

History of Ohio's Pretreatment Program OTCO Pretreatment Workshop

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Formerly Ohio EPA Pretreatment Program 1988 – 2015

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- <https://www.bing.com/videos/search?q=cuyahoga+river+fire+video&view=detail&mid=5DAF785FF024BADA9D4E5DAF785FF024BADA9D4E&FORM=VIRE>

- <https://www.bing.com/videos/search?q=louisville+sewer+explosion&view=detail&mid=9512F297A5E02CD2190E9512F297A5E02CD2190E&FORM=VIRE>

Key Federal Pretreatment Milestones

- 1970 Creation of USEPA.
- 1972 Clean Water Act Signed. Established the NPDES permit program nationwide. Retained framework for WQ standards.
- 1976 Flannery Decision established priority pollutants and required USEPA to promulgate Pretreatment Standards. List now in 40 CFR 401.15.
- 1977 NRDC vs Costle. USEPA required to develop and include TBELS in NPDES, USEPA prohibited from exempting broad categories of point sources.
- 1977 Flannery and Costle incorporated into CWA amendments.

Key Federal Pretreatment Milestones

- General pretreatment regulations issued 1978
 - General prohibitions against pass through and interference
 - Specific prohibitions
 - Gave broad authority to regulate nondomestic dischargers
- Local programs assigned to regulate most IUs

Key Federal Pretreatment Milestones

- 1985 PIRT report issued. Noted problems with implementation.
- 1988 40 CFR 403 Revised based on PIRT
 - Minimum Penalty authority required in all SUOs
 - Added specific POTW and CIU reporting requirements
 - Added POTW program submission requirements
 - Clarified procedures for modification of programs
 - Dilution prohibited
 - Required local limits for all programs

Key Federal Pretreatment Milestones

- 1986 DSS Report issued. Addressed RCRA DSE concerns.
- 1990 403 revised based on DSS.
- - Slug plan review by POTWs, slug notification by IUs
 - Required to issue all SIUs permits, sample and inspect them, and to report to states at required intervals
 - Required ERPs
 - SNC defined
 - Expanded specific prohibitions on potentially explosive discharges
 - Required WET testing at POTWs
 - Required technical re-evaluation of local limits at least every 5 years

Key Federal Pretreatment Milestones

- 2005 Streamlining Rule. 40 CFR 403 Revised
 - Optional general permits
 - Optional lower tier CIU classes
 - BMPs allowed as limits
 - Allowed monitoring waivers for pollutants not present

Key Federal Pretreatment Milestones

- Early 1980s: Pretreatment Categorical standards (40 CFR 405 to 471) issued. National standards for classes of industry based on technology deemed economically achievable. Most stds for metal bearing waste were issued in early 1980s.
 - 439 pharmaceuticals, 437 CWT, 442 TEC, 441 Dental, 455 pesticides, trickled in over next 20 years.
 - Very few standards were ever updated

SUMMARY OF CATEGORICAL PRETREATMENT STANDARDS

PART	CATEGORY	PRETREATMENT DISCHARGE SUBPARTS	PRETREATMENT NO-DISCHARGE SUBPARTS	NO PRETREAT. STANDARDS	EFFECTIVE DATE OF REGULATION	NEW SOURCE DATE	COMMENTS
405	Dairy Products			A-L			
406	Grain Mills	NS -- A		[ES -- A], B-J		12/4/73	406.16 restricts excessive loading
407	Canned & Preserved Fruits & Vegetables			A-H			
408	Canned & Preserved Seafood			A-AG			
409	Sugar Processing			A-H			
410	Textile Mills			A-I			
411	Cement Manufacturing			A-C			
412	Feedlots		NS -- B	A, [ES -- B]		9/7/73	B allowance 412.15(b)
413	Electroplating	[ES only -- A,B,D-H]		C		8/31/82	ES, job shop, & printed circuit board manuf. only
414	OCPSF	B-H,K		A,I,J		3/21/83	ERROR in 414.26 - 411.111 should be 414.111

419	Petroleum Refining	A-E				12/21/79	
420	Iron & Steel Manufacturing	A-F, H-J, L		G, K		1/7/81	
421	Nonferrous Metals Manufacturing	[NS only -- B, E, N, O, R-U, W, Z, AD, AE] [ES&NS -- C, G-M, P, Q, V, X, Y, AA-AC]	[NS only -- D] [ES&NS -- F]	A		2/17/83 (A-I, K-M) 6/27/84 (N-AE) 1/22/87 (J) A-I: The new source date for molybdenum acid plants within Subpart I is 6/27/84.	421.65 (ES for subpart F) allows for impoundment discharge
422	Phosphate Manufacturing			A-F			
423	Steam Electric Power Generating	Main part	Main part			10/14/80	Only one part (no subparts); both ES & NS contain no discharge of PCBs, limits on CU, Cr & Zn
424	Ferroalloy Manufacturing			A-G			
425	Leather Tanning & Finishing	A-I				7/2/79 1/21/87 (C)	
426	Glass Manufacturing	[NS only -- H, K-M]		A-G, I, J		8/22/73 (A) 10/17/73 (B-D, E, G) 8/21/74 (H, K-M)	
427	Asbestos Manufacturing			A-K			
428	Rubber Manufacturing	NS only -- E-K		A-D		8/23/74 10/11/73 (D)	
429	Timber Products	[ES -- G, H]	[ES&NS -- F] [NS -- G, H, L]	A-E, I-K, M-P, [ES -- L]		10/31/79	
430	Pulp, Paper & Paperboard	A-G, I-L		H		1/6/81 (A, C-D, F-L) 12/17/93 (B, E)	
432	Meat Products			A-J			
433	Metal Finishing	A				8/31/82	
434	Coal Mining			A-F			

