



*State of Louisiana*

**OFFICE OF  
STATE INSPECTOR GENERAL**

**MECHANICAL WASTEWATER TREATMENT PLANTS**

**Report by**

**Inspector General Bill Lynch**

**Prepared for**

**Governor M.J. "Mike" Foster, Jr.**

**February 18, 1998**

**File No. 1-97-0008**



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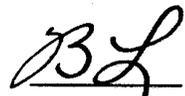
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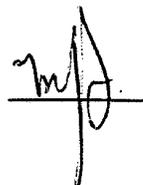
**Mechanical Wastewater Treatment Plants**

January 7, 1998

Report by

 Inspector General Bill Lynch

Approved by

 Governor M.J. "Mike" Foster, Jr.

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# Mechanical Wastewater Treatment Plants

The Department of Health and Hospitals, Office of Public Health, has failed to adequately regulate the manufacture and installation of mechanical wastewater treatment plants for rural residences. As a result approximately six-hundred plus unapproved mechanical wastewater treatment plants were installed by one installer. The Office of Public Health has been slow to investigate information indicating the likelihood that other installers also may have installed unapproved units.

## Background

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The Office of Public Health employs 108 state sanitarians working out of parish health units in 59 of Louisiana's 64 parishes. Sanitarians are licensed by the State Board of Examiners for Sanitarians. They monitor food, beverages and water, as well as waste water treatment and emissions.

In many parts of the state drainage is too poor for conventional septic tank/drainage field wastewater systems. Mechanical treatment plants are usually installed in such situations by Public Health licensed installers. Public Health oversees mechanical treatment plants.

Mechanical plants are small wastewater systems capable of treating sewage before it is discharged into the environment. Several mechanical plant designs have been approved for installation in Louisiana. The sanitary code requires Public Health engineers inspect wastewater treatment systems designed to treat more than 1,500 gallons per day. Plants installed for individual residences typically treat 500 gallons per day.

The size of a plant is determined by the number of gallons of liquid it can hold in its treatment chamber.

The Cajun Aire 500 is an approved 500 gallons per day wastewater treatment system. Its major component is a concrete box 5 feet 7 inches high, 5 feet 2 inches wide, and 8 feet long. The box is divided internally into pretreatment, aeration and clarifier chambers.

Sewage entering a Cajun Aire 500 plant is deposited directly into the pretreatment chamber where large solids settle out. The settled wastewater then flows into the aeration chamber where a submerged air diffuser supplies oxygen to aerobic organisms breaking down waste. Treated wastewater then flows into the clarifier chamber where the remaining solids settle. After clarification, treated wastewater is discharged into the environment.

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The state sanitary code permits only the installation of state approved plant designs. The design of a mechanical plant is critical to its proper functioning. For a manufacturer to obtain approval for a unit it designs, the design must be tested by an independent laboratory and the testing procedures used must meet state requirements. Public Health decides whether to approve a particular plant design for installation in Louisiana based on the test results.

A \$50 fee is paid by the manufacturer to DHH for a sewerage treatment plant identification tag for each plant it manufactures. The tag affixed to the plant by the manufacturer is intended to facilitate the collection of revenue according to DHH officials.

A landowner seeking to install a mechanical plant is required by the sanitary code to submit an application and obtain a permit.

Section 13:012-3 of the sanitary code states "a 'final' permit, which shall also be in writing, may be issued only upon assurance that the individual sewage system has been properly installed. In the case of individual mechanical plants, such assurance of proper installation shall be in the form of a completed 'Certification of Installation' form submitted to the State Health Officer by the licensed installer who performed the actual installation."

DHH standard operating procedures (SSOP-01), effective July 1, 1997, require that once the certification of installation is received, an on-site inspection will be conducted by a sanitarian to verify that the observable components of the mechanical plant have been installed according to code.

## Inadequate Oversight

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Public Health's oversight of plant manufacturers and unit installations is inadequate to assure that only approved individual wastewater treatment systems are installed at rural residences. Regional sanitarians confirm that plant installations are not inspected by sanitarians in many parishes. Furthermore, neither sanitarians nor engineers inspect plants rated at less than 1,500 gallons per day on-site at the manufacturer's premises.

