PRESIDENT'S MESSAGE

Here we are again bringing you another newsletter and a new President. As I listen to vendors and engineers and others in the wastewater field who travel throughout New England hear praises on the New Hampshire Association, I can't help feeling a sense of pride in us. I have been in the Association for 8 years and have seen tremendous changes over the years. The obvious question before us is: where do we go from here?

Speaking for myself, I would like to see more participation by members in planning events and communicating between plants. The best opportunity we have for this is in our quarterly newsletter, The Collector. We encourage you to drop us a line about anything in the wastewater field. Write to: Bob Livingston, P.O. Box 95, Concord, NH 03301. Remember, the main purpose of the New Hampshire Water Pollution Control Association is to make us all better informed about the wastewater field. Tours, technical sessions, social gatherings and the newsletter all help to make us professionals. All you have to do is join in, get involved.

Past President's plaque to Lorraine Sander for her hard work and dedication to the Association.

The first NEWPCA Operations Award to Bob Livingston for his leadership in statewide operator training and the plant technical assistance program.

Certificate of Commendation to Art Hoffman for his initiatives in improving the sludge handling process at the Dover Treatment Plant.

Honorary Lifetime Membership to Lin Collins.

Simpson's Pavilion in Dover was the site of our Association's annual Clambake on June 8. A sunny 90° day greeted over 200 participants who feasted on lobsters, chicken, or steak. In spite of the heat, softball and volleyball occupied the more energetic members, while others (the more sensible) enjoyed the shade of the trees near the Budweiser van and the bar. If you have any recommendations for improving or adding new events, please let us know.

CONTEST ★ CONTEST ★ CONTEST

We are searching for a new logo for our Association and have decided to run a contest to find one. Please submit your design on 5" x 7" paper in black and white. We are looking for simplicity and something that will reproduce well. Judging will be done by your Board of Directors. The prize? ONE HUNDRED DOLLARS CASH!!! Please send your entries to Bob Livingston, P.O. Box 95, Concord, NH 03301 by September 30. (Be sure to include your name & address.)
LEBANON INSTALLS ODOR CONTROL SYSTEM

The Lebanon Wastewater Treatment Facility is a secondary activated sludge plant, with primary clarifiers. The sludge (secondary and primary) is stored for 28 days in a holding tank, then dewatered and incinerated. The majority of the odors which have annoyed nearby neighbors and local shopping malls, originate from the sludge holding tank. The sludge holding tank is a covered tank with air mixing and can hold up to 140,000 gallons of sludge, commonly 4.5% to 5.5% solids. The exhaust air, 230 cfm, contains up to 40 mg/L of hydrogen sulfide.

In the past, we worked on controlling the odors, by treating the exhaust with deodorants and a potassium permanganate spray. Deodorants we found to be completely ineffective. The potassium permanganate did not work for us, mainly due to the limited contact time. We have tried treating the sludge, while in storage with potassium permanganate, but the cost was prohibitive because of the reaction of the permanganate with compounds other than hydrogen sulfide. We also tried treating the sludge with LLMO’s which did not work. We also considered pH adjustment to keep the sulfide in solution, but the costs were too high.

Realizing that treating the disease was not the answer, we settled on treating the symptoms, the exhaust air. We looked at three basic types of odor systems: ozonizers, carbon absorption and chemical oxidation.

Ozone proved to be too expensive capital cost-wise. Carbon absorption was a viable alternative only if it could be regenerated; however, O & M costs were slightly higher than the chosen alternative. The chosen alternative was chemical oxidation.

To initiate this operation, we bought a chemical tank, a Croll-Reynolds counter current flow packed-bed fiberglass tower, 12 inch x 6 ft. high, with plastic media, a ½ HP 200 CFM blower, chemical feed pump and a prefabricated wooden shed to house everything for $5,971.00.

After everything was purchased, we ran 8” flexible tubing from the tank dome to the intake of the blower. The blower discharges into the bottom of the tower. The oxidizing agent is then pumped through the chemical feed pump and sprayed into the top of the counter current packed bed tower. pH must be greater than 8.5 to keep H₂S in solution for the Cl₂ to oxidize. If less than pH of 8.5, H₂S remains in the gaseous state and cannot be oxidized.

