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**REPORT
and
RECOMMENDATIONS
of the
STATE OF NEW JERSEY
COMMISSION OF INVESTIGATION
on the
GREEN ACRES ACQUISITION
of
UNION LAKE**

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STATE OF NEW JERSEY
COMMISSION OF INVESTIGATION

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March, 1988

**TO: The Governor and the Members of the Senate and
the General Assembly of the State of New Jersey**

The New Jersey State Commission of Investigation is pleased to submit this Report and Recommendations on the Green Acres Acquisition of Union Lake, pursuant to *N.J.S.A. 52:9M-10* of the Act establishing the Commission. The investigation was conducted under *N.J.S.A. 52:9M-2*, which authorizes the Commission to investigate the faithful execution of the laws of the State, the conduct of public officials and any matter concerning the public safety.

Respectfully submitted,
Henry S. Patterson, II, Chairman
James R. Zazzali
Barry H. Evenchick

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REPORT AND RECOMMENDATIONS OF THE NEW JERSEY STATE COMMISSION OF INVESTIGATION (SCI) ON THE GREEN ACRES ACQUISITION OF UNION LAKE

Introduction

The Acquisition

On June 25, 1982, the Department of Environmental Protection (DEP or Department) acquired 4,617 acres at Union Lake in Cumberland and Salem counties for \$3.1 million from the WaWa Corporation, a Wawa, Pa., company with offices at Millville near the lake. New Jersey's Green Acres Program under the Bond Act of 1978 provided \$1.8 million of the cost and the Federal Land and Water Conservation Fund subsequently provided \$1.3 million. The purchase included the 800-acre lake and its 110-year-old earthen dam.

Although it had been listed as a priority acquisition prospect by the Department's Division of Fish and Game (DFG) even before the inception of the Green Acres Program in 1961, Union Lake was not formally ranked for acquisition purposes until 1979. This ranking process followed the first notice to DFG in 1978 by WaWa's subsidiary, the Maurice River Company, of its interest in selling the property to the State. After a public hearing in September, 1979, the Department began negotiating for the purchase through its Green Acres Program administrator, then Curt J. Hubert. The negotiators initially envisioned a joint purchase of the property by Green Acres and the Landis Sewerage Authority of Cumberland County. However, the final deal was closed by the Department only (the Authority closed on a portion of the acreage later in 1982). Hubert's role as the dominant state negotiator, contrary to customary Green Acres acquisition procedures utilizing a staff versed in appraisal, engineering and other negotiating skills, will be assessed later.

The dam at Union Lake was inspected by the Army Corps of Engineers in 1978 under the federal government's nationwide Phase One Inspection Program. This activity consisted of a visual inspection, an analysis of pre-existing data and

a computation of spillway capacity. A report was forwarded to the Department in November, 1978, and by the Department to the dam's owners in February, 1979, with a directive to perform recommended follow-up studies. By September 1980, the engineering firm of O'Brien & Gere, Inc., had completed a report for WaWa which contained at the company's direction only partial follow-up engineering studies (particularly excluded was an analysis of the spillway's stability). This report, which estimated a cost of \$1.4 million to repair the dam's embankment, remained a corporate secret at WaWa throughout the entire negotiating period.

The Department's decision to purchase the property included appallingly minimal consideration of the condition of the Union Lake dam. This consideration was based largely upon a mere one-page memorandum received in August, 1980, by Green Acres Administrator Hubert from the DEP's Division of Water Resources. The lack of communications in the DEP and Green Acres bureaucracy, particularly the failure to coordinate various divisional and sectional responsibilities, adversely affected the acquisition process.

The Department did not obtain the secret dam report from WaWa until after the purchase. When informed at the eleventh hour that WaWa was intentionally withholding the report, the Green Acres administrator reacted with anger—not at WaWa but at the departmental employee who gave him the message.

The Department proceeded upon an assumption (a "guesstimate") that about one million dollars would be needed to repair the dam but it never performed follow-up studies to ascertain the actual condition of the dam (DEP never knew that until completion of an engineering report in 1986). Finally, the ultimate purchase price included no adjustment whatsoever for repairing a dam that was in obvious need of substantial repair.

Arsenic, long a serious pollution problem at Union Lake, was almost as pervasive an issue in the State's acquisition as the dam. (Indeed, the presence of the poison in the lake subsequently aggravated the difficulty and enlarged the cost of rebuilding the dam). At the time of the negotiations, the Department, WaWa and the area's citizenry all knew of the contamination. The Department had reached—and publicly advanced—the conclusion that the levels of arsenic found in the Lake did not pose a health risk for recreational use. Largely for that reason, Green Acres inappropriately dismissed arsenic as an acquisition factor at an early stage of the negotiations. Green Acres also ignored a later confirmation of arsenic in the lake-bottom's sediment, a condition that increased the complexities, and the cost, of dam reconstruction. Even though DEP possessed much information at the time of the negotiations about both the contamination source and potency, hardly any attention was given to potential long-term lake or land management difficulties.

The SCI Inquiry

On December 17, 1986, the Commission adopted a resolution authorizing an inquiry into the extent to which the process for acquiring Union Lake "may have failed adequately and properly to solicit and consider" data about the condition of the site. More specifically, the inquiry was directed to focus on "whether and to what extent information regarding the condition of the dam at Union Lake and possible arsenic pollution of the lake existed and was known to the DEP at the time of the acquisition and whether acquisition procedures under the Green Acres Program are adequate in general with respect to the process by which external criteria are solicited, examined and considered."

Senate President John L. Russo and Assembly Speaker Chuck Hardwick were formally notified of the Commission's decision by Executive Director James J. Morley. His letter noted that the probe would determine if "circumstances" surrounding the acquisition "suggest a need for revisions in the procedures governing Green Acres acquisitions generally." Since the Legislature at the time was considering a bill to appropriate \$15 million to repair the Union Lake dam—officially

labelled a "high hazard potential structure"—Morley's letter emphasized that the SCI would not inquire "into the need for funds to perform remedial work." Therefore, the letter stated, the SCI's decision to conduct an investigation need not delay the processing of the appropriation bill. The legislation was enacted in June, 1987.

Meantime, the SCI's probe, which would ultimately require the sworn testimony of 15 witnesses, interviews with at least 30 individuals, and the scrutiny of over 26,000 pages of records and exhibits, had settled on certain crucial issues. These included whether sufficient data about the condition of the dam and the presence of the arsenic had been obtained and incorporated by DEP and its Green Acres staff into the conclusions that led to the formal sale to the State, whether WaWa had purposely withheld relevant information that might have clarified potential cost problems related to the dam repair and arsenic contamination issues and revealed a larger financial obligation on WaWa's part, and whether the DEP's acquisition procedures were adequately designed and properly implemented to promote the integrity of the Green Acres acquisition program and the public interest in that program's success.

The Commission's investigation was conducted with the cooperation of the DEP, particularly its Green Acres personnel. The Commission's staff had access to witnesses and records relative to all aspects of the Union Lake transaction except representatives of the seller. WaWa produced some documents pursuant to subpoena but no witnesses. Because the Commission's subpoena power does not extend to out-of-state witnesses, the Commission requested their voluntary appearance. All relevant witnesses connected with the seller, a Pennsylvania corporation, reside outside of New Jersey. As of this writing, the staff has been unable to interview, even on a voluntary basis, any present WaWa officials who were associated with the transaction, despite repeated requests to their attorneys. Absent such communication, the staff, unfortunately, was unable to look at the transaction from the seller's viewpoint except through corporate documents produced by a subpoena served upon WaWa's corporate agent.

Background on the Dam

Union Lake's dam was built in 1866-68 at a point on the Maurice River about 13 miles above Delaware Bay. Impounding about 800 acres of fresh water, the dam created the largest lake in South Jersey. It consists of an earthen embankment and a masonry spillway and is about 2,000 feet long and 35 feet high at the embankment. The spillway is located about 500 feet from the western end and is about 200 feet long. An inflatable rubber dam (fabridam) installed on the spillway's center section in 1965 and foot-high flashboards on the end sections raise the normal reservoir elevation above 26 feet.

The dam was classified as a "high hazard" structure of intermediate size by the Army Corps of Engineers in 1978, based upon technical criteria as well as the potential for loss of life and property in the event of failure. A school, a trailer park, a senior citizens residence and houses are downstream.

At the time of the purchase, the land surrounding the lake was largely undeveloped except for the eastern shore. On that side is a development of single-family homes built by the Maurice River Company in the late 1960's. A small beach on the eastern side of the dam was conveyed to the City of Millville.

Background on the Arsenic

Union Lake is about 11 miles downstream from the Vineland Chemical Company (Vichem), a manufacturer of arsenical pesticides. This company has been identified by the DEP since the 1960's as the source of arsenic contamination of various sections of the Maurice River, including Union Lake, down to Delaware Bay. Numerous studies conducted by and for the DEP have revealed arsenic levels in the water in excess of state and federal standards for drinking water. Arsenic has also been identified in lake bottom sediments where it tends to accumulate.

Vichem has been the target of a prolonged series of administrative attacks and lawsuits by the Department and its predecessor Department of Conservation. The DEP identified the specific sources of the contamination as both the arsenic waste water generated through the plant's cooling system and the discharge of solid waste in the form of arsenic salts.

At present, the DEP has revoked Vichem's operating permits but the revocation is under appeal. Whatever the record of the Department's prolonged attempt to eliminate the pesticide company's poison discharges—and it is an ample record—it was grossly disregarded during the State's negotiations.

The Green Acres Program

The Green Acres Program has been funded by bond issues approved in 1961, 1971, 1974, 1978, 1983 and 1987, with the funds being allocated through legislative appropriations. The program makes bond monies available for the acquisition of lands by the State and for assistance grants to municipalities and counties to acquire lands for local open space, conservation and recreation. "Permanent open space" is the stated goal of the Green Acres Program. Bond issue appropriations to date have totaled \$675 million. Local and federal assistance has provided additional monies.

Green Acres is the only arm of the Department that actually purchases land. The Department administers 489,786 acres. Its Division of Parks and Forestry manages 300,192 acres, including 35 state parks and 11 state forests. The Division of Fish, Game and Wildlife manages 183,529 acres of wildlife areas. Through the Department, the State has become the single largest owner and developer of recreation land and facilities. (About half of this land was acquired prior to the Green Acres Program).

The acquisition of recreational sites is guided by the Statewide Comprehensive Outdoor Recreation Plan (SCORP), a kind of recreational master plan that defines priorities and policies of open space acquisition for the State. Mandated in order to maintain New Jersey's eligibility for federal assistance (up to 50 percent) under the Federal Land and Water Conservation Fund, the SCORP was first published in 1967 and subsequently updated in 1973, 1977 and 1984. The federal fund has contributed about \$100 million in matching money to date.

