.e., extrusion) and individual ancillary operation(s) that are practiced at the plant. Based on this new understanding, the folks from Concreteopolis and Slick Aluminum worked together to develop daily production rates for each operation at the facility. After some discussion, a representative schematic including process flow rates and production rates was agreed upon (see example schematic).
(At this point, a collective sigh of relief was heard as the permitting staff at Concreteopolis knew the hard work was done! Now for the

Please see **Discharge, page 8**

*The Coordinator's Desk:*

# The Power of the Permit!

by Robert Heilman, P.E.

I was recently notified of an interesting situation in another state I thought our readers should know about. It seems that an industrial user, a printed circuit board manufacturer, was attempting to get a permit to discharge to a municipal collection system. The industrial user had moved from another state where the owner was in significant noncompliance and refused to implement corrective measures. The city where the industry was moving to had a very rigorous permit application, which asked all the right questions. Because the industry was required to provide information on previous locations of operation, the city was able to verify the industry's past performance and compliance history. As the city checked on the industry's record, it found out the magnitude of the past problems. Fortunately, the city had the right to refuse the industry a permit, based on the "bad actor" aspect in its regulations. Even upon appeal, the refusal to issue the permit was upheld, due to the past history of the industrial user.

I wanted to share the above situation with you for several reasons. First, there are "bad actors" everywhere. As pretreatment coordinators and staff, you know who these industries are and when they leave town. Just because an industry leaves your jurisdiction does not necessarily mean that the industry is going out-of-business. It could very well be that the industry has had enough of your "tough" posture and is looking for an "easier" place in which to do business. If you know that an industry is relocating to another municipality, either next door or to another state, you should make that municipality aware of any compliance problems you may have had with that industry. I do not mean you should share any personal problems or perceived concerns, but only those actual and documented violations which could be of interest to the targeted city. You must be careful not to slander the owner or the business by reporting only the facts, which are public information anyway.

I want to emphasize the fact that pretreatment personnel need to communicate with each other when they have negative experiences with a particular industrial user who chooses to "get out of Dodge." I suggest we try to keep others informed with a simple telephone call when a problem facility moves to another location to begin operations. This applies to pretreatment program personnel as well as us regulators. After all, as the state approval authority, we get to see the "big picture" of who is doing what throughout the entire state.

Another reason I wanted to discuss this issue is even though you may not be able to deny a permit to an undesirable industry, unless your ordinance contains the "bad actor" language, you certainly can prepare a tighter permit than you might normally write. There is enormous power in a well written permit. However, you must fully understand your legal authority to do this. We see many permits during our audits and inspections, some good - some not so good. It seems that the better the program knows and understands its ordinance, the better the quality of the permits. If you get a "bad actor" coming to a location near you, you need to know how to deal with them. The key to controlling them is in your ordinance.

At this writing, I am aware of a business that has had a very poor track record with a certain city and is planning to relocate to another municipality which is in the process of developing a pretreatment program. We are currently working with both the industry and the municipality to prevent the kinds of problems that occurred at the previous location. So far, the new owners have been quite cooperative and we expect the facility to be "state of the art" by the time it opens. The facility will probably end up with a permit that contains very stringent monitoring requirements and limits.

In summary, we need to establish a network throughout the state to share pertinent information, not just about "bad actors," but about any issue of concern. The **Pretreatment Communicator** is one mechanism through which we can share information. I encourage each of you to let us know if you have something that you would like us to include in future newsletters. From time-to-time we will be inviting some of you to contribute articles. We want everyone in the pretreatment community to share in this communication effort. We hope you will accept our invitation if we contact you.♦

## DEP Annual Reuse Reports

by David York, Ph.D.

**Attention all utilities having reuse projects -- Annual reuse reports are required by Rule 62-610.870(3), Florida Administrative Code (F.A.C.).**

**Who needs to submit?** -- All permittees having reuse projects if the domestic wastewater treatment plant has capacity of 0.1 mgd or more.

**What is considered "reuse?"** -- Reuse projects are defined in Rule 62-610.810(2), F.A.C. The following types of projects are reuse:

- ù Slow-rate systems meeting the requirements of Part II of Chapter 62-610, F.A.C. (spray irrigation systems).
- ù Public access reuse systems meeting the requirements of Part III of Chapter 62-610, F.A.C. (irrigation of golf courses, parks, and other landscaped areas and other urban reuse activities).
- ù Irrigation of residential properties, as described in Part III of Chapter 62-610, F.A.C.
- ù Irrigation of edible food crops, as described in Part III of Chapter 62-610, F.A.C.
- ù Rapid-infiltration basins meeting the requirements of Part IV of Chapter 62-610, F.A.C.
- ù Absorption field systems meeting the requirements of Part IV of Chapter 62-610, F.A.C.
- ù Projects involving wetlands creation, restoration, or enhancement using reclaimed water.
- ù Ground water recharge and indirect potable reuse projects, as described in Part V of Chapter 62-610, F.A.C.
- ù Industrial uses of reclaimed water (including use at the wastewater treatment facility), as described in Part VII of Chapter 62-610, F.A.C.