Spent chlorine solution will be drained into the chlorine contact tank, to achieve a once through system.

O & M costs currently are running at $400/year for electricity and $2,000 for chemicals. We are using Calcium Hypochlorite, pH adjusted with caustic, as the oxidizer. We intend to pipe over a portion of the chlorine solution used to disinfect the effluent, to use as the oxidizer. Once this is done, chemical costs should be about $250/year.

We have run tests using a drag meter and find the tower to remove 100% of the measurable hydrogen sulfide. Some of the other unmeasurable odors (amines mercaptans) are not detectable in the exhaust air.

Dana Arey
Lebanon WWTP

JOBS

Derry WWTF  Looking for an Operator I, starting salary $12,480 and an Operator II with a range of $14,414 to $17,451, contact Rodney Bartlett 434-6934 as soon as possible.

Milford WWTF  Looking for an Operator/Maintenance Mechanic I, experience preferred but will train, starting salary $6.21/hour to $7.50/hour depending on experience, contact Roger Taillifer 673-9441.

Manchester WWTF  Looking for a Maintenance Mechanic Supervisor, starting salary $20,833 to $24,649 depending on experience. To request application, contact Personnel Department, City Hall Annex, 27 Market Street, Manchester, NH 03101, 603-624-6543 from 9:00-5:00.

Manchester WWTF  Looking for an Operator II. Needs to be certified with the State of New Hampshire. Rotating shift. Starting pay $283.54 to $336.17/week, depending on experience. Request application from Personnel Department, City Hall Annex, Market Street, Manchester, NH 03101.

Warner WWTF  Looking for Plant Superintendent, Grade II, salary commensurate with experience, contact either Jackson Hunt 456-3636, Fred Wilman 456-2558, or Dick Brown 456-3033.

West Swanzey WWTF  Part-time Operator II, 20 hours per week, starting salary around $6.60/hour, contact Ginny Maloney 352-7411.

Keene WWTF  Looking for three Operator I and II, preferred certified but will train to be certified; Operator I — $5.83/hour and Operator II — $6.95/hour, excellent benefits offered, contact Jerry Holcomb 352-6550.

Henniker WWTF  Looking for an Operator II. Must hold a Grade II Operator License with the State of New Hampshire. Mechanical ability necessary. For more information, contact Henniker Selectmen’s Office.
PROFILES

The subject of our Profiles Column this month is Walt Norris. Walt has been treasurer of our Association since 1976 and has never lost a penny. Walt is in charge of the entire Concord Sewer Department which includes the Hall Street Plant, the Penacook plant and all the collection systems as well. He started with Concord in September of 1971 after leaving his job with the State Highway Department. Walt has a bachelor's degree from New England College in Civil Engineering and has done graduate work at Northeastern in Sanitary Engineering.

He and his wife of 13 years, Linda, and their two sons Todd (5½) and Scott (3½) share their home with Walt's extensive collection of Civil War artifacts and guns.

One of Walt's prouder accomplishments lately is designing and building their summer house which he says is larger than their present home in Concord.

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CERTIFICATION QUIZ NO. 5

GRADE I
Why is it necessary or desirable to "wash" grit?

GRADE II
What are some of the advantages of aerobic digestion in comparison with anaerobic?

GRADE III
How are off gases and foul air treated in a biological odor reduction tower?

GRADE IV
What types of potentially harmful industrial waste discharges can be continuously monitored and connected to alarm systems?

CERTIFICATION QUIZ ANSWERS

March Issue Number 4

Grade I: — B.
Grade II: — 23,120 cubic feet
    .173 MG
Grade III: — A. 3822 mg/L
    B. 983 lbs TSS/day
Grade IV: — C.

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Familiar Faces in new places

Greg Mack, former Chief Operator at Somersworth Water Pollution Control Facility, has been promoted to the position of Superintendent. His former responsibilities are being split between Denis Messier and Bob Lentz.

Jon Patterson has been named Superintendent of the Newfields, NH Wastewater Pollution Control Facility. Jon is also an operator and Safety Officer at Somersworth.

The Operations Division has added a familiar face to its staff in the person of Mark Gauthier. As most know, Mark is a past president of the NHWPCA. Mark has several years experience at the Somersworth WWTF and was Superintendent before moving to the Manchester WWTF for a short stint as Chief Operator before resigning and joining Operations.