Jeanne M. Donlon, bureau chief for State land acquisition at Green Acres—which sponsored the Union Lake acquisition—described the current status of funding:

The funding from the earlier bond acts is fairly well depleted. There are small amounts left which are obligated to specific projects and the '83 bond act . . . has a few million dollars left. That, too, has been designated for specific projects, so there is not that much funding left.

Donlon's comments underscore the importance of the Commission's inquiry relative to the need for intelligent, efficient and conservative investment of such limited Green Acres funds. The voter-approved 1987 Green Acres bond issue contained no provision for State acquisitions.

How Union Lake Proposal Evolved

WaWa Initiated the Sale

There is little question but that WaWa's decision in 1978 to determine whether the State might be interested in buying the property marked the beginning of prolonged negotiations that led to the actual acquisition of Union Lake two years later. In an interview with SCI staff, M. Curtis Parker Jr., the vice president of the Maurice River Company in 1978, said that corporate efforts to develop lakeside property had been disappointing. As a result, alternative markets for disposing of the Union Lake site were explored. According to Parker, his company was familiar with the Green Acres Program and thought DEP might be interested. Following instructions to make contact with the State, "sometime in 1978," Parker said he obtained from Assemblyman (now Senator) James R. Hurley of Millville the names of the appropriate officials to see in Trenton. Hurley told the staff (as he similarly testified in 1983 before the Legislature's Joint Ethics Committee) that he first heard of the proposed acquisition through a letter from then Acting Commissioner Betty Wilson around the time of the September, 1979, public hearing. He said that he had no knowledge how the original contact with WaWa was arranged. Although the Landis Sewerage Authority files contain a letter, dated April 10, 1978, from Parker expressing interest in making WaWa land "available" to the Authority, the DFG file does not contain any similar correspondence from him on the subject.

Lake Long Sought by State

As noted, Union Lake had long been favored as an acquisition prospect by State fish and game authorities and, indeed, was included on an initial list of proposed acquisitions in 1961 after passage of the first Green Acres bond issue. A year earlier the DFG had put the lake on its own "priority list of lands for possible acquisition as hunting and fishing grounds." However, it was WaWa's desire to sell the lake parcel—spurred in part, perhaps, by the poor outlook for its lakeside housing development—that actually set the negotiation process in motion. Apparently the first direct contact with corporate representatives by the State was made by A. Bruce Pyle, then director of the DFG's Bureau of Fisheries. This contact took place prior to the November general election in 1978. Pyle, in his testimony at the SCI, said that passage of a Green Acres referendum proposal at that election may have had a favorable impact on Union Lake's acquisition.

On August 4, 1978, Pyle recommended the acquisition in a memorandum to DFG's then-director, Russell A. Cookingham. This memo noted that the lake was "the finest and largest south of Round Valley Reservoir," that it would be a "tremendous public fishing asset," and that increased and guaranteed public access to it "could be possible only through acquisition by the state (local and county governments have expressed no interest to WaWa). . ." Concluded Pyle's memo:

I urge the division to put it near the top of its list of properties for acquisition and to press the Department on the matter.

The bond issue passed in 1978 and subsequently the Union Lake acquisition was formally proposed under the Green Acres Program by the DFG.

Who Moved First—Buyer or Seller?

Memories of certain witnesses who figured in the initial discussions with WaWa were both vague and contradictory on the issue of whether WaWa or the State was the prime mover in promoting the acquisition of Union Lake as a Green Acres project. At that time, of course, neither the condition of the dam nor arsenic con-

tamination of the lake had yet been mentioned in any correspondence preliminary to the beginning of the negotiations. There were conflicting recollections of why WaWa wanted to sell. For example, Pyle testified at the SCI that he "had the impression that they were looking for money at the time for expanding their WaWa chain. . . ." On the other hand, Donlon, the chief of the State Land Acquisition Bureau for the Green Acres Program, testified at the SCI that she "got the impression that they were willing to sell if the price was right, but not trying to unload." She added: "Maybe they were just too clever for us, but that was my impression, [that] they were not seeking to really push us into this." Cookingham's recollections were fragmented—despite the fact that it was his Division of Fish and Game that initially promoted the acquisition proposal. He variously recalled concerns in the Union Lake area about a housing development "going in there," that the Green Acres program had been expanded to include both "rural" and "urban" area acquisitions by the state, and finally:

At that time we were not—I don't think we—if we had showed an interest in acquiring at that time, it was very informal, very casual. I don't recall aggressively getting involved in any recommended acquisitions at that time.

Adverse Local Reaction Turns Favorable

By the time of the DEP hearing in September, 1979, at Stockton State College, the Union Lake project had become the DEP's highest priority urban acquisition project, although ultimately it was edged into fourth place by certain North Jersey proposals. Despite its high rating within the Department, public reaction to the proposed acquisition was mostly negative. Green Acres Planning Chief Robert S. Stokes recalled that "we were rather surprised by the strong public opposition." Among local officials who attacked the plan was Hurley, whose legislative district included the Union Lake area, and who was a lakeside resident. However, Hurley was voicing the consensus of his constituency as expressed at the public hearing at that time. He was later to become a strong advocate of the deal, reflecting a sweeping change among his constituents in favor of the State take-over. This change of

attitude apparently was prompted by the spreading knowledge that WaWa fully intended to dispose of the lake, if not to the State then to another buyer, possibly a developer. Stokes explained to SCI Counsel Carol L. Hoekje his recollection of what he characterized as a "major shift in the local residents' feelings:"

Initially, they felt they were opposed to State acquisition, feeling that there would be an influx of outsiders using the lake and that could be prevented. Their preference would be to leave things as they were.

I got the feeling that they shifted their opinions on State acquisition of Union Lake when they realized that the lake was strengthened, that the surrounding property was better for the State to acquire it than to allow it to go to a private developer who could cut off their access. . . .

So gradually our office began to receive quite a number of letters in support of the project. Some of the people who wrote in indicated that they had testified or spoke at the earlier meeting against the project and now realized that the State, let's say, was the better of two evils, but there was quite a noticeable shift in public opinion.

Q. Do you recall over what period of time this shift occurred?

A. My recollection was that it started fairly quickly after the public meeting. Within a month or two there was a gradual—there seemed to be a gradual shift where we started getting letters in support. It may have been longer than that, but it was fairly close to the meeting. It could have been within six months, but there was a very noticeable shift in public opinion that really took us by surprise.

The Dominant State Negotiator

Green Acres Administrator Hubert almost single-handedly negotiated on behalf of the State for the acquisition of Union Lake. He adopted from the outset what he and colleagues characterized as a "hands on" role despite the pressure

of numerous managerial responsibilities in running a complex division and the availability of subordinates with special negotiating experience and the existence of bureaus and/or sections specifically created to handle survey, appraisal, contracts, negotiation problems and other details. The SCI, while critical of Hubert's deal-making dominance, emphasizes that its inquiry found no illegalities in either his motives or his conduct throughout the two-year process. Nonetheless, that process was complicated by such factors as a deteriorating dam and continuing arsenic contamination of the lake and the impact of these factors on the need for engineering, cost and other technical reviews and appraisals of the site. As will become obvious, Hubert's almost solo performance propelled the negotiating activity toward a sale agreement finale before critical technical issues and questions were properly addressed and, most important, before essential data that could have affected the cost of the acquisition—the cost of implementing and safeguarding its ultimate use by the public as well as its actual purchase price—had been obtained and studied.

Hubert explained to Counsel Hoekje at the SCI his reasons for acting as the chief negotiator:

... that's one of a handful of projects in which I remained involved during the entire acquisition, directly involved during the entire acquisition process.

Q. When you say you remained directly involved, what do you mean?

A. That means I dealt directly with the seller and representative agent.

Q. Why did you remain directly involved?

A. Well, I guess unlike most other projects, I did get directly involved at its inception and for some—I don't know why, I continued to deal with it directly rather than just to spin it off to someone else. I know that I was very supportive of the project, I thought it was a good acquisition and a wonderful opportunity for the State and, you know, there is no good reason, except that it was a large project and I was directly involved with it at the start and I continued to stay involved with it.

Hubert testified both that he took the lead role despite the availability of about 10 negotiators on the Green Acres staff and that he and no one else decided what his role would be. Others in the Division agreed with his self-assessment. His land acquisition chief, Donlon, recalled that Hubert negotiated other projects as well, that "he liked to negotiate and so he frequently did." Planning Chief Stokes testified that Hubert's actions were not particularly unusual, that Hubert's "advice to me when I began to move into the management level was that it's nice to keep your hands involved in a specific project that will produce accomplishments" and that "keeps you abreast of new techniques."

Hubert could recall few specifics about his negotiations but his diaries provide additional information about his negotiating activity. These diaries show an initial notation on July 29, 1980: "Rich Weinroth re Union Lake Here". Other meetings with Richard K. Weinroth (outside counsel for WaWa) on Union Lake are noted on May 14 and 29 and June 30, 1981 (all prior to the State's formal offer to purchase) and on September 8 and 10, 1981. Additional meetings with Weinroth are noted on February 4 and 19, 1982, and April 12, 1982, "re Union Lake." Hubert's meetings with the DFG are noted on April 20, 1981; July 27, 1981, "Cookingham Here Union Lake"; August 3, 1981, "Cookingham Union Lake"; September 11, 1981, "re Union Lake"; December 15, 1981; February 26, 1982, "Fish & Game U.L. Mgmt Plans", and May 18, 1982, "Cookingham re WaWa." Meetings with the various DEP Commissioners are noted on August 19, 1980: "Comm. [English] Union Lake" and March 16, 1982: "Comm. [Hughey] U.L.". Numerous general briefings are noted also with the assistant and deputy commissioners.

Hubert was asked to describe his negotiations:

Q. Were there any particular difficulties?

A. The usual problem of difference of opinion as to the value of the property, one; and the second issue ... was the fact that we didn't have enough money to buy it all. So delineating the property that we are going to buy and then the big wrinkles in the acquisition involved the arrival of the Landis Sewerage Authority which was interested ... for

purposes of a sewage treatment operation and delineating the land that suited their purposes and the land that suited our purposes and relating it to the amount of money we had and this was a complicated and extended deal.

As noted, the negotiations originally involved purchases of separate parcels of the Union Lake area, the lake and environs by the State and a section by the Landis Sewerage Authority for construction of a sewage treatment facility. State officials welcomed the Authority's interest not only because Green Acres could not afford to buy the entire tract but also because the Authority's proposed use of the land would be beneficial to the area's wildlife. As Hubert explained it:

Based on my experiences with Green Acres, it was unique but it was something that was welcomed . . . by us, because the application of this process of treating sewage would have required the growing of corn on substantial acreage to be acquired by the Authority. The corn apparently—well, the sewage waste which is sprayed, sprinkled over the land contains high amounts, excessively high amounts of hydrogen and corn apparently takes an awful lot of nitrogen out of the soil so the raising of corn on this nitrogen rich land keeps that land in some kind of chemical balance and prevents excessive hydrogen running off into water sources and presenting other problems. . . . The Division of Fish and Game would have benefited measurably with all of this corn, it would have enabled them to have pheasants and other upland game around there for hunting purposes.

