

Operator Facts

TECHNICAL FACTS FOR WASTEWATER TREATMENT PLANT OPERATIONS

New York State Department of Environmental Conservation

Fall 2001

Volume 6, Number 3

Changes in the Certification Training Requirement

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Effective January 15, 2002 (which is the day after the next ABC exam filing deadline), there will be new certification training course requirements for all *new certification applicants* for Grade 3, 3A, 4 and 4A New York State Wastewater Treatment Plant Operator Certification. The new training courses are the *Grade 3 Supervision and Technical Operations Course* and the *Grade 4 Management Course*. These new courses are the result of a "Need-to-Know" analysis conducted in September 1999 at SUNY Morrisville by a panel of certified wastewater treatment plant operators.

The *Grade 3 Supervision and Technical Operations Course* can be completed in one of two ways.

1. The classroom course option is a five (5) day course that covers various principles of supervision (similar to the old Basic Supervision Course) and also adds a new "Technical Operations Module". The Technical Operations Module includes training on: multimedia issues; odor control; nutrient removal and toxics.

The following schools will be offering this program in 2002; Great Lakes Laboratory, SUNY Morrisville and New York City Department of Environmental Protection. See page 5 for information on contacting these schools.

2. You can also choose the home study course option and supplement that with the one (1) day technical operations module. The following courses are approved for the Supervision requirement.

"Supervisory Management in the Water/Wastewater Field"
Michigan State University,
(800) 356-5705
www.bus.msu.edu

"Basic Supervision and Basic Management"
Indiana State University,
(800) 234-1639, Extension 2522
extwarne@ruby.instate.edu

"Utility Management"
California State University-Sacramento,
(916) 278-6142
www.owp.csus.edu

In addition to these home-study Supervision options, you must complete the one (1) day classroom training covering the "Technical Operations Module". The following schools will offer the one (1) day "Technical Operations Module"; Great Lakes Laboratory; SUNY Morrisville and New York City Department of Environmental Protection.

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Operator Facts

The purpose of this technical bulletin is to inform wastewater operators about various operational practices, problem-solving approaches, technical developments and training/certification issues.

The bulletin is produced by:
 Bureau of Water Compliance Programs,
 Robert Cronin, P.E. Director, BWCP,
 Phillip T. Smith, P.E. Chief, FOAS
 Robin Yasinsac, Coordinator

You are invited to submit technical articles or other information of interest to operators for publication in *Operator Facts*.

Be sure to notify us of a change of address if you wish to continue to receive *Operator Facts* and Training Notices. Please include your certificate number.

The mention of any product or listing of any company's seminar is not an endorsement by this Department.

Send all correspondence to: *Operator Facts*, NYSDEC, 625 Broadway, Albany, New York 12233-3506, Phone (518) 402-8177 or Fax (518) 402-8082. Visit our website at: www.dec.state.ny.us/website/dow/bwcp/index.html

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The Grade 4 Management Course has been changed to a three (3) day classroom course. This course covers the following management issues:

- Grant Proposal Development Skills
- Grant Management Skills
- Contract Development & Oversight Skills
- Regulatory Knowledge
- Political Skills

There are no home study courses approved for Grade 4. SUNY Morrisville and the New York City Department of Environmental Protection are the only schools offering the three (3) day Management course in 2002.

Op Facts Brain Teaser

The clues are abbreviations and acronyms pertaining to wastewater. Try to find these letters which can be grouped horizontally, vertically, and diagonally in a forwards or backwards direction. The answers are in the back!

A	D	A	C	S	C	G	O	D	A
S	H	B	T	E	B	A	P	O	F
M	E	S	D	D	A	N	T	M	I
E	N	S	O	P	F	E	W	A	S
D	Y	L	A	S	D	O	W	C	R
N	R	M	T	O	C	A	T	Y	D
Y	W	E	B	A	F	T	I	M	N
B	A	P	E	C	A	M	R	E	O

1. Occupational Safety & Health Act
2. Renewal Training Course
3. State Pollution Discharge Elimination System
4. New York State Deartment of Environmental Conservation
5. Association of Boards of Certification
6. Supervisory Control And Data Acquisition
7. New York Rural Water Association
8. Discharge Monitoring Report
9. Wastewater Treatment Plant
10. Facility Operations Assistance Section
11. New York Water Environment Association
12. Biological Oxygen Demand
13. Environmental Protection Agency
14. Mixed Liquor Ssuspended Solids
15. Water Environment Federation
16. Gallons Per Minute

What Wastewater Utilities Can Do Now to Guard Against Terrorist and Security Threats