Leo Caron, former Maintenance Supervisor at Manchester, has been appointed Chief Operator of the Manchester WWTF.

Norm Plourde left his Operator II position at the Manchester WWTF and has taken a new position with the Town of Milford WWTF.
Lab Talk

As most of you know, the functions of a lab at any treatment plant can vary anywhere from complex extractions to inspection of septage hauling equipment. Undoubtedly the function that appears to be the most important is that of data collection. If you stop for a few moments and list all the variable test results and measurements made, you would be surprised to discover the magnitude of your daily list. Also consider the fact that it may be replicated every day. There is a shift in importance from spending the bulk and effort of your time directed at collecting information to manipulating what you have collected. This does not reduce the importance of daily lab tests or measurements for quality control but actually increases it. What better time to evaluate the importance, reliability, and actual need for specific information than when your data collection system is growing. The purpose of all this information that is gathered by yourself and staff members is to make an informed decision on the direction of your plant toward an objective. Obviously the success of this approach not only depends on having the right information but also having the information right. This problem can take so many different forms that it may go undetected for long periods of time. This is where your laboratory staff can be of tremendous value. Working closely with daily to day operations, they can usually sift through important data and track down non-representative information. The overall result leads to better control since trends can be monitored in shorter time periods and proper actions carried out to reach your objective.

by:
Phillip Maltails
Manchester WWTF

THANK YOU SPONSORS

We are pleased to publish another listing of sponsors. You have been a great help towards the publication of "The Collector" and we hope that all of our readers and sponsors will continue to support one of the best Associations established. Thank you!

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UNIVERSITY OF LOWELL
DIVISION OF CONTINUING EDUCATION

Industrial Technology — Water/Wastewater Option

The following courses are offered during the Fall 1984:

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<thead>
<tr>
<th>COURSE #</th>
<th>COURSE</th>
<th>NIGHT OFFERED</th>
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<tr>
<td>20.251</td>
<td>Wastewater Treatment Plant Operations I</td>
<td>Monday &amp; Wednesday</td>
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<tr>
<td>20.253</td>
<td>Wastewater Lab I</td>
<td>Tuesday &amp; Wednesday</td>
</tr>
<tr>
<td>20.152</td>
<td>Water Biology</td>
<td>Monday</td>
</tr>
<tr>
<td>20.225</td>
<td>Water Chemistry I</td>
<td>Thursday</td>
</tr>
<tr>
<td>20.257</td>
<td>Water &amp; Wastewater Plant Management I</td>
<td>Monday</td>
</tr>
<tr>
<td>20.351</td>
<td>Water Supply &amp; Treatment Operations I</td>
<td>Thursday</td>
</tr>
<tr>
<td>20.353</td>
<td>Water Works Operations Lab I</td>
<td>Tuesday</td>
</tr>
<tr>
<td>20.354</td>
<td>Industrial Wastewater Treatment</td>
<td>Wednesday</td>
</tr>
<tr>
<td>20.452</td>
<td>Operations &amp; Maintenance of Wastewater Collection Systems I</td>
<td>Monday</td>
</tr>
</tbody>
</table>

Registration is August 27-30, 1984 from 6:30-8:00 in Ball Building Room 214. Cost is $44/credit hour. For further information call 617-452-5000.
NEW WPCF OPERATIONS DIVISION

As of July 1, 1984, operations personnel will be able to join a new category of WPCF and NEWPCA membership and will receive operations-oriented services. The Division's title is the "Professional Wastewater Operations Division (PWOD)".

Eligible for membership in the PWOD are those who are actively involved on a daily basis with the operation and maintenance of wastewater treatment plants, collection facilities, and wastewater laboratories. Membership is restricted to those who work full time at those facilities. Those in operations may continue to belong to WPCF as "active" members if they prefer to receive the service package for that category which includes the Journal.

Existing "Affiliate" members will be automatically converted to the operations division based on the above criteria. A new publication called "Operations Forum" is in the mail to all WPCF members and will be a practical, useful tool for operators. The creation of the operations division represents a significant commitment on the part of the Federation to recognize the needs of our operators.