Hubert recalled that he had inspected out-of-state public sites that profitably coexisted with sewage treatment processes.

Although Hubert's and the Authority's negotiations proceeded on parallel courses, each party handled its own discussions. The Authority was cooperative in the SCI probe, opening its files for scrutiny and making its representatives available for interviews. As previously stated, the Authority closed separately with WaWa on its purchase, after Green Acres had completed its deal.

The offer to purchase was submitted to WaWa on July 15, 1981. It was submitted as a joint offer of \$4.1 million from the DEP and the Authority—the DEP to pay \$2.5 million for its tract and the Authority to pay \$1.6 million for its land. The offer to purchase did not specify the amount of land or location that each party would purchase.

WaWa responded with a letter setting forth its terms and conditions of sale, particularly in connection with its plans to operate a hydroelectric plant near the base of the dam. These conditions, for the most part, remained in the final contract of sale. Included was a requirement that the lake level be kept at an elevation of 26 feet in order to provide for an uninterrupted flow of water to the hydroelectric plant below the dam. This project was subsequently abandoned by WaWa.

The minutes of meetings of WaWa's Board of Directors during the Union Lake negotiation period that were provided to the SCI contain only a few cryptic references to Union Lake. One such reference, in the minutes of a meeting on December 9, 1981, stated:

Vincent P. Anderson, Vice President, General Counsel and Secretary of the company, reported that with respect to the sale of land to the State of New Jersey, there has been no significant change. Survey and title work needed to be completed before entering into a formal agreement of sale. The change in administration is causing a significant delay in completing this transaction.

This citation is notable not only because it was unusual to find any recorded mention of Union Lake in any of the directors' minutes, but also because it referred to a "significant delay in completing" the Union Lake transaction, suggesting that WaWa may have been more eager to sell the tract than outsiders realized. However, the accusation that the "change in administration" was to blame for the delay appears self-serving and of doubtful validity. It was true that the gubernatorial election of November, 1981, had resulted in Democratic Governor Brendan T. Byrne being succeeded by Republican Thomas H. Kean. However, the office of DEP commissioner was filled on January 21, 1982, soon after Kean was sworn. The new DEP commissioner, Robert E. Hughey, took office within 10 days, so there was no prolonged lapse in the

continuity of the Department's command. The WaWa-State negotiations appear to have proceeded without any other recorded indication that the election results had had any effect.

On December 22, 1981, the Landis Sewerage Authority wrote to WaWa that it had met with DEP on November 15, 1981, and "divided up the land which [it] and Green Acres are purchasing from you jointly" and that the Authority was "ready to sign an agreement for \$1.6 million". On January 12, 1982, Hubert sent a copy of a proposed contract for the sale of the property to the Authority. On March 11, 1982, WaWa wrote to Green Acres and the Authority referring to the "understandings that we reached at a meeting . . . on March 8, 1982, concerning your respective purchases of land". Contrary to customary State procedure, the letter also stated "contracts shall be prepared by counsel for WaWa and delivered to both buying parties before March 19, 1982." Deputy Attorney General Alan Rothstein told the SCI in an interview that the agreements of sale had been prepared by WaWa's counsel, due to the "urgency of the transaction." Rothstein was unable to elaborate.

On April 21, 1982, Hubert signed a Memorandum of Justification setting forth the proposed acquisition cost:

The certified appraised value of the above noted property was offered to the property owner and was rejected.

The certified appraisal value of \$3,324,600.00 for 5,755.2 acres represents an acreage value of \$578.00.

The acquisition cost reflects 4,307 acres at \$682.00 per acre.

The Department selected for acquisition from the entire tract those areas which would be most compatible for the intended recreation and conservation use.

The appraisal was prepared as of January 15, 1981. Since there has been a lapse of 15 months, much of the increase in the value can be attributed to increase in market conditions in that area during this time.

The revised appraisal on this property reflects \$80 per acre more than the certified value.

In the opinion of the Green Acres staff, costs of condemnation and the studies of condemnation awards indicate that a greater expenditure of funds would result from placing this property in condemnation.

Therefore, it is recommended that this acquisition be approved at the negotiated price.

SCI Counsel Hoekje asked Hubert who else had concurred in the final price:

Q. *Was the final price figure that you arrived at, at the end of the negotiation, reviewed by anyone within the Department?*

A. Well, it's reviewed within the Green Acres office and, you know, the final decision to buy is made at the commissioner level and they are aware of it and concurred with it.

Other authorizing documents and invoices were prepared in April and May of 1982, including on April 20 a draft press release for the Governor to announce the signing of a contract for the Union Lake purchase. The actual agreements of sale are dated May 25, 1982, and June 22, 1982.

The property deed dated June 25, 1982, conveys 4,617.89 acres from WaWa to the DEP for \$3,142,211. The actual total price was \$3,152,211, because \$10,000 was held at the closing in escrow pending resolution of an action to quiet title. Concurrent with its negotiations with Green Acres on November 12, 1981, WaWa conveyed an easement over the property for water rights to the Atlantic City Electric Company. Total sale price was \$500,000 but, because Atlantic City Electric subsequently exercised (after the DEP purchase) its right to rescind the agreement, WaWa received only a total of \$50,000 from this transaction.

The Dam As A Negotiation Factor

The Phase One Report

The Union Lake dam was inspected in 1978 by the U.S. Army Corps of Engineers pursuant to a federal law authorizing a national program of inspection of dams for the purpose of protecting human life and property. Prompted by a series of dam failures in the 1970s, the 1978 inspection

was the result of the enactment in 1972 of the National Dam Inspection Act, which called for an inventory of all dams and an inspection of potentially hazardous dams to reveal any possibility of dam failures. Funds for inspections were finally appropriated in 1977 after a dam failure in Georgia caused the death of 37 persons.

A Phase One inspection consisted of a preliminary study of available data, including original plans and drawings, a visual on-site inspection, a study of the terrain and rainfall data, and a computer simulation of a maximum flood scenario. The Corps reviewed and revised the draft report and submitted it with a formal assessment to the governor of the affected state. The Corps could only recommend corrective actions to the governor and had no authority itself to correct deficiencies or to order them corrected. The Corps used a traffic light pattern in making its reports. According to an analysis of the federal inspection program presented at the SCI by T. Brian Heverin, of the Philadelphia District of the Corps:

In the case of dam inspections, you *can* tell a book by its cover. A report issued with a green cover indicates a good dam, with nothing more than minor deficiencies which must be corrected. They are not of a serious nature. Reports with a yellow cover mean "caution." Serious deficiencies have been found in the dam, but not of an emergency nature. A red cover, continuing the traffic light color scheme, means just what it suggests: Stop, fix the dam! It means the dam in question has been found unsafe. It requires remedial action to correct the unsafe condition. In the case of an unsafe dam that has a seriously inadequate spillway, a white report is issued.

Corps records indicate that of about 300 dams inspected in New Jersey and Delaware as of January, 1980, most received yellow covers, including Union Lake's. Most were also earthen dams like Union Lake. In September, 1978, the Corps forwarded its Union Lake Phase One Report to Governor Byrne with a copy to Dirk Hoffman, then Deputy Director of the DEP. The report noted in its transmittal letter and in a two-page "Assessment of General Conditions" by the Corps of Engineers:

Union Lake Dam, a high hazard potential structure, is judged to be in fair/overall condition. The spillway is considered to be inadequate since 61 percent of the Probable Maximum Flood (PMF) would overtop the dam. To insure adequacy of this 19th century structure, *the following actions, as a minimum*, are recommended for completion: a. Determine adequacy of the spillway by a qualified professional consultant. b. Determine extent and location of seepage through the embankment and stability of the structure [emphasis added].

In another assessment in the report, by the project manager, this ominous observation appears:

Union Lake Dam appears to be in a marginally adequate structural condition but substantial seepage was observed along the downstream embankment. The dam is over 100 years old and has withstood the test of time but sufficient engineering data was not available regarding the foundations, method of construction or zoning of embankment to allow a full assessment of its term-long adequacy. *Further engineering studies in the near future are recommended without reservation.* A collapse could cause irreparable structural damage to the dam and significantly endanger downstream residential areas which are quite heavily populated [emphasis added].

John H. Moyle of DEP's Dam Safety Section was asked at the SCI to describe his reaction to the Phase One Report:

- Q. *So what did the Phase One report mean for the Union Lake dam?*
- A. It meant that further investigations were required.

A copy of the Union Lake Phase One report was forwarded to Moyle's Dam Safety Section of the Division of Water Resources, which had jurisdiction over dams and was charged with pursuing follow-up and compliance. In February, 1979, the section sent a copy of the report to the owner of the Union Lake dam with a cover letter requesting compliance by WaWa with necessary follow-up requirements. Moyle described at the SCI the follow-up that resulted:

Q. *What happened to the reports once they came into your office?*

A. ... There was a form letter which we used which just indicated the name of the dam and the location and the owner, and they were directed under state law to come in with the work schedule and name an engineering firm who was going to do the work and the time schedule. . .

Q. *What kind of response did you get on these letters?*

A. Most of the responses were that they needed more time, they didn't have any money, or that they indicated the name of an engineer that was going to do the work.

Q. *And what kind of success did you have with respect to the letters?*

A. Very little success.

Q. *What was done in the interim to insure the enforcement of it?*

A. We would follow-up the letters, and that was about it. The Department right now, in order to do a complete enforcement on this, you have to be in the position to have the manpower, and we have been lacking in a lot of the manpower to do this follow-up action and maintain our abilities to do what we are supposed to do on an everyday basis.

Moyle attributed the time lag in obtaining compliance to a combination of other events, including delay in implementing a grant program to assist some publicly owned high hazard dams, and lack of funds on the part of private owners, including many small lake associations. Moyle added that the best repair work had been done on dams owned by the state and by water companies.

Appraisals Ignore The Dam

In September, 1980, pursuant to Green Acres procedures, two appraisers who bid the lowest were awarded a contract to appraise the proposed Union Lake purchase. The appraisers were Calvin Schwartz of Calvin M. Schwartz Appraisal Company and Jon Brody of Brody Appraisal Company. Both appraisers are ac-

credited members of the American Institute of Real Estate Appraisers. In February, 1981, Philip Hubbard of the Green Acres appraisal review section signed a certification of fair market value which adopted the lower Schwartz estimate of \$3,324,600 for 5,755.2 acres, or \$577.66 per acre. The certificate stated: "Union Lake, which covers approximately 900 plus acres, has the only improvement on the entire property which is a 2,000 foot long [dam] constructed in 1868 but not completed until 1869."