Implementing Pretreatment in Ohio

- 1972 Creation of Ohio EPA by Ohio General Assembly
-
- 1977 Ohio NPDES delegation
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- 1983 Ohio Pretreatment Program delegation
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- Develop staff and in house expertise. Central and district offices
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- “Target” POTWs for local pretreatment programs

Implementing Pretreatment in Ohio

- Industrial Waste Surveys.
- Develop guidance, reporting forms
- Hold and attend trainings for IUs and local governments
- Assist with category determinations and limits calculations

Implementing Pretreatment in Ohio

- De target POTWs with few or no IUs
- Develop state IU permit program
- Develop and issue Ohio pretreatment rules.
- Develop enforcement program - take significant enforcement actions

Implementing Pretreatment in Ohio

- Evolution of Ohio WQBELs on local limits. Pass through limits based on WQBEL's not EEQ.
- Respond to federal rule changes
- Rule Mandated duties – PCIs, audits, IU inspections

Implementing Pretreatment in Ohio

- Develop information management and continue to revise with technology.
- Value statewide consistency while considering local conditions
- Help POTWs achieve and maintain technical basis for local limits

Pretreatment Program Review

- Did it work?





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MORBIDITY AND MORTALITY WEEKLY REPORT

98 **Current Trends**
Influenza — United States

Epidemiologic Notes and Reports

Sewer Collapse and Toxic Illness in Sewer Repairmen — Ohio

On February 19, 1981, a 30-foot-deep sewer in an industrial section of Cincinnati, Ohio, collapsed, bringing with it 20 tons of earth and leaving a hole 24 feet in diameter in the street. Three days later, several sewer workers were overcome by nausea, vomiting, dizziness, and eye and nose irritation while repairing the collapsed drain, and had to climb out of the sewer. Four other workers also experienced eye and nose irritation and headache. The supervisor of maintenance for the Metropolitan Sewer District notified the city health department and the National Institute for Occupational Safety and Health (NIOSH). Subsequent epidemiologic investigation and environmental mapping of underground sewer systems have implicated highly acidic effluent (wastewater) and volatile organic solvents discharged from a large pigment manufacturing plant as the cause of the sewer collapse and subsequent illness in the sewer workers. City health officials immedi-

TIMELINE OF EVENTS

February and April 1991: Ohio EPA audit of MSD program.

June, 1991: First news coverage by Cincinnati Enquirer. Later in June, Enquirer published 1989 TRI data.

July - August, 1991: Press coverage continued.

September, 1991: Ohio EPA conducted in-depth follow up investigation.

November 1991: Ohio EPA investigation report completed.

December 1991: Enforcement settlement between Ohio EPA and MSD reached.

1989 TRI Data on Industrial Toxic Discharges to sewers

County Millions of pounds

Hamilton	19.75
Lucas	1.16
Cuyahoga	1.04
Butler	0.98
Franklin	0.84

JIM BERGMAN
CINCINNATI
EDUCATOR
1971



"COWABUNGA! THIS SEWER'S NOT EVEN FIT FOR US MUTANTS!!"

Excerpts from Ohio EPA Evaluation of MSD Enforcement

- “MSD sent NOVs for less than half of IU W’s zinc violations. Only one NOV was sent for pH violations, in spite of numerous pH violations. Many of the pH violations were in the 1-2 SU range.”
- “IU W informed MSD it had ceased its discharge of concentrated wastewaters to the POTW in November, 1988. IU W resumed discharge of concentrated wastewaters in July 1989 without informing MSD. “
- “Out of \$170,000 in fines noted and/or proposed by MSD, only \$13,000 was collected.”

Excerpts from Ohio EPA Evaluation of MSD Enforcement

- “MSD does not appear to believe that aggressive enforcement of their pretreatment program is appropriate. A statement appearing in the Cincinnati Enquirer on June 9, 1991,MSD considered itself to be a public utility and a service agency and not ‘an extension of the regulatory agency’ Regarding pretreatment matters, MSD is not an ‘extension of the regulatory agency’, it is the regulatory agency.”

Hamilton County MSD Toxics Progress

- 1989 TRI report showed 20,000,000 lbs toxics to POTW alone
- 2013 TRI report 2,100,000 lb all media releases
- 2013 883,000 lb to POTW, reduction of 93 % in 21 years.
- Hamilton County Ranked #1 in overall toxic releases in 2013, but counties across the State had also achieved drastic decreases.

Pretreatment Program Review

- There are many other examples of remarkable pollutant reductions and cases where POTWs went from reluctant to enthusiastic regulatory authorities.
- Most veteran pretreatment professionals would probably say “yes, it did work.”

Why did Pretreatment Program Work?

- Emphasis on local control with central government oversight.
 - Encouraged POTWs to become autonomous. Do IUs want to deal with State, Feds, or community pretreatment staff?
 - State and Feds too far away to effectively regulate large numbers of IUs
- Broad authority also allowed flexibility
- Successful Partnerships with regulated community
- Emphasis on education and outreach

Why did Pretreatment Program Work?

- Categorical standards quickly led to dramatic metals reductions
- Local Limits expertise grew and allowed limits to be both effective and flexible. Led to gradual further pollutant reductions
- Strong enforcement at key times

Final Thoughts

- Salute to the many who made it work
- Political mood swings cause uncertainty
 - Persistence usually pays off. Professionals stay on beyond the terms of elected officials.
 - Its ok if you don't win every battle, the next generation will take the baton.





Questions?

Audience tales of pollution in the old days?

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