Lorraine Sander and Greg Mack have met with the other New England Operators Association presidents and with NEWPCA's officers over the past year to discuss the WPCF proposal. It is evident that many of our ideas have been incorporated in the final membership package by WPCF. The New Hampshire Association Board of Directors highly recommends that all personnel at plants consider joining the new division.

The cost will be $15 for the first year and will give you the benefits of full membership in WPCF and NEWPCA.

PLANT OPERATIONS AWARDS

NEWPCA 1984

The NEWPCA Plant Operations Committee will be accepting written papers on the following subjects: (a) Maintenance Management (b) Solide Processing/Sludge Management. All papers must be submitted by November 1, 1984, to:

Charles Smith
C/o Whitman & Howard, Inc.
45 William Street
Wellesley, MA 02181

Awardees will be presented a plaque and $100 cash prize at the NEWPCA January 1985 Meeting.

For additional information or assistance in submitting a paper, contact Don Pottle at NHWS&PCC.

SAFETY CORNER

The Board of Directors of the New Hampshire Water Pollution Control Association has appointed a Safety Committee to provide information relative to the hazards inherent in the wastewater field. The committee members are:

Mike Butler, Monadnock Paper Co. (Chairman)
John Dolbeare, Nashua WWTP
Robert Heligern, Nashua WWTP
Vernon "Chris" Hipkiss, Pittsfield WWTP
Roger Taillefer, Milford WWTP
Tom White, Penacook WWTP

Safety is a very broad-based subject. We would like to obtain your input as to the safety problems you would like us to address. This list contains only a few of the possibilities. Please number in the order of importance to you, (1-15). Your input will help us on the Safety Committee to concentrate our efforts in the areas that will best serve the NHWPCA and its members.

1. Firefighting
2. Breathing Apparatus
3. Confined Space
4. Collection System
5. Water Safety
6. Safety Devices
7. Suppliers
8. Pump Station
9. Gas Monitoring
10. Mechanical
11. Electrical
12. Chemical
13. Biological
14. First Aid, CPR
15. Right to Know

Other Topics

Please mail to Mark Gauthier @ NHWS&PCC.
SAFETY PROGRAMS PAY OFF—
THE CONVINCERS

SAN DIEGO JUDGE IMPOSES FIRST JAIL TERM FOR CRIMINAL STATE SAFETY LAW VIOLATION

SAN FRANCISCO—(By a BNA Staff Correspondent)—The first jail term for violation of the California Occupational Safety and Health Act was imposed Jan. 11 against an El Cajon, Calif., contractor by San Diego Municipal Court Judge Rafael A. Arreola.

Under terms of the sentence, Mike Henderson, president of KTA Construction Inc., will serve 30 days in the county jail followed by 36 months of probation.

The sentence is the first to result in a jail term under the criminal sanctions of the Cal/OSHA Act, according to the Division of Occupational Safety and Health (DOSH), which enforces the Act. In other cases where criminal charges were brought, sentences involved fines and/or parole.

Henderson's sentence stems from an Oct. 28, 1982, accident in which a KTA foreman was killed when an unsupported earth wall of a 12 foot deep trench collapsed. A subsequent DOSH inspection resulted in citations charging that the company did not obtain an excavation permit from the division, failed to adopt a code of safe practices, and did not shore the trench adequately.

The sentence stipulates that Henderson spend 30 days in the county jail, but he will be allowed to participate in the work furlough program during the day. He will then serve 18 months formal probation followed by 18 months summary probation. In addition, in lieu of $7,500 fine, Henderson agreed to perform construction work worth $19,900 to improve a Little League baseball field. He also agreed to designate a safety director for KTA Construction, establish a safety program approved by Cal/OSHA, and report every new construction job to DOSH.

The Cal/OSHA law provides for criminal penalties against employers. The charges are investigated by DOSH and the results turned over to the local prosecutors for formal legal action. "It should be evident from the prosecution of this case that the division intends to hold management accountable particularly when there is, as in this case, willful intent to jeopardize the safety of workers," said deputy DOSH chief Victor Muniz.

BOY'S BODY RECOVERED

SAN ANTONIO, Texas (AP)—Rescuers recovered the body of a 12-year-old boy from a sewage treatment plant Friday, more than a day after the child tumbled into an open manhole while chasing a soccer ball.

The body of Raul Perez floated more than eight miles through the underground sewer system before drifting into the plant, said Assistant Fire Chief Jimmy Saldana.