The reference to the dam prompted SCI Chairman Henry S. Patterson, II, to ask Green Acres' Chief Review Appraiser Vincent T. Bogdan:

CHAIRMAN PATTERSON: Who gets the certification of fair market value?

THE WITNESS: Once it's certified, it goes to the chief of land acquisition, who subsequently would assign a negotiator to discuss the matter with the property owner.

CHAIRMAN PATTERSON: So that even if they had never gone to see the property, and I am sure they did, the chief of land acquisition probably did, but whoever got this, if they had not seen the property, they would know, from that description and that sentence and that paragraph, that there was a lake and there was a dam and that the dam incidentally was 120 years old; is that right?

THE WITNESS: Yes, yes.

The certificate set a total valuation for the land without a separate valuation for "improvements" such as the dam. Bogdan was asked by Counsel Hoekje to explain this apparent discrepancy:

Q. *Can you explain for us why on this page the dam would be called an improvement and why on the first page in the breakdown, there would be no separate provision for the dam?*

A. Well, as I previously said, the fact that the appraisers did not value the dam separately, it's not indicated insofar as the valuation breakdown is concerned, but it is noted in here that a dam does exist and since we are talking about a large expanse of ownership here, the appraisers apparent-

ly felt that there would be no particular reason to value the dam separately, just include it in the entire property. You are talking about \$3.3 million, so that the dam in itself would be at best a minimum valuation insofar as the entire amount is concerned.

Calvin Schwartz explained at the SCI why he did not place a separate valuation on the dam:

I felt that the dam was built for a specific purpose, to generate water power, and the industry was gone, they no longer needed that, and I felt that the property with or without the dam would probably have the same value. And I didn't consider that this was a tremendous asset and it was there and from all I could see it was functioning and, therefore, I didn't feel that it really contributed greatly to the property from the owner's point of view.

I thought development was so far in the future that this lake that was created may have value to the State for water retention purposes or water control or reservoir recreation area, but I felt that without the State coming in and acquiring the property, that the dam was there and that the lake was there, and development potential was so far in the future that it didn't really contribute much one way or the other to the property.

CHAIRMAN PATTERSON: You didn't make any judgment as to the quality of the dam?

THE WITNESS: No, other than the fact that I observed it and the lake was—it was doing the job that it was designed for, there's a lake there and it retained the water there, and it looked like it was in pretty good shape, just by physical observation.

Schwartz continued:

We saw a dam that was functioning, we photographed it and we assumed that the State was buying this and that they knew what they were buying. I guess we kind of assumed. We didn't know what they were going to use it for, we didn't know whether they were going to continue using the lake, whether that was one of their major objectives, but we felt that this dam was there and it was serving its purpose as far as we knew.

Appraiser Brody described his view of the dam:

To me it was part of the overall property. It was there, it created value because it held back the water to some degree, and it made the lake aesthetically pleasing, whereas if you probably didn't have the dam, and, again, I'm not an engineer and I don't know what would happen, I'm assuming if you didn't have the dam, the lake would empty and you'd have a stream, in most likelihood, going through it, and you'd probably fill in where the lake was and create houses around this stream. But it created aesthetics, the way I looked at it, anyway.

Chairman Patterson discussed with Schwartz the limits of his appraisal:

CHAIRMAN PATTERSON: But the fact is you didn't make any inspection of the dam other than a visual inspection?

THE WITNESS: Just a visual inspection.

CHAIRMAN PATTERSON: Did you consider the quality of the water in the lake or in the river?

THE WITNESS: No. The only thing they told us, they had the annual bass fishing contest down there and we assumed that the lake was probably all right if the fish were there and they were fishing in it. We just never thought that it might be contaminated.

CHAIRMAN PATTERSON: And you didn't do any checking to see whether it was?

THE WITNESS: No.

Appraiser Schwartz testified about how little he knew or was told about the dam:

Q. *Did anybody from the State at any time give you any information regarding the condition of the dam?*

A. No.

Q. *Did anyone from the seller ever inform you that the seller had recently commissioned and, in fact, received an engineering report relating to the condition of the dam?*

A. We knew nothing about any special study being made on the dam.

Q. Did you have any information—did you know at all that the Army Corps of Engineers had inspected the dam in 1978 pursuant to a national act?

A. No.

Q. ... Supposing then the State went out and commissioned an engineering inspection of the dam, do you have any guidance for us how, then, the results of your appraisal and any report or engineering inspection would intertwine or combine to produce a final figure?

A. Yes. In the agencies that we work for they would submit the report to us and say we have secured an engineering report and would like you to read it and study it and tell us what affect it has on your value.

CHAIRMAN PATTERSON: So what you're saying, I guess, is that if the State was aware of a report that criticized or had in its possession, and I don't know whether it did, a report indicating problems with the dam, that the State agency should have given you a copy of that report to help you in making an appraisal of the property, is that a fair statement?

THE WITNESS: Yes.

CHAIRMAN PATTERSON: Would the seller, WaWa, would they have any obligation—let's make it a legal obligation first, to give such a report if they had one?

THE WITNESS: I think they would.

CHAIRMAN PATTERSON: Certainly they have a moral obligation.

THE WITNESS: Yes. They would be withholding information.

Appraiser Brody also testified about how little data was available to him about the condition of the dam:

Q. When you formed the appraisal of the property at Union Lake, did you ever think—did you ever consider whether the condition of the dam would be a factor in terms of the value of the property?

A. No, I did not.

Q. Did anyone from the State ever discuss with you the possibility of doing an engineering inspection of the dam?

A. Not to my recollection.

Q. Did anyone from the State ever give you a report that had ever been done about the condition of the dam?

A. Not to my recollection.

Q. Did anyone from the seller discuss with you the possible condition of the dam?

A. Again, not to my recollection.

Q. Did anyone from the seller give you any information about the dam?

A. Not to my recollection.

Schwartz also discussed his view of the varying obligations of the parties involved in commissioning an appraisal of property featuring a dam:

... And I think that the seller has an obligation, I think the report that the seller made—his appraiser, the person who is in contact with the owner and is representing a value to the land and if he knows there is some real detriment to the value of the property due to something, if there is, I'm not saying necessarily if the dam broke tomorrow and they lost the lake, that that would have an adverse effect on the value. I would have to look at it and see. I don't know. I would have to examine it very carefully, but I think if there was a problem with the dam, a known problem, and an appraiser works for an owner of a property, it would seem to me that that would be withholding some information that he should have knowledge of. And it would seem to me that if the purchasing agent were deeply concerned with that dam, that was a major significance in their purchase, that then they should have had an engineer look at it. I think the appraiser looks at it a little differently.

Paradoxically, WaWa ordered an appraisal of the property and received a valuation of \$5,750,000 for 5,753 acres, or about \$1,000 per acre. The appraisal commissioned by WaWa, in

June, 1981, discussed the Union Lake dam thusly:

We have been advised that it is rated as a "yellow" dam by the DEP and that this characterization may mean some repairs are necessary. It is the appraiser's position that even at present Union Lake and Union [Lake] dam fulfill more of a public than personal need and that any repair to the dam should necessarily include public funds.

This observation concluded: "There are no negative items of concern under this heading." The DEP document file contains only portions of the WaWa appraisal report pertaining to comparable land sales in the area, as was the customary procedure.

WaWa's Secret—The O'Brien & Gere Report

On February 1, 1979, the Division of Water Resources sent a copy of the Phase One report to WaWa and directed the corporation to take corrective actions in accordance with the report's recommendations. WaWa actually could have initiated these corrective steps in December, 1978. According to corporate files, that was when WaWa first obtained a copy of the Phase One document after its Maurice River subsidiary had made a direct request to the Army Corps of Engineers. Typically, WaWa never told Green Acres officials that it already had a Phase One copy. Instead, on February 29, 1979, Frederick L. Wood of the family that had founded WaWa requested from DWR a 90-day extension of the compliance deadline set by the report for engaging an engineering firm to assess the Union Lake dam. In this letter Wood also informed the State that he was to be WaWa's Union Lake "project engineer."

Finally, on June 27, 1979, WaWa contracted with O'Brien & Gere Engineers (Justin & Courtney Division, Philadelphia, Pa.) to perform an investigative study of Union Lake dam as mandated by the Phase One report. Justin & Courtney, which as WaWa's previous engineering consultant had inspected the Union Lake dam in 1945, had been sold in 1978 to O'Brien & Gere of New York.

Whatever WaWa knew about Union Lake that might have been detrimental to the sale of the

lake to the State obviously became covert. For example, in response to SCI subpoenas for books and records, WaWa withheld almost 4,000 pages of documents (the Commission received 15,000 pages) that applied to the period when Union Lake negotiations were underway and when the O'Brien & Gere engineering study of the dam was prepared and promptly cached. These missing pages included a number of minutes of the quarterly meetings of WaWa's Board of Directors, a deletion which explains why there is not—in the minutes that were submitted to the SCI dating back to 1974—a single reference to the O'Brien & Gere study until the directors met on June 8, 1983. By that time WaWa had finally turned over the report to the State. Indeed, the only reference to the dam itself, in the minutes WaWa did submit to the SCI, was on March 11, 1981, when the directors apparently agreed to "go forward with the sale of the lake and the dam." The condition of a number of minutes of WaWa directors' meetings that the SCI did get indicates that the corporation excised or covered over certain information that it did not want the Commission to see when it photocopied such papers for transmittal. The company asserted an attorney-client privilege in explaining its retention of more than one-fourth of the papers requested.

The reason for such excessive corporate secrecy by WaWa became obvious when the Commission's investigation focused on the belatedly submitted O'Brien & Gere study and other related papers—WaWa apparently did not want to be forced to reduce the sales price on its Union Lake property or to be obligated for repairing the dam or for resolving the problem of the arsenic contamination of the lake. This also suggests why the Commission was unable to persuade any corporate executives to come to New Jersey to give sworn testimony about the Union Lake deal with the State.

As early as October, 1979, the State was warned that WaWa, or the Wood family that owned WaWa, was eager to dispose of Union Lake because of the potential problem of rebuilding the dam. In a letter at that time to the then-DEP Commissioner Jerry Fitzgerald English, South Jersey industrialist Frank H. Wheaton Jr., of Millville, sounded the alarm:

Whoever is going to do the negotiation for the State should realize that the basic reason I believe the Woods want to sell the lake and the land is that they foresee a sizeable amount of money having to be put up to repair the dam.