One consequence of the events of September 11th is a heightened concern among citizens in the United States over the security of their critical wastewater infrastructure. The nation's wastewater infrastructure consisting of approximately 16,000 publicly owned wastewater treatment plants, 100,000 major pumping stations, 600,000 miles of sanitary sewers and another 200,000 miles of storm sewers, is one of America's most valuable resources, with treatment and collection systems valued at more than \$2 trillion. Taken together, the sanitary and storm sewers form an extensive network that runs near or beneath key buildings and roads, and is contiguous to many communication and transportation networks. Significant damage to the nation's wastewater facilities or collection systems would result in: loss of life, catastrophic environmental damage to rivers, lakes and wetlands, contamination of drinking water supplies, long term public health impacts, destruction of fish and shellfish production, disruption to commerce, the economy and our normal way of life. Although many wastewater utilities have already taken steps to increase security, the following recommendations provide many straightforward, commonsense actions to increasing security and reducing threats from terrorism. Many of these actions are recommended by the Association of Metropolitan Sewer Agencies, the Water Environment Federation, and other leading professional organizations. The recommendations include:

Guarding Against Unplanned Physical Intrusion

- Lock all doors and set alarms at your office, pumping stations, treatment plants, and vaults, and make it a rule that doors are locked and alarms are set;
- Limit access to facilities and control access to pumping stations, chemical and fuel storage areas, giving close scrutiny to visitors and contractors;
- Post guards at treatment plants and post "Employee Only" signs in restricted areas;

- Control access to storm sewers;
- Secure hatches, metering vaults, manholes and other access points to the sanitary collection system;
- Increase lighting in parking lots, treatment bays, and other areas with limited staffing;
- Control access to computer networks and control systems, and change the passwords frequently;
- Do not leave keys in equipment or vehicles at any time.

Making Security a Priority for Employees

- Conduct background security checks on employees at hiring and periodically thereafter;
- Develop a security program with written plans and train employees frequently;
- Ensure all employees are aware of communications protocols with relevant law enforcement, public health, environmental protection, and emergency response organizations;
- Ensure that employees are fully aware of the importance of vigilance and the seriousness of breaches in security, and make note of unaccompanied strangers on the site and immediately notify designated security officers or local law enforcement agencies;
- Consider varying the timing of operational procedures if possible so if someone is watching the pattern changes.
- Upon the dismissal of an employee, change passcodes and make sure keys and access cards are returned;
- Provide Customer Service staff with training and checklists of how to handle a threat if it is called in.

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RENEWAL TRAINING & UPCOMING MEETINGS

News and Events



NYWEA, Inc.
126 North Salina Street - Suite 200
Syracuse, NY 13202
(315) 422-7811

National Events

WEFTEC 2001
Atlanta, GA
October 13-17, 2001

State Events

2nd Annual Residuals Management Conference
Syracuse
November 7, 2001

Common Metals Specialty Conference
Sherrill
December 12, 2001

74th Annual Meeting
Marriott Marquis, NYC
February 4-6, 2002

Spring Technical Conference & Exhibition
Rochester
June 17-19, 2002

Long Island Chapter

Chopper Pumps and Step Screens
Cedar Creek
October, 2001

Capital Chapter

Fall Meeting - Stormwater
Clifton Park, NY
October 25, 2001

Genesee Chapter

Process Control
TBD
December 7, 2001

Job Opportunities

Wanted: Wastewater Treatment Plant Operator I

The Otisville Correctional Facility seeks someone to operate the Otisville Wastewater Treatment Facility and work under a wastewater supervisor. The position is full time, but two candidates may split the job on a part-time basis.

Candidates should submit their resume (indicating full-or part-time status) to: Otisville Correctional Facility, Attn: Personnel, P.O. Box 8, Otisville, NY 10963.

Wanted: Sewage Plant Operator

United Mobile Home, Inc. seeks a Class 3A sewage plant operator for its 50,000 gpd activated sludge sewage treatment plant at Brookview Village Mobile Park in Greenfield Center, Saratoga County. The recently upgraded plant includes an influent lift station, flow equalization, tertiary filtration, effluent chlorination/dechlorination, an aerobic sludge digester with drying beds, and alum injection for phosphorus control.

Candidates should submit their resume to: United Homes, Inc., Jeffrey V. Yorick, P.E., Engineering Manager, 102 East Hillview Drive, Morgantown, WV 26508. To arrange a site visit, you should call (304) 291-3380.

Wanted: Sewage System Supervisor

The Rockland County SD#1 in Orangeburg seeks someone who will plan and direct the activities of mechanics and laborers in maintaining the RCSD #1 collection system. The minimum qualifications are 6+ years of experience in collection system O&M, which includes 3+ years of supervisory experience. Starting salary is \$46,019 annually.