**When are the reuse reports due?** -- The first reports will be due January 1, 1997. Updated reports will be due January 1 of future years.

**What period is covered by the first report?** -- October 1, 1995 through September 30, 1996.

**What form do I submit?** -- Use DEP Form 62-610.300(4)(a)2.

**Where do I get the form?** -- Contact the DEP district office.

**Do I have to monitor flows to all reuse types and users?** -- No. While flow records are desirable, estimates may be used.

**What will the data be used for?** -- To maintain an updated inventory of reuse in Florida. This type of information is useful to utilities wanting to implement reuse and to track the effectiveness of Florida's reuse program.

**For more information:** Call the DEP district office or David York at 904/922-2034.

Thanks for your help.

***Use it Again, Florida!***

## Discharge Limitations

(continued from page 6)

easy part!) With the right information, the staff at Concreteopolis began to calculate discharge limits for Slick Aluminum's industrial user permit. The daily maximum production-based categorical standards for zinc in mg/off-kg (mg of pollutant per kg of aluminum) for each operation are:

- ù 0.49 for extrusion
- ù 1.94 for direct chill contact cooling water,
- ù 2.98 for solution heat treatment,
- ù 0.26 for cleaning/etching bath, and
- ù 5.7 for cleaning/etching rinse.

**STEP 1**.
Since the applicable categorical standards apply on a per operation basis, the folks at Concreteopolis multiplied the production rate for each operation times the production-based standard to obtain a mass limitation for each operation. Based on the production rates and applicable categorical standards, the following daily maximum mass limitations (in mg/day) would be calculated for zinc:

- ù 65,927 for extrusion
- ù 142,646 for direct chill contact cooling water,
- ù 142,182 for solution heat treatment,
- ù 2,158 for cleaning/etching bath, and
- ù 47,310 for cleaning/etching rinse.

Thus, the facility would be subject to a total daily maximum mass limitation of 400,223 mg/day for zinc. Similarly as before, the equivalent concentration-based pretreatment standard can be calculated by dividing the

## Reminders:

- The pre-registration deadline for the first "B" Industrial Pretreatment Certification Course is July 12. The course is scheduled for August 12 - 16; however, manuals should be picked up on August 11. For more information, you may contact Jessie Carpenter at (407) 268-6092.
- POTWs required to submit a Title V air operating permit application should do so before June 15, 1996. See related article for more information.

mass-based limitation by the representative long-term process flow rate (98,000 gpd).

Thus, for zinc, $C_{EQ}$ =

$$\frac{400{,}223\ mg}{day}\left(\frac{day}{98{,}000\ gal}\right)\left(\frac{gal}{3.7854\ L}\right)$$

$$C_{EQ} = 1.079\ mg/L$$

Again, by paying close attention to units, the folks of Concreteopolis were able to quickly calculate a concentration-based categorical pretreatment standard. However, this facility has an additional discharge that is combined **prior to** treatment; therefore, everyone immediately (and fondly...?) thought of the CWF.

**STEP 2**.
Reviewing our representative schematic, it seems the facility has a 20,000 gpd dilution wastestream combined with the regulated process prior to pretreatment. Therefore, the next step is to apply the CWF to calculate a fixed alternative discharge limit ($C_{AL}$).

For zinc at point B:

$$C_{AL} = \frac{1.079 \cdot 98{,}000}{98{,}000}\left(\frac{118{,}000 - 20{,}000}{118{,}000}\right)$$

$$C_{AL} = 0.8960\ mg/L$$

Now, the Concreteopolis permitting folks have developed a limit that applies to the treated wastewater discharged from the pretreatment facility (point B). Wow! (They were almost done!)

Being expert pretreatment people, the Concreteopolis staff remembered to check local limits and determine which zinc standard was applicable. [The zinc local limit has recently been revised and is now 0.85 mg/L. It applies at the point where the facility discharges to your publicly owned collection system (i.e., end-of-pipe, point C).] Since the local limit must be compared to the categorical standard, one of the standards must be adjusted so they apply at the same location.

**STEP 3**.
The Concreteopolis folks decided to adjust the categorical standard at point B down to the end-of-pipe at point C. Thus, using the FWA to adjust the zinc categorical standard to the end-of-pipe (point C):

$$C_{AD} = \frac{(0.8960 \cdot 118{,}000) + (0 \cdot 8{,}500)}{(118{,}000 + 8{,}500)}$$

$$C_{AD} = 0.84\ mg/L$$

So, it appears that the categorical limit is more stringent than the corresponding local limit (0.85 mg/L). Now to put the categorical standard in the permit!