Although English noted Wheaton's warning in her reply to his letter on October 30, 1979—"we will most certainly take into account potential costs to repair the dam," she wrote—it apparently had little or no impact on negotiator Hubert's zealous pursuit of a purchase agreement. Neither he nor anyone else in DEP ever made an aggressive attempt to force WaWa to relinquish the O'Brien & Gere report. There were inquiries about it, of course, but no one took umbrage when WaWa sidetracked all requests. Even as the negotiations approached a contractual rapport, WaWa's refusal to release the O'Brien & Gere document was phrased in bluntly candid terms. For example, Fisheries Chief Pyle reported as late in the negotiations as May 6, 1982, in a memo to Hubert, that the Water Resources Division's dam safety expert Moyle had been directly rebuffed by WaWa. Pyle told Hubert that Moyle had sought to determine if WaWa had complied with the State directive for an engineering study of the dam. Moyle was told a report (O'Brien & Gere's) had been completed but that it could not be released without permission from WaWa. Pyle added that the WaWa Company had informed Moyle that it "would not release the results because it may jeopardize negotiations with the State over the sale of the lake and adjacent property."

Pyle concluded his memo to Hubert with the statement that "I leave it to you to decide what to do."

From the record, Hubert decided at that late date to do nothing to force WaWa to produce the report.

What the State Did Not Know

The fragmentary information in DEP files on WaWa's alleged compliance with the directive to undertake an engineering study of the Union Lake dam raises serious doubts about the judgment of Hubert as the chief negotiator and other DEP or Green Acres officials who were responsible for the transaction. At no time, according

to available records, was it even suggested to WaWa that the deal would be cancelled unless WaWa produced the O'Brien & Gere document. Even after March 31, 1980, the date when WaWa project manager Wood had "estimated" five months earlier to the DWR that the study would be completed, no evidence of any concern appears in DEP records over the fact that the report was still not available.

Green Acres officials apparently did not know that, around March of 1980, O'Brien & Gere had completed only a preliminary study and had discussed proposed final findings and recommendations with WaWa officers. The report actually was not completed and forwarded (to WaWa only, of course) until September 15, 1980. It was entitled, "Investigation of Union Lake Dam," and it detailed findings and conclusions on only three aspects of the Union Lake dam—1) hydraulic adequacy of the spillway, 2) seepage through the embankment, and 3) stability of the embankment. The critical issue of the spillway's stability was not addressed. The State was not to learn the details of the WaWa report until May, 1983, after it had acquired not only the lake but also a \$15 million dam reconstruction obligation.

WaWa's Report Finally Obtained—Too Late

The O'Brien & Gere report was not delivered to the State until a year after WaWa and DEP signed the agreement of sale for the Union Lake deal. Indeed, the Division of Water Resources did not even request a copy of it until March 29, 1983. There is no official explanation for the long delay in obtaining a document that WaWa kept secret throughout the Union Lake negotiations.

The O'Brien & Gere report does raise questions that should disturb those who were most involved in the Union Lake transactions. Some of these issues are as much the result of what the report does not say as of what it says. It compels a prober to question whether the document was a valid response by WaWa to the Corps of Engineers' directive for an engineering study of specific issues involving the dam—particularly the Phase One report's doubts about the durability of the spillway. It also prompts a question as to whether WaWa purposely contracted for a report that would fall short of the engineering study directive in order to reduce the chance it might be forced to pay for repairing the dam.

The SCI was given full access to O'Brien & Gere's files and to detailed reviews of pertinent papers with O'Brien & Gere officials even though they, like WaWa's key people, resided out of state.

Certain recommendations and conclusions of the O'Brien & Gere report are excerpted here to demonstrate the impact they might have had on the course and the outcome of the State's dealings with WaWa. For one thing, the excerpts indicate that an effort was made by WaWa to avoid any in-depth assessment of the Union Lake spillway.

The report concluded with the following recommendations:

1. The embankment should be improved to provide a stable, erosion resistant cross-section. This should be done by shaping and adding riprap to the upstream slope and by adding filter material and earth to the downstream side of the embankment to control seepage and to provide stability. The cost estimate for this is \$1,400,000 including engineering fees.
2. The stability of the spillway should be investigated in detail to evaluate alternate methods of improvement.
3. Facilities should be installed which would provide a means for draining the reservoir.
4. The emergency warning system described herein should be instituted.

The report made the following conclusions:

The Union Lake embankment is constructed of sand on a sand and gravel foundation. The embankment has experienced some slumping and erosion resulting from wave action, surface runoff and inherent instability. No riprap is present on the upstream slope to resist wave action. For the most part, the embankment slopes are steeper than are necessary to insure adequate stability. The water level drops rapidly within the embankment indicating that the foundation is substantially more pervious than the embankment.

The embankment was constructed in 1867-1869 with a considerable amount of difficulty. A report of the construction de-

scribes the dam foundation as a quagmire or a bog with about one-third of the area consisting of quicksand. The quicksand areas were stabilized during construction with timber sheeting. Movement occurred in both the embankment and the spillway during the filling of the reservoir. The reservoir was lowered at this time and parts of the embankment and spillway were rebuilt.

Five thirty-two inch wrought iron "tubes" were originally installed at the western end of the embankment for draining the reservoir. However, these tubes or pipes are no longer visible and have presumably been filled over. No facilities are presently available for safely lowering the reservoir below the spillway crest elevation.

The masonry buttress spillway appears to be in fair condition. However, a boring into the structure showed that the masonry was quite soft and the boring initiated seepage through the spillway after an advance of only two feet through the upstream face of the structure. In addition, a large crack up to 10 inches deep was observed at the base of the masonry wall. It appears that the masonry spillway could be unstable during high flows.

What WaWa Report Didn't Say

Although the WaWa report did not include an analysis of the stability of the spillway, it noted:

A detailed stability analysis of the spillway was not included in the scope of work for this report. However, a portion of the data required for analysis was obtained. This data indicates that the spillway is approximately 10.5 feet thick at the base and 5.0 feet thick at the top. The height of the spillway was not determined because the boring was stopped before it reached the foundation as noted in Section 3.3. Based on this data, the field inspection, and the review of records, *the stability of the spillway is questionable and should be investigated in detail* [emphasis added].

The Phase One report had recommended:

Engineering investigations and studies should be performed to more accurately de-

termine the extent and locations of seepage through the embankment and stability of the structure.

The O'Brien & Gere report stated:

As a result of the Phase I inspection, the following requirements were made of WaWa Incorporated with respect to the Union Lake Dam: Engineering investigations and studies should be performed to evaluate the extent and location of seepage through the embankment and the stability of the embankment.

By substituting "embankment" for "structure," any possible evaluation of the stability of the spillway was excluded. Nothing in the DWR file indicates that DWR ever knew (before the close of the acquisition) that WaWa was conducting a study that was less than completely fulfilling the Phase One recommendations. Of course, the O'Brien & Gere report specifically states that stability analysis of the spillway was excluded from the scope of work and also specifically recommends such analysis. It should be remembered that the scope of O'Brien & Gere's work was specified by WaWa.

The contract between WaWa and O'Brien & Gere included a drilling program (to be "developed and discussed with the owner") and required that after completion of the drilling program, "soils and permeability tests will be made, if required, and seepage and stability analysis will be performed." The actual drilling program included 13 holes in the embankment but only one hole in the spillway.

It is unclear from the documents available to the Commission whether WaWa consciously excluded analysis of the spillway's stability from the scope of O'Brien & Gere's work at the outset or even recognized the necessity for spillway stability analysis. The O'Brien & Gere report states that this analysis was excluded from the scope of its study but nonetheless noted the need for it. In any event, at least by March, 1980, WaWa knew that its preliminary report did not include such an analysis and by May, 1980, WaWa had decided that its final report would not include it.

The O'Brien & Gere files contain a memorandum summarizing a meeting on March 10, 1980 with WaWa's project manager Frederick Wood,

President Richard L. Wood and corporate counsel Vincent P. Anderson to review the preliminary report:

The stability of the earth embankment was reviewed. The results of the drilling program and lab tests were explained to the representatives of WaWa. They understood the problems of the embankment stability and [the] proposed remedial measures.

Various options were discussed including the draining of the reservoir. This would be difficult because of the expensive development around the lake. The possibility of having the owners contribute to a bond issue was mentioned.

The structural stability of the masonry spillway was reviewed. The representatives of WaWa agreed that the structural integrity of the spillway should be assessed and asked us to submit a proposal for this work.

This memo suggested that WaWa's executives had not yet fully realized that an engineering report raising critical questions about the long term stability of the dam (spillway) could adversely influence their negotiations with the State. Since the spillway's condition—which the Phase One report had earmarked for a close follow-up engineering study—was still a part of O'Brien & Gere's preliminary review plans, the engineers on March 26, 1980, wrote WaWa's executives a letter outlining proposals for "additional work" and the estimated cost of such activity. This letter concluded:

The preliminary report indicated conditions which merited further investigations and analysis. At that meeting, O'Brien & Gere was requested to submit a proposal to WaWa, Inc., for Engineering Services relative to the following additional work:

1. An evaluation of the structural integrity of the masonry spillway.
2. A simulated dam break analysis to evaluate the downstream effects of a failure of Union Lake dam.
3. An evaluation of the problem of the low area northeast of the dam.

4. Preliminary design and cost estimates for the installation of facilities to drain the reservoir.

O'Brien & Gere estimated the costs for each work proposal—\$20,000 for task 1, \$2,000 for task 2, \$4,000 for task 3 and \$8,000 for task 4. At the time, WaWa owed O'Brien & Gere \$19,640 for its work and \$12,000 for its drilling subcontractor. Quite logically, the most important additional engineering proposals—checking on the "integrity" of the spillway and estimating the cost of draining the lake (which would be complicated by the arsenic contamination)—were the most costly jobs. As it turned out, these were the two tasks the WaWa directors rejected, despite the importance that the Phase One report attached to such probes. Project manager Wood on April 14, 1980, wrote O'Brien & Gere that WaWa, "after much debate," authorized only the "simulated dam break analysis" and the "evaluation" of the low area northeast of the dam.

This was the point at which WaWa, in specifying the final scope of its engineering study, began deviating from the State's directive that was based on the Phase One report's follow-up recommendations. State officials, of course, knew nothing about this development.

O'Brien & Gere proceeded with the authorized extra work at an agreed upon price of \$8,000. The final report of September, 1980, differs from the preliminary report of March, 1980, primarily because of the additional analyses and a change in estimate of spillway capacity from 60 to 50 percent of the Probable Maximum Flood. In most respects, however, the information (including the dam repair cost estimate of \$1.4 million) was similar.

Paul Pettit, an O'Brien & Gere engineer, said in an interview that his firm could not on its own send copies of the report to the State without instruction from WaWa.

As noted previously, the O'Brien & Gere report was received by the Division of Water Resources in May, 1983, about a year after the conclusion of the Union Lake purchase. According to the June 8, 1983, minutes of the WaWa Board of Directors:

Mr. Vincent P. Anderson reported on three matters in South Jersey. First, the O'Brien

& Gere dam report has been delivered to the Department of Environmental Protection of the State of New Jersey at their request. The State is exploring the feasibility of repairs to the dam and felt that any reports that we might have might be of assistance in that respect.