The inadequacy of Public Health's oversight came to light when agency officials learned through investigation of a complaint that Ace Plumbing, located in Duson, improperly manufactured and then installed approximately six-hundred plus mechanical units.

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McGrew Construction Company, Inc., located in Bossier City, has received Public Health approval for plant designs marketed under the trade name "Cajun Aire." Ace Plumbing sells Cajun Aire units it manufactures using McGrew's molds.

In the spring of 1996 Public Health received a complaint that Cajun Aire units being manufactured and installed by Ace Plumbing did not match approved design specifications. Public Health employees investigating the complaint visited Ace Plumbing and inspected the molds. The investigation verified that molds used by Ace Plumbing to manufacture Cajun Aire units had been altered from the approved design specifications.

Based on unverified information provided by Ace Plumbing, Public Health believes that approximately six-hundred plus improperly modified units were installed. Public Health has not determined the location of all of these units and has not established whether the unapproved modified units installed by Ace Plumbing do an adequate job treating wastewater.

As a result of its findings Public Health brought an administrative enforcement action against Ace Plumbing seeking correction of the improper installations. More recently McGrew and other related parties were brought into the enforcement action. These administrative proceedings are still pending.

The cost of a new installed Cajun Aire 500 unit is about \$1,900 whereas a rival firm estimated it will cost \$800 per unit to retrofit existing units to bring them into compliance. Retrofitting six-hundred plus plants to correct modifications would cost an estimated \$480,000, excluding legal fees.

The Ace Plumbing case demonstrates that Public Health did not have adequate procedures in place to discover in the absence of complaints the fact that Ace Plumbing was manufacturing units with unapproved modifications. As illustrated by Public Health's inspection of Ace Plumbing's manufacturing facility, periodic, random inspection of production facilities is an effective means of assuring that plants are being produced in conformity with the approved design. Public Health, however, relied on the good faith of the manufacturer and an assumption that plants bearing identification tags conform to approved design specifications.

The Ace Plumbing case further demonstrated that Public Health's oversight of actual system installations was inadequate to detect approximately six-hundred plus improperly modified units. Prior to July 1, 1997 sanitarians were not governed by a standardized operating procedure requiring on-site inspections.

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Public Health's inspection practices for plant installations are inconsistent. Local governmental units are encouraged by Public Health to enact ordinances requiring approval of wastewater treatment plants before utilities can be connected when property ownership is transferred and for new construction. Where local ordinances impose this type of requirement Public Health conducts on-site inspections of plant installations. In areas where there is no such requirement installations are often not inspected. In those cases a sanitarian signs off on an installation checklist provided by the installer on which the installer certifies that his installation is in accord with Public Health regulations.

Our review of 3,461 installation permits approved from May 1, 1997 through July 31, 1997 revealed that final permit approvals were granted by sanitarians days, sometimes months after the plants were installed. Sixty-six percent of final permit approvals during May and June, before the effective date of SSOP-01, and 61% of those approved during July 1997 were not executed on the day of installation.

The new Public Health policy, specified in SSOP-01, requires a sanitarian to perform an on-site inspection once the checklist is received to verify that the observable components of the mechanical plant have been installed according to code.

Public Health policy prior to July 1, 1997 did not require sanitarians to go to the site to collect identifying tags from installed units. In practice the tags were turned in by the installer or landowner.

As demonstrated by the Ace Plumbing case, the fact that a tag is affixed to a unit does not mean that the unit, as manufactured, necessarily conforms to the approved design. In addition, when a sanitarian does not personally collect the identifying tag from the unit, there is no assurance the tag came from the unit installed at the particular site. In fact, according to Public Health, approximately 25% of all tags sold to manufacturers remain unaccounted for.

Mr. Pomier, owner of Ace Plumbing, said the elevation measurements of all six-hundred plus modified plants, clearly indicated on the installer's checklist, can be used to determine that he installed altered units. He added that parish sanitarians approved every installation based upon information provided in the check list. Public Health officials dispute Mr. Pomier's statement saying that the elevation readings shown in the checklist are insufficient to determine external plant measurements.