In this case, you decide to require monitoring at point B, after all, no need to muck things up since you know there are no pollutants at concentrations of concern in the sanitary wastewater. Therefore, you prepare your permit using 0.90 mg/L (i.e., 0.8960 rounded to two significant figures!) as the applicable discharge limit at point B. Of course, the permit will clearly document the basis for the zinc limit and specify the monitoring location, frequency, and sample type. Oh yeah! Of course the folks of Concreteopolis did not forget about the remaining categorical standards which

## CWF & FWA Formula:

General forms for applying the combined wastestream (CWF) or the flow weighted average (FWA) formula when developing effluent limitations for industrial users. Because these formulas are general, modifications may be necessary for specific applications.

**Combined Wastestream Formula:**

$$C_{AL} = \frac{\sum_{i=1}^{N} C_i F_i}{\sum_{i=1}^{N} F_i}\left(\frac{F_{AL} - F_D}{F_{AL}}\right)$$

**Flow Weighted Average Formula:**

$$C_{AD} = \frac{\sum_{i=1}^{NA} C_{AL_i} F_{AL_i} + \sum_{i=1}^{NC} Cu_i Fu_i}{F_{AD}}$$

where:
$C_{AL}$ = alternative discharge limit
$C_{AD}$ = adjusted discharge limit
$C_i$ = categorical pretreatment standard for pollutant in wastewater stream i
$Cu_i$ = representative concentration for pollutant in unregulated stream i
N = The number of categorical wastewater streams
NA = The number of "alternative" wastewater streams
NC = The number of noncategorical wastewater streams
$F_i$ = The longterm average daily flow in wastewater stream i
$F_{AL}$ =The total flow where the alternative limit applies
$F_{AD}$ =The total flow where the adjusted limit applies
$Fu_i$ = the flow from unregulated wastestream i
$F_D$ = the total flow from dilution wastestreams such as:
1. sanitary wastestreams;
2. process wastestreams exempted from categorical pretreatment standards; or
3. boiler blowdown, noncontact cooling water, stormwater, and demineralizer backwash, if these do not contain significant amounts of the pollutant of concern (otherwise, they are "unregulated" since they contain pollutants of concern from an unregulated source)

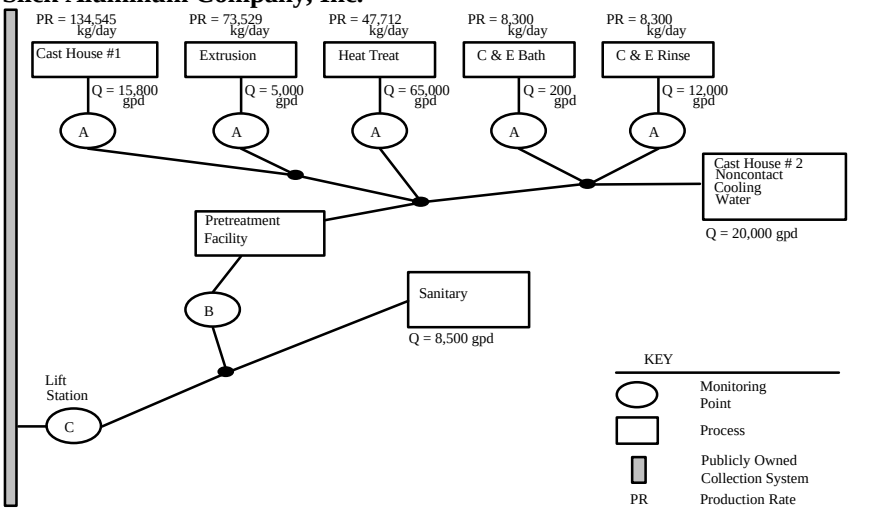
include pollutant limits for chromium and cyanide as well as either total toxic organics or oil and grease. (Will the work never end!)

Well... As you probably guessed... You did it one last time! Terrific! (Are you tired of this yet?) Seriously, we hope you will keep this example and the ones from the previous two articles. While it is unlikely that your permitting situations will match these exactly, the examples may be helpful in the future.

Of course, every permitting situation is unique and there are a number of questions that can arise. We hope that whenever you have questions you will feel comfortable and call us for assistance. We may not know all the answer ourselves; however, we certainly are willing to work with you to help you find the right answer. Often, other pretreatment coordinators may be able to help you or we may be able to contact someone at EPA to find an answer. Either way, each of us has the same goal of developing industrial user discharge permits that correctly implement the applicable pretreatment standards!♦

Example:

**Slick Aluminum Company, Inc.**

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