No mention was made in those minutes, of course, that any of these same reports WaWa might have possessed during the negotiations also would have been more helpful to the State at that time.

The Critical Schiffman Memo

What State negotiator Hubert knew—or did not know—about the condition of the Union Lake dam is significant in any attempt to rationalize the avidity with which he promoted the purchase. It certainly can be assumed he knew from the outset that the dam was in need of some kind of repair. Whether or not an intense desire to make the acquisition caused him to discount this knowledge, there is no question but that, aside from the self-serving aspects of portions of his testimony, he obviously did not want this or any other potentially adverse issue to complicate or sidetrack the Union Lake deal. The DEP's document files indicate that every now and then he asked about the dam and received responses that should have made him much more inquisitive, particularly in view of his years of experience with Green Acres acquisitions. Nonetheless, the record shows he was alerted early and often during the negotiations that Union Lake was a problem lake.

One such occasion was in October of 1979 when chief planner Stokes sent him a memo listing "outstanding questions" about Union Lake, including:

... dam report indicates that the dam is considered high risk because floodwater must pass directly over the dam. Report also indicated that the dam is in need of some repair.

Stokes was asked at the SCI about Hubert's reaction to his memorandum:

Q. *Did you ever learn from Mr. Hubert whether he had, indeed, received information on the dam?*

- A. I believe that I recall that he said he had received some information. I don't recall pursuing precisely what information it was or anything else, but I think out of curiosity, I may have asked him and he already knew that I was interested in ascertaining the condition of the dam. I didn't pursue that question energetically with him, but I believe he did indicate that he had received—I did get the impression that he was having difficulty in securing that information.

Hubert indicated in his SCI testimony that he felt the issue was overblown:

- A. I do not recall specifically talking to Mr. Stokes about this, but I do recall reviewing within my agency the condition of the dam and except for the requirement of an increase in the spillway height, no one was in a position to say that the dam was not structurally sound.

On July 31, 1980, Hubert sent the following note to Arnold Schiffman, director of the Division of Water Resources:

The Department is considering the purchase of Union Lake in Millville. One of the important considerations in that acquisition is the condition of the lake's dam. We understand it was inspected and received a yellow rating. It would be helpful if you could provide us with additional details on just what that means, in terms of probable trouble within the foreseeable future.

Schiffman's answer, on August 8, 1980, consisted of a one-page single-spaced summary of the dam as an issue in the transaction. Since Hubert subsequently cited it, inaccurately and out of context, in promoting the Union Lake acquisition, it will be reviewed here at some length.

The Schiffman memo, for example, recalled the Phase One federal inspection of the dam in 1978 (significantly, Hubert had yet to read the two-year-old report). It then informed Hubert about the inspection results:

It was judged to be in fair overall condition, though some seepage was observed along the downstream embankment. The spillway, however, is considered to be inadequate. . .

Schiffman next noted that the dam's WaWa

ownership had engaged an engineering consultant to "conduct more detailed studies," that a "preliminary study has been completed but the final report is not yet available," and that he could not provide the consultant's estimate of the cost of repairs, "though I believe it could be close to \$1 million."

Schiffman concluded with this reference to the 1978 Phase One Report:

The dam is classed as high hazard on the basis of the potential for loss of life and extensive property damage in the event of its failure. As quoted from the report prepared by Louis Berger and Associates: "Except for the inadequate spillway capacity, the seepage observed and the lack of drawdown facilities, no inherently detrimental conditions were observed to render an 'inadequate' assessment." In other words, there would appear to be little risk of imminent failure but, to assure the unequivocal stability of the dam and its ancillary structures, the remedial works recommended in the report should be undertaken.

The Schiffman memo unfortunately did not contain another reference to the dam from the Berger and Associates' Phase One report that would have been informative. After noting that, with certain exceptions, "no detrimental conditions were observed to render an 'inadequate' assessment," the commentary in the Phase One report continued: "However, the long-term stability [of the dam] remains extremely doubtful until further studies are completed. This assessment is subject to the limitations inherent in the visual inspection procedures stipulated by the Corps of Engineers."

Nonetheless, the Schiffman memo's reiteration of the dam's "high hazard" classification and the call for implementation of the Phase One Report's remedial recommendations should have forewarned all involved in the acquisition talks, particularly Hubert.

This memorandum served as the basis for Hubert's "interpretation" of the condition of the dam at Union Lake. According to Hubert, he proceeded with his negotiations based upon this memorandum and additional conversations he

had with Schiffman about the dam. Hubert never considered obtaining an independent evaluation of the dam because, in his mind, his "experts" had provided an acceptable evaluation. To Hubert, "close to \$1 million dollars" was an acceptable estimate for dam "improvement," as he put it. Hubert contended that his superiors knew about the repair estimate but he was unable to document the contention.

Hubert could not recall ever having any conversations with the sellers about the dam.

Misuse of the Schiffman Memo

As chief negotiator for the State, Hubert's failure to have obtained, studied and followed-up the 1978 Phase One report at the outset was, in the Commission's view, an irresponsible misjudgment. Even when it was cited in the Schiffman memo to him in August, 1980, he continued to ignore that easily available document and its implications. He was asked at the SCI how he reacted to the time lag between Schiffman's memo of 1980 and the Phase One inspection of 1978:

Q. *At that time, did you consider that the inspection of 1978 might have been outdated and it was possibly to [the] benefit of the State to have a reinspection?*

A. There was no indication from Mr. Schiffman, our department expert, that that was the case.

Q. *Do you ever recall discussing this with Mr. Schiffman?*

A. I only recall, not specifically, the two-year difference between the date of the study and the date of his memo, I only recall discussing with him the condition of that dam and his opinion thereof.

Hubert also was questioned about his use of the term "experts" with reference to a million-dollar estimate of the cost to repair the dam:

Q. *... You said it was assumed by experts that it cost \$1 million and this was before it was purchased, acquired by the State. Now I am asking you directly, wasn't it just one expert, Schiffman, who presented the \$1 million or*

were there other people we don't know about?

A. Director Schiffman gave me the information. I cannot attribute the \$1 million to Mr. Schiffman. That may be a number that he got from some other source. I don't know where he got that information, whether it's his number or someone else's. That's a number he gave me.

Q. *You know of no other sources for the million dollar [estimate] other than Director Schiffman; is that correct?*

A. Correct.

Q. *When you said experts, it was a mistake, there was one expert that you knew of?*

A. All right. I guess what I was thinking when I said experts was that the engineers who did the study for the Corps of Engineers, which Director Schiffman relied on in his memo to me, represented more than one person.

Questioned by SCI Counsel Hoekje, Hubert discussed his initial request to Schiffman for information about the dam:

Q. *At the time you began the negotiation process for the Union Lake property, do you recall whether you had any information regarding the Union Lake dam?*

A. I don't know when the issue of the dam was first brought to my attention or when I discussed it with anyone else. I don't know whether I was aware—let me put it this way, I know that there was a program under way to systematically investigate the condition of all dams in New Jersey. I knew that for a long time, but I don't know that I ever thought of that in connection with Union Lake specifically until the acquisition became a reality.

Q. *Do you recall why or what prompted you to discuss with Mr. Schiffman the condition of the dam?*

A. Well, certainly in part because all dams in the State were being studied in terms of their structural condition and probably

specifically because we were contemplating acquiring it.

Q. *Was there any particular discussion at Green Acres that prompted you to contact Mr. Schiffman?*

A. I am not sure how that was initiated or what the impetus was. I just know that that was a very early issue and one that I addressed before we got far into negotiations.

Q. *Do you recall how you were aware that all dams in the State were being inspected?*

A. I [had] probably seen it in the newspapers as a result of some major or minor catastrophe, you know, involving a dam.

Q. *Was there any source within the Department that had informed you of the inspection program?*

A. I don't know. I don't know.

Hubert recalled his reaction to the Schiffman memorandum:

Q. *Do you recall what your reaction was upon receiving this memorandum?*

A. I discussed it with him in person to verify my own interpretation of the memorandum to satisfy myself that there were no structural problems that should cause us not to go ahead with the acquisition and he confirmed that.

Q. *What did you understand to be a possible structural problem?*

A. That the dam was in imminent danger or in danger of collapse, and I was assured that that was not the case.

Hubert explained why he never asked for the Phase One report:

Q. *Have you ever seen the report on the Union Lake dam that was done by the Army Corps of Engineers?*

A. Negative.

Q. *Did you ever ask for the entire report?*

A. No. I am not qualified to evaluate it.

Q. *Did Director Schiffman ever recommend that you examine the entire report?*

A. Not to the best of my recollection.

Q. *After you received this memorandum from Director Schiffman and had follow-up conversations with him, did you do any other follow-up work with respect to the condition of the dam?*

A. I don't believe so.

Hubert was asked whether he had ever considered hiring an expert to assess the dam:

Q. *Did you ever consider hiring another engineering firm to do an inspection of the dam?*

A. No.

Q. *Would you have had the authority to do so?*

A. I certainly would not have done it unilaterally, because, again, I am not qualified to make the judgment that that's necessary. It would have been going counter to the information and evidence that was presented to me by a qualified person or the appropriate agency relative to its condition.

Q. *When you say you would not have made such a decision unilaterally, whose additional assistance would you have had to employ?*

A. Probably Schiffman's and the commissioner's, I don't know.

Q. *Did you ever ask Director Schiffman whether any additional study should be necessary?*

A. No. Again that would have been contradicting what he already told me, as far as I am concerned.

As to whether or not he had discussed the Schiffman memorandum with anyone in the office, Hubert responded:

Q. *Do you recall whether you had any discussions with anyone in Green Acres pertaining to information you had received from Director Schiffman.*

A. Sure, I discussed it with people in the office.

- Q. *Do you recall whom you discussed it with?*
- A. Probably Jeanne Donlon, probably Bob Stokes, maybe others, I don't know.

State acquisition chief Donlon recalled discussing the dam issue with Hubert and accepting his views of it:

Q. *Did you, during the time of the acquisition of Union Lake, ever receive any information about the condition of the dam at Union Lake?*

A. I did not personally receive it, but I was aware of the memorandum that had been received by Mr. Hubert regarding the condition of the lake, and I discussed it with Mr. Hubert.

Q. *Which memorandum are you talking about?*

A. I am talking about a memorandum from the Division of Water Resources. I believe it was from Arnold Schiffman who was, at that time, director.

A. When I discussed the dam with Mr. Hubert, he said that he had discussed it with those persons in the Department who were responsible for the dam inspection program that had been mandated, I guess, by the Corps of Engineers and that Mr. Schiffman had sent a memo regarding the condition of the dam.