"After we couldn't find him for so long, we just waited for him to float in there," Saldana said. "We were afraid he had snagged on something but after so long, we knew he was dead."

The sixth-grader could have died by striking his head, inhaling the poisonous gas fumes underground or drowning, Saldana said.

The boy had fallen through the uncovered manhole about 2 p.m. Thursday during a physical education class at Taft Jr. High School.

Rescue crews worked around-the-clock until Perez' body was found.

THE NEWS-SUN, November 5-6, 1983

GAS IN SEWER PIPE KILLS TWO

PHOENIX, Ariz. (AP)—Officials kept a carbon monoxide-filled sewer pipe sealed today while they pondered how to safely investigate the site where a construction worker and a would-be rescuer were killed and 29 others were felled trying to save them.

The carbon monoxide apparently came from a malfunctioning gasoline-powered water pump in the half-mile pipe, Gordon Routley, a fire protection engineer with the Phoenix Fire Department, said yesterday.

The dead worker had gone inside yesterday afternoon to check the pump, and when he didn't emerge, others went in to try to save him. In all, 31 workers and firefighters were overcome by fumes and heat exhaustion, officials said.

THE EVENING SUN, Friday, March 9, 1984
OPERATOR TRAINING
Fall 1984 Schedule
Franklin Operator's Training Center

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DATES</th>
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<tr>
<td>Pump Operation &amp; Maintenance (@ Dover)</td>
<td>Sept. 11 (Tues)</td>
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<tr>
<td>Pump Operation &amp; Maintenance</td>
<td>Sept. 12 (Wed)</td>
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<tr>
<td>Sludge Conditioning &amp; Dewatering</td>
<td>Sept. 18 (Wed)</td>
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<tr>
<td>Emergency First Aid (2-day course) (@ Nashua WWTF)</td>
<td>Sept. 26 (Wed)</td>
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<tr>
<td>Safety</td>
<td>Oct. 3 (Wed)</td>
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<tr>
<td>Laboratory Troubleshooting</td>
<td>Oct. 10 (Wed)</td>
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<tr>
<td>Energy Conservation</td>
<td>Oct. 17 (Wed)</td>
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<tr>
<td>Chlorination</td>
<td>Oct. 24 (Wed)</td>
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<tr>
<td>Wastewater Biology</td>
<td>Oct. 31 (Wed)</td>
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<tr>
<td>Activated Sludge</td>
<td>Nov. 7 (Wed)</td>
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<tr>
<td>Certification Exam Review</td>
<td>Nov. 14 (Wed)</td>
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<tr>
<td>Math Review for Operators</td>
<td>Nov. 28 (Wed)</td>
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</tbody>
</table>
| Operators with special requests and suggestions on math review courses for this fall, please send to Wayne Kimball, c/o NHWS&PCC, P.O. Box 95, Hazen Drive, Concord, New Hampshire 03301. NERWI is sponsoring a training course on August 16, 17 & 18 in So. Portland entitled “The First 12 Hours: A Hazardous Material Incident Seminar and Simulation.” For registration details contact Kirk Laflin, NEIWPC, 2 Fort Road, So. Portland, ME 04106 (207-799-7303).

Many thanks are offered to our operators who conducted or assisted with the spring operator training courses.

Thanks to:
- Lorraine Sander and Ken Smith, CPR — Nashua WWTF
- Brian Carroll, Collection System O&M — Woodsville WWTF
- John Bushold, Advanced Lab — Concord, Hall Street WWTP
- Norm Bilodeau and Jeff Burke, Metal Spraying and Lubrication — Franklin WWTP
- Rick Seymour, Basic Lab — Nashua WWTF
- Philip Maltais and Bob Cote, Computer Control — Manchester WWTF
- Charles McDowell, Collection System O&M — Berlin WWTF

Operators who have not gotten their certification renewed, please contact Wayne Kimball of NHWPCC, Operation Division.

Also, any paid-up members who are not getting association correspondence please notify Wayne of correct mailing address.

NEW HAMPSHIRE WATER POLLUTION CONTROL ASSOCIATION
P.O. BOX 95
CONCORD, NH 03301

Robert W. Livingston (W)
NHWS&PCC
Concord, NH 03301