Public Health defends its failure to conduct on-site inspections of mechanical plant installations on the basis that it is inadequately funded and staffed to do an on-site inspection of every unit installed. Officials point to inspection of food and beverage establishments and public water supplies as the agency's primary mission, saying such Public Health programs safeguard the welfare of the state's total population. Inspections are, however, routinely performed with existing staff in parishes requiring DHH approval before connecting utilities.

## Failure to Investigate

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After learning of the six-hundred plus improper installations by Ace Plumbing, Public Health failed to promptly investigate the possibility that other installers may have installed modified Cajun Aire units.

In addition to Ace Plumbing, several other installers manufacture and install Cajun Aire plants. In one instance an individual who buys and "recycles" used mechanical plants complained to Public Health that a Cajun Aire unit he had purchased did not match the approved specifications. However, Public Health has been slow in its attempts to verify whether other Cajun Aire installers have installed units with unapproved modifications.

## Conclusions:

1. On-site inspections alone are not adequate to determine installation of an approved plant because some critical design features of an installed unit are either below ground or inside the unit, and therefore difficult to inspect once the plant has been manufactured and installed.
2. Public Health's failure to conduct compliance inspections at manufacturers' premises resulted in the manufacture and installation of approximately six hundred plus modified individual mechanical waste water treatment plants violating the Louisiana Sanitary Code.
3. Inadequate tracking of Sewerage Treatment Plant Identification Tags, permit applications and records of installations contributed to Public Health's failure to identify modified mechanical plants installed in Louisiana.

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4. On-site inspections by Sanitarian's of plant installation are frequently not performed, particularly in those parishes lacking ordinances linking inspections to commencement of utilities.
5. Public Health's apparent reliance upon manufacturers and installers to act in good faith and failure to provide consistent compliance enforcement created the potential for continuing violation of the Louisiana Sanitary Code.

### Recommendations:

1. Public Health should revise its current operating procedure to require periodic and/or random on-site inspection of molds and plants at the manufacturers' premises by qualified personnel for compliance with the Louisiana Sanitary Code.
2. Public Health should actively enforce SSOP-01 requiring on-site inspection by parish Sanitariums to assure plant installation in accordance with the Louisiana Sanitary Code.
3. Public Health should revise its records keeping procedures to assure tracking of permit applications by parish Sanitariums.
4. Public Health should enhance its procedures to assure proper tracking of Sewerage Treatment Plant Identification Tags.

### Management Responses:

1. Mr. John Pomier did not respond to the draft report.
2. Department of Health and Hospitals' response is attached.

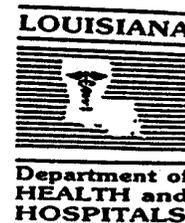
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STATE OF LOUISIANA  
DEPARTMENT OF HEALTH AND HOSPITALS

December 24, 1997

M. J. "Mike" Foster, Jr.  
GOVERNOR



Bobby P. Jindal  
SECRETARY

Mr. Bill Lynch  
Inspector General  
State Capitol Annex  
P. O. Box 94095  
Baton Rouge, Louisiana 70804-9095

Re: File No. 1-97-0008  
Mechanical Wastewater Treatment Plants

Dear Mr. Lynch:

This will serve to acknowledge receipt of your transmittal letter of December 15, 1997 and also respond to its enclosed draft of the findings of an investigation by your office regarding the efforts of the Office of Public Health to regulate the manufacture and installation of individual mechanical wastewater treatment plants, hereinafter referred to as "IMP's".

We agree that we have had some problems regarding the regulation of the IMP's; however, we do believe that we have identified the principal sources of some, if not most of these problems, and we have already initiated effective steps to improve and standardize these regulatory procedures.

The Office of Public Health has a new Individual Sewage System Program Administrator, who is quite busy assisting the Director of the Division of Environmental health Services to **turn the program around**. This is taking a bit of time to fully accomplish in every respect, but definite, positive progress has been made, and will continue to be made. This new administrator is receiving the full cooperation and assistance of a new Chief of Sanitarian Services and also a new Chief Engineer over the OPH Engineering Services, as well as the full cooperation and assistance of the OPH Regional Sanitarian Directors and the District Engineers across the state as she looks for ways and means to develop and implement improved and uniform services within her Individual Sewage System Program. As you noted in your report; however, the Office of Public Health is not adequately funded or staffed to carry out inspections of all installations, especially **during the actual installation of each new system**, while at the same time responding to and performing all the other health related mandates.