Q. *Do you recall who brought up the topic of the dam?*

A. No, I don't. Probably me.

Q. *Is there anything more that you could tell us, if you say probably you, why you make that statement?*

A. Why did I probably bring it up?

Q. Yes.

A. Because I recall questioning him about the dam specifically. I don't recall a specific time, and he reported to me that he was satisfied with the report that had been furnished by Mr. Schiffman and so I am sure that it was in response to an inquiry of mine to him about the dam and its condition.

Q. *Did you have discussions with anyone else about the dam at the time?*

A. No.

Q. *After Mr. Hubert told you that he was satisfied with the report on the dam, did you take any other action or do any other follow-up questioning?*

A. No. He told me that he had had these discussions with the people who were responsible for dam inspection, et cetera, in the Department and that he was satisfied that Mr. Schiffman had said that there were no real problems with the dam, that it did require some repair, but that it was not hazardous to life or safety.

Q. *Do you know whether Mr. Hubert ever asked for the entire Phase One report?*

A. I don't know the answer to that.

Q. *Do you know whether Green Acres ever received the entire report mentioned in this memo?*

A. I don't believe they did. If they did, I was not apprised of that.

Hubert was certain that he had discussed the Schiffman memorandum with his superiors:

Q. *Did you ever discuss information you had received from Director Schiffman on the dam with anyone in the commissioner's office?*

A. It would have been reviewed in briefing sessions I had with the deputy commissioner or assistant commissioner, yeah.

Q. *When you say it would have been reviewed, what are you basing that statement on?*

A. Because I would not have proceeded with an acquisition like this without making sure that the people who make the ultimate decision have all the information I have. And, of course, they have access to that information from the Water Resource Division as well directly without coming to me.

Q. *Why do you say they have direct access from the resource people?*

- A. Why not? They can ask them too, right?
- Q. *Is there any particular thing that should prompt them to ask the water resources people?*
- A. Well, my conversations with them, I guess.
- Q. *Do you have a specific recollection that you reviewed the issue of the dam in any meetings with the assistant commissioner?*
- A. Not a specific recollection, no, but I am sure it was brought up on more than one occasion.

Although Hubert testified that DEP's decision-makers knew what he knew, whatever he knew, this was not particularly evident to the Commission. Hubert also testified that he never questioned Schiffman's \$1 million dollar estimate for "improving" the dam:

- Q. *Directing your attention to an estimate of \$1 million that is made reference to in this memorandum, was that a figure that was the subject of discussion, further discussion between you and Mr. Schiffman?*
- A. No. I accepted that figure at face value. It was [Schiffman's], obviously, estimate of what it would cost to bring that dam up to the standards set by either the State or the Corps of Engineers or somebody and it was seen by me and by him as an improvement to the dam, not a repair to the dam.
- Q. *Did you have any idea who would pay for the \$1 million in the repairs?*
- A. No . . . There was never any meeting or other conversation in which I was involved where reference was made to expensive repairs to the dam. I do know—I could say almost categorically that I cannot recall ever being part of a conversation in which the dam was referred to in terms of requiring extensive, expensive repairs.
- Q. *Do you mean a conversation between you and the seller?*
- A. Anybody.

- Q. *Was the \$1 million figure referred to by Director Schiffman considered expensive at the time?*

- A. Well, a million dollars is, of course, a lot of money, but it was not viewed by anybody as being inordinate, that I know of.

Dam Apparently Not Discussed With WaWa

During his testimony at the SCI, Hubert was equivocal about whether the condition of the dam ever figured in his negotiations with WaWa representatives. One thing he did clarify in his testimony, however, was that he always believed the dam was to be "improved" rather than "repaired"—despite the Schiffman memo's repeated reference to potential repair costs. Hubert's testimony continued:

- Q. *Did your negotiations ever include a discussion of potential repair costs to the dam?*
- A. I don't recall discussing that. With the sellers, you are talking about?
- Q. Yes.
- A. No, I don't recall.
- Q. *Was the condition of the dam ever discussed between yourself and the sellers or the seller's agents?*
- A. I don't recall.
- Q. *Does the final selling price that you arrived at with the sellers reflect any adjustment for any potential repairs to the dam?*
- A. It was our opinion, it was the Department's opinion that the dam did not require any repairs but rather improvements, okay. And it is my—it was my opinion and it still is that the appraisal figure reflected the value and condition of everything involved in the acquisition.
- Q. *Was the figure of the \$1 million "improvement" reflected in the final selling price?*
- A. I will repeat my last answer. The final selling price reflected the extent, condition of the land, water and dam and the negotiations between the buyer and seller in terms of adjustments of their respective values.

Q. *But were any of the adjustments based—*

A. No.

Q. *Based specifically on the dam?*

A. No, no.

Hubert could in fact recall little discussion about the dam itself:

Q. *Did the sellers ever provide you, during your negotiations, with any information on the structure of the dam?*

A. Not that I can remember.

Q. *Did you ever learn what the dam is made of?*

A. It looked like concrete to me when I looked at it.

Q. *The spillway part looked like concrete?*

A. Yeah.

Q. *Do you know what the rest of the dam is made of?*

A. No.

Donlon discussed the meaning to Green Acres of the repair estimate:

Q. *Do you recall a \$1 million figure being considered at the time of the acquisition?*

A. I recall Curt Hubert, yes, mentioning the \$1 million figure. I read the memo and I believe that he discussed that with the director of the Division of Fish, Game and Wildlife.

CHAIRMAN PATTERSON: So what the State is really saying is, that approximately \$5 million was a good deal, \$4 million plus for the acquisition and \$1 million for the repair work?

THE WITNESS: Yes, that's correct. You see, there was Green Acres money for development as well as acquisition. Now, those monies are not disbursed by our bureau. We do the acquisitions. The development of recreational resources on the land is actually done by an office called capital improvement which is in the fiscal office, in conjunction with the agency that has acquired the land, so that I believe that Mr.

Hubert felt that there was sufficient amount, \$1 million in Green Acres development money that could perform the necessary repairs.

Schiffman Interprets "His" Memo

Commission Counsel Hoekje learned from Schiffman that, while he regarded his memo as a "strong" reaction to the Union Lake dam problem, he may not have written it. Indeed, he may have arranged for others more informed about the issue to compile the memo for his signature. The actual author of the memo was never identified to the SCI. Schiffman, who is now assistant director of the Division of Water Resources, responsible for water pollution control programs, testified about his other recollections of the memo:

Q. *Do you recall any discussions with anyone at Green Acres about the Union Lake dam?*

A. Not in specific detail. I almost feel like I should recall something like that, but I don't. Again, I was focusing on the waste water treatment facility. I don't recall any significant discussions. I'm trying to remember. I barely remember the letter. I do remember the issue, and the letter was quite clear as to what the situation was. It was a dam that would have to be repaired.

Q. *Do you have any recollection about discussing the contents of this memo with anyone on your staff?*

A. Not really. I probably, if I had discussed it with anybody, it would have been with Dirk Hofman. And the letter's a fairly strong letter, and I would have asked him about it before I signed it. I have no specific recollection of having done so. I would be surprised if I didn't.

Q. *What is it about the memo that makes you say it's a strong memo?*

A. Well, we basically said that there's a problem with the dam and it's going to cost, on a guesstimate, a large amount to fix it and the guesstimate is based on incomplete information, which means that that was a minimal level and it could be much higher.

CHAIRMAN PATTERSON: Mr. Schiffman, your interpretation of the memo, your reading of the memo and, again, I don't want to put words in your mouth, is that there is a problem and somebody ought to worry about the problem, is that fair to say?

THE WITNESS: Yes. That's exactly what it says.

CHAIRMAN PATTERSON: Would it surprise you to know that most people read the memo exactly the opposite?

THE WITNESS: That there was a problem?

CHAIRMAN PATTERSON: That it really wasn't a problem at all.

THE WITNESS: Let me read it again and I'll give you my judgment again. I think I can understand why. I guess everything is relative, but to me the fact that the spillway could be [overtopped] on a dam like that could mean that it would fail. The fact that it wasn't going to fall down immediately is another issue. From a regulatory standpoint the fact that it needed repairs means repairs would have to be made. That's what that says. Now, does that mean that the dam is going to fail tomorrow? Absolutely not, that's not what that ranking means. But if something was to go wrong the damage would be extensive, that's the reason for the ranking, and that if this was a—we would react the same way if—it would have to be repaired and remediated. The thing that's—the estimates are based on an incomplete report. What that does is it says they could be substantially different than what was stated here. From a regulatory perspective there were things there that had to be fixed. From a cost perspective there was a fair degree of uncertainty as to what would have to be done. So from my viewpoint this is a fairly strong letter. That's my perspective on it.

CHAIRMAN PATTERSON: I understand your viewpoint and I'm just pointing out to you that it is a fact from other witnesses that they took it exactly the opposite, which is too bad, but that's what happened.

THE WITNESS: I'll be frank, I can understand that somebody can do that because this didn't say run for your life. As a matter of fact, there were very few circumstances like that.

This is a risk issue, and there are very few dam failures, but when they do fail in the wrong place they cause tremendous damage, and that's the regulatory perspective. I can see somebody who is not in my line of work, not looking at this as a priority. From my perspective that would be a mistake.

CHAIRMAN PATTERSON: It isn't just that they didn't look at it as a priority. They looked at it as something, really, if we have to repair the dam and the spillway, it's minor, don't worry about it, don't bring it into the negotiations because if we do it we'll complicate the negotiations and we might not acquire the property. And by property I mean the lake and all of the adjoining property. And I don't think anybody quarrels with the fact that the property, that the acquisition of the property was in the best interest of the State of New Jersey. The only quarrel is whether they should have paid four million dollars for something that's going to cost another 14 or 15 million dollars to fix.

THE WITNESS: First, the cost wasn't known at the time. That's certainly a disturbing issue.

CHAIRMAN PATTERSON: But the fact is people took your one million dollars [as] being an indication of that's what it was going to be.

THE WITNESS (Quoting): "We are unable to provide the consultant's estimate, we believe it would cost close to one million."

CHAIRMAN PATTERSON: Yes. Wishful thinking. They wanted to believe your million dollars.

THE WITNESS: All right. I guess this wasn't too helpful a memo, then, except in retrospect.

CHAIRMAN PATTERSON: I'm not trying to blame you.

THE WITNESS: No, this isn't a question of blame, I think the memo [was] pretty clear at the time. It was preliminary, we estimated a million, a million to us, a million to me was a lot of money, and the fact that it was not going to fall down immediately was not the issue. From a regulatory perspective somewhere along the line the regulatory agency would demand that remedial action be taken. Somewhere down the line, no matter

what the program was, although, again, our attention was to deal with the things we were directly responsible for, we did direct that the State facilities be evaluated and repaired because we were responsible for them. Eventually, the program under the rules and regulations would deal with this facility. Actually, I lost track. I don't really know if the State, when the purchase was made, ever directed or gave any direction itself to do the necessary repairs or remediation at the time. I just don't recall. But I would not look at this as a minor memorandum or report, if that's what you're trying to get at. That's my judgment.