Wanted: Engineer 1

RCSD #1 also seeks someone for on-site inspection and supervision of construction and sewer rehabilitation projects and to assist in contract specification preparations and other related activities. The minimum requirement is a bachelor's degree in Civil, Sanitary or Environmental Engineering (at least 15 credits in Civil Engineering or related courses). Starting salary is \$43,973.

Certification Courses

Basic Operations

October 15-26, 2001
Great Lakes Laboratory - Buffalo (716) 878-5422

November 26-December 7, 2001
SUNY Morrisville (315) 684-6082

Basic Laboratory

November 5-9, 2001
SUNY at Morrisville (315) 684-6082

Activated Sludge

November 5-8, 2001
Great Lakes Laboratory-Buffalo (716) 878-5422

December 10-13, 2001
SUNY at Morrisville (315) 684-6082

Advanced Operations and Management

December 10-14, 2001
Great Lakes Laboratory - Buffalo (716) 878-5422

Coordinating Actions for Effective Emergency Response

- Review existing emergency response plans, and ensure they are current and relevant;
- Make sure employees have necessary training in emergency operating procedures;
- Develop clear protocols and chains-of-command for reporting and responding to threats along with relevant emergency management, law enforcement, environmental, public health officials, consumers and the media. Practice the emergency protocols regularly;
- Ensure key utility personnel (both on and off duty) have access to crucial telephone numbers and contact information at all times. Keep the call list up to date;
- Develop close relationships with local law enforcement agencies, and make sure they know where critical assets are located. Request they add your facilities to their routine rounds;
- Work with local industries to ensure that their pretreatment facilities are secure;
- Report to county or State health officials any illness among employees that might be associated with wastewater contamination;
- Report criminal threats, suspicious behavior, or attacks on wastewater utilities immediately to law enforcement officials and the relevant field office of the Federal Bureau of Investigation.

Investing in Security and Infrastructure Improvements

- Assess the vulnerability of collection system, major pumping stations, wastewater treatment plants, chemical and fuel storage areas, outfall pipes, and other key infrastructure elements;
- Assess the vulnerability of the storm water collection system. Determine where large pipes run near or beneath government buildings, banks, commercial districts, industrial facilities, or are contiguous with major communication and transportation networks;

Terrorist and Security Threats (continued from Page 3)

- Move as quickly as possible with the most obvious and cost-effective physical improvements, such as perimeter fences, security lighting, tamper-proofing man-hole and valve boxes, etc;
- Improve computer system and remote operational security;
- Use local citizen watches;
- Seek financing for more expensive and comprehensive system improvements.

While wastewater utilities are the key to improving security of our wastewater treatment plants and collection systems, EPA, other Federal agencies, and both industry and managerial trade associations also provide help and support. EPA is working with AMSA and other groups to develop training courses and technical materials for wastewater utilities and State personnel on assessing vulnerabilities and improving security. EPA is working collaboratively with the Association of Metropolitan Water Agencies and other groups to develop an Information Sharing and Analysis Center to bolster coordinated notification and response to threats and vulnerabilities at both water and wastewater facilities. A number of technical projects are underway to help increase security of the nation's critical wastewater infrastructure.

This article was provided by: U.S. Environmental Protection Agency, Office of Wastewater Management.

For More Information

EPA Counter-terrorism:

<http://www.epa.gov/ebtpages/ecounterterrorism.html>

EPA Alert on Chemical Accident Prevention and Site Security:

<http://www.epa.gov/ceppo/pubs/secale.pdf>

Association of Metropolitan Sewer Agencies:

<http://www.amsa-cleanwater.org>

Association of Metropolitan Water Agencies:

<http://www.amwa.net/isac/amwacip.html>

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S	H	B	T	E	B	A	P	O	F
M	E	S	D	D	A	N	T	M	I
E	N	S	O	P	F	E	W	A	S
D	Y	L	A	S	D	O	W	C	R
N	R	M	T	O	C	A	T	Y	D
Y	W	E	B	A	F	T	I	M	N
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D	Y	L	A	S	D	O	W	C	R
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The beginning of each word is capitalized. Diagonal words are bolded and capitalized. Other letters in the word may also be capitalized and/or bolded if they start a new word in another direction.

For future **Brain Teasers**, be sure to visit our web site:
www.dec.state.ny.us/website/dow/bwcp/foas_main.html

a	d	a	c	S	c	G
	h			e	b	
p			s	d	d	A
	t	m				
		N	s	O	p	f
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	W	y				
	N	r	M		o	c
		y	D			
		w		B		F
t		m	N			
		a	p	E		
	R					

New York State DEC
Facility Operations Assistance Section
625 Broadway - 4th Floor
Albany, New York 12233-3506