We respectfully disagree with several inaccurate comments and conclusions in the draft submitted to us, but we note that most, if not all of this disagreement pertains to an ongoing investigation of the complaint brought to our attention in the Spring of 1996. The investigation of

the complaint has already expanded, and as noted in the submitted draft, it is the subject of an administrative hearing proceeding which is progressing with the direct involvement and participation of the administrative law judge presiding over a case entitled *In the Matter of John Pomier*, Docket No. HH-97-002 in the newly created Division of Administrative Law.

We are placed in a position where we are unable to comment sufficiently due to the current proceedings pending before the ALJ. The proceedings are not lying dormant by any means. The ALJ has conducted several special status conferences with the expanding parties thus far, the latest held on December 17, 1997. Since we feel that it is inappropriate for extensive responsive details regarding points that we are in some disagreement with the investigation report prepared by your office, due to the pending case before the administrative law judge, we will instead focus on the Recommendations at the conclusion of the draft of the report to be submitted to the Governor, again noting that we agree that we have had some problems regarding the regulation of the IMP's.

Recommendation No. 1. "Public Health should revise its current operating procedure..."

Response: It is agreed that the operating procedure should require periodic and/or random on-site inspection of molds and plants at the manufacturers' premises by qualified personnel. This is at the very core of amendments and major changes to Chapter XIII of the State Sanitary Code which the OPH Division of Environmental Health Services is preparing to promulgate shortly, with some input from the regulated industry. The changes to the Appendix regarding the regulation of the IMP's will result in periodic and/or random on-site inspection of IMP's at the manufacturers' premises by the representatives of an American National Standards Institute (ANSI) accredited certification program testing/evaluation facility, who will report problems, if any, to the OPH.

At this point in time, we sincerely believe that we will be promulgating the Notice of Intent to rewrite Chapter XIII, including the significant changes to its Appendix regarding the regulation of IMP's in the February or March issue of the *Louisiana Register*, which would mean that final rulemaking would be promulgated in the May or June issue, at which time the changes could be implemented.

Recommendation No. 2. "Public Health should actively enforce SSOP-01 requiring on-site inspection by parish Sanitarians to assure compliance..."

Response: First, we will visit Conclusion No. 4, which addresses the fact that some 23 parishes do not have local ordinances prohibiting utility hook-ups until a sewage permit has been obtained from the parish health unit (operated by OPH in 63 parishes). OPH does license sewerage system installers in all 64 parishes, and this provides OPH with some indirect regulatory control in the 23 parishes without the above described local ordinances; however, we must rely on complaints of unauthorized installations (by licensed installers and/or by illegal installers). Legislation is being considered which would prohibit utility hook-ups until a sewage permit has been obtained from the parish health units across the state. Second, we return to the second Recommendation and offer comment that this is indeed a new standard operating procedure being implemented across the state with appropriate training and instructions by our new Individual Sewage System Program Administrator, and more significantly, warnings will be sent to all Sanitarians employed by the OPH

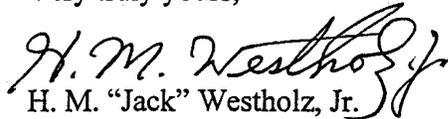
to the effect that discovery of willful failure to comply with the on-site inspection of sewerage systems as required by SSOP-01 will be met with appropriate disciplinary action.

Recommendation Nos. 3 and 4. "Public Health should revise its records keeping procedures..."

Response: The new OPH Individual Sewage System Program Administrator is addressing these problems as fast as is reasonably possible, with improved and standardized procedures for records keeping of all individual sewage systems including IMP's and for improved retrieval and tracking of Sewerage Treatment Plant Identification Tags which will be the subject of training sessions in each of the nine (9) OPH Regional areas across the state. These training sessions are presently in the process of being scheduled, and should be accomplished by mid-February, 1998.

In summary, we appreciate this opportunity to offer some comments regarding the draft of the report about to be submitted to the Governor, and we trust that you will annex our comments to the final draft.

Very truly yours,



H. M. "Jack" Westholz, Jr.  
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HMW:dms