Schiffman was asked about follow-up conversations with Hubert:

- Q. *Do you recall or are you aware of imparting to Mr. Hubert an evaluation of the dam that because it was not structurally unsound it was okay to go ahead and purchase it.*
- A. I could have conveyed to him and others the exact meaning of what high hazard meant, which meant that it wouldn't fall down immediately. If I went beyond that I don't recall, but we certainly would have described that to anybody what the various ranking systems meant. At the time we were doing a lot of that type of describing. The word itself is somewhat inflammatory.

Schiffman was asked whether he was aware of the significance attached to his memorandum by Green Acres:

- Q. *Do you think you and your staff were aware that Green Acres took your one-page memorandum and used that as the basis for making the purchase decision about the dam?*
- A. I wasn't. I would have assumed certain things would have occurred, which apparently didn't, but I don't know what anybody else's assumptions or knowledge would have been.
- Q. *What is it you are assuming that would have also occurred?*
- A. I would assume you subtract out the estimated repair cost in the purchase price.

That might have been a little naive of me, but that would have been my assumption.

- Q. *Do you consider this one-page memorandum to give sufficient information about the dam upon which to make a purchase decision?*

A. By itself?

Q. *Yes, sir.*

A. No. My immediate reaction would be, from my perspective, would be to get more detailed studies.

WaWa's Hidden Report, Again

The Schiffman memo referred to the WaWa engineering study, saying "the final report is not yet available." This was in August, 1980, only a month before WaWa received the full report from the O'Brien-Gere engineering firm. On August 4, 1980, a short memo was written at Schiffman's Division of Water Resources about a telephone conversation between DWR and WaWa, noting "completed/prelim copies available; not interested in making repairs; Mtg last Tuesday w/Hubert; will get in touch w/us." James Kearns of DWR's Dam Safety Section, whose initials are on the memo, could not recall the telephone conversation, nor did Hubert have any recollection of it although his diary referred to a meeting with WaWa's counsel on that Tuesday. WaWa officials were not, of course, making themselves available to the SCI. Of particular interest is the fact that supervisors and staffers at the Dam Safety Section, both past and present, were generally unable to recall any discussions with WaWa representatives. John Moyle of that section testified at the SCI that he did not think he had any conversations with Green Acres personnel about the Union Lake dam.

Because Schiffman's memo directed his attention to the WaWa engineering study, Hubert was questioned about his efforts, if any, to obtain the report:

- Q. *Did you ever perform any follow-up with respect to whether the owners had completed [their] studies?*
- A. I asked on at least one other occasion whether that information was available and was told it wasn't.

Q. Was not?

A. Was not available and had gotten no indication that, in fact, such a report being prepared should delay or deter us in our acquisition.

Q. From whom should you have gotten such an indication?

A. From the water resource people.

Q. Whom did you ask?

A. Probably Mr. Schiffman.

Q. Do you recall?

A. Specifically, no.

Q. Did you ever ask the owners or the sellers whether they had completed the follow-up studies?

A. I don't recall asking them that.

Q. Did the owners ever tell you that they had completed the studies?

A. No, no.

Hubert was also certain that his superiors were aware of the existence of a second dam report. The basis for his certainty was twofold: 1) no recollection of specific discussions but rather a general recollection that he had discussed all important issues with his superiors, and 2) his belief that the staff at the Division of Criminal Justice had shown him a document indicating that the DEP commissioner's office was aware of a second dam report. Such a document is unknown to the SCI and, apparently, unknown both to the Department of Environmental Protection and to the Division of Criminal Justice. Hubert again:

Q. Did you consult with the commissioner's office?

A. No. The commissioner's office was aware of everything. There is a document that you didn't give me which shows that the commissioner's office was aware of this other study and that, you know, there were no questions raised by them about it and there was no reason for any questions to be

raised because they had been satisfied as I had by the Schiffman study.

Q. Mr. Hubert, when you were here before, you referred to the document that you have just brought up now. I haven't shown it to you because I haven't seen such a document and it's not in our files. I represent that to you. I was wondering if you could describe for us what it is that you are referring to?

A. Well, you have to go over to the other witch hunters.

As for his reaction to the reference to the O'Brien & Gere study in Schiffman's memo, Hubert's testimony continued:

Q. Do you know if that study was available to your office, meaning the commissioner and the deputy?

A. I made inquiries of the Division of Water Resources concerning that study and its effect on the acquisition. I got nothing from them that suggested that we not proceed with the closing.

Q. But did you have any knowledge whether that study was available not to yourself, I mean to the commissioner or the deputy?

A. I don't know. As I said, my inquiries on the technical matters were directed to Schiffman in the Division of Water Resources. I didn't feel that there was anyone else in the department that was qualified to speak to the technical or engineering aspects of the matter.

Q. Basically, what you are saying is that once you received that letter from Mr. Schiffman, you pretty much relied on that for the balance of the negotiations?

A. Not summarily but that and continuing conversations with that division during which I learned nothing to the contrary.

The Memo That Angered Hubert

Within three months of the consummation of the sale of Union Lake by WaWa to the State, an exchange of memos took place that raised critical questions about the dam, although the nego-

tiations continued toward an agreement of sale nonetheless. One of the memos disturbed chief negotiator Hubert and both it and his reaction to it shed additional light on the blinders-on zeal with which Hubert pressed for the acquisition no matter what the problems, dam or otherwise. The memos also reinforced a suspicion (although neither Hubert nor others in Green Acres seemed inclined to be suspicious) that WaWa was hiding data that could have adversely affected its ability to dispose of the property without having to address the dam repair issue.

The crucial exchange of memos began in mid-March, 1982, when fisheries chief Pyle wrote to John O'Dowd, chief of DWR's flood plain management:

As you may know, the state is working toward the acquisition of Union Lake and, if purchased, we expect it to be turned over to this Division for management. A while back, at our request, you sent to us a copy of the U.S. Army Corps of Engineers Report on the dam's condition. The report specified a number of items that required attention. I would appreciate it if you could give me a status report on the extent to which these conditions have been satisfied and a listing of any conditions, if any, that have not been met.

Around April 21, 1982, John Moyle of DWR's Dam Safety Section penned a note on the bottom of his copy of Pyle's memorandum:

Phone call made to B. Pyle. Informed Pyle that no repairs have been made. WaWa has completed a preliminary report on the engineering studies but would not turn it over to our office. They said it may have a play in the transfer of ownership. They said to contact Mr. Vince Anderson of WaWa at 215-459-4700 to obtain a copy.

Moyle testified at the SCI about his attempt to obtain an update on the status of the report:

... I personally called WaWa to get a copy of that report, and at the time they told me that they would not give me a copy because they were in the midst of negotiations and that, you know, it shouldn't be coming through us, it should go through negotiating.

On May 12, 1982, Richard Hall, DFG's wildlife biologist, wrote to George Howard, Chief of the Bureau of Wildlife Management:

I understand that the U.S. Army Corps of Engineers has issued a report on this dam that WaWa is basically ignoring. If this report indicates major problems with the structure, we should be aware of them prior to consummation. If the Corps pursues the repair of any deficiencies, it could cost millions.

Hall also advised Howard that WaWa was reluctant to release any information about maintenance "until the acquisition was consummated, at which time they would turn over all files and records." Hall wrote:

Frankly, their reluctance in this matter, even to give me ballpark figures, bothers me.

Next came the memo that was so disturbing to Hubert. On May 8, 1982, merely 17 days before the actual sale of the lake by WaWa to Green Acres, Pyle sent the following memo to Hubert:

A number of times in the past I have expressed my concern over the condition of the Union Lake dam as related to conditions placed on it by the US Army Corps of Engineers Dam Inspection Program in relation to the State's plans to purchase it. While I expect that this item was not overlooked in your negotiations with the WaWa Company, recent developments suggest that it might have been, and I offer the following for your consideration.

Recently, I contacted Mr. John Moyle of the Division of Water Resources to find out whether the WaWa Company had complied with any of the conditions imposed upon it by the State as a result of the Corps of Engineers Dam Inspection Program. He advised me that he had no record of compliance and would contact the WaWa Company to see what had been done, or what they intended to do. WaWa's engineer informed him that they had completed the study but would not release results without permission from the WaWa Company. Upon contacting the WaWa Company, Mr. Moyle was informed that they would not release the results be-

cause it may jeopardize negotiations with the State over the sale of the lake and adjacent property. I leave it to you to decide what to do.

On May 8, 1982, Hubert testified, the Union Lake deal was in its "eleventh hour." The forms required by departmental procedure had just recently been signed, including an administrative authorization releasing funds for the purchase. Contracts were being signed or prepared for signature.

Hubert recalled during questioning by Counsel Hoekje that he was "exercised" by the Pyle memo. He testified:

Q. *Do you recall receiving this memorandum from Mr. Pyle?*

A. Specifically recall receiving it, no. I do recall being exercised.

Q. *What do you mean by that?*

A. Because after years and years of vigorously pursuing the acquisition of this project, that this individual should suddenly find it appropriate to protect himself by writing a memorandum like this [and] closing "I leave it to you to decide what to do," you know.

Q. *Where were you in the stage of acquisition and negotiations?*

A. May '82 we were probably very well along. We were in the eleventh hour or later, right, May '82.

Q. *Had you ever heard from Mr. Pyle before on this subject of the dam?*

A. My only recollection of any conversations were those involving his support of the acquisition and encouragement that we move with dispatch.

Q. *Referring you to the second paragraph of the memorandum, the very last sentence referring to a contact by Mr. Pyle of Water Resources with the WaWa company. He was informed that they would not release the results because it may jeopardize negotiations with the State over the sale of the lake and adjacent property. Do you recall*

whether you had any reaction to this statement with respect to possibly jeopardizing negotiations?

A. Again, I believe at that time we had concluded our negotiations and I don't know whether I reviewed this with Water Resources again but there is nothing here, other than conjecture, to suggest that there is any problem with the dam.

Hubert was so "exercised" by Pyle's action that he complained to Pyle's superior, DFG Director Cookingham. This memorandum is dated May 18, 1982:

I'm at a loss as to how to respond to Bruce Pyle's May 6, 1982 memo, a copy of which is attached. As you know on August 8, 1980, Director Schiffman told us that "no inherently detrimental conditions were observed to render an inadequate assessment" of the dam.

On the strength of that and no expressed concerns from your office we went ahead with the purchase. We now have an executed contract of sale and your office now raises concerns over the dam's condition.

The [dam] is old and as such will require continued maintenance and repair even though it was judged to be in "fair overall condition".

If your Division is not prepared to assume the responsibility of the [dam] we should never have gotten this far in the acquisition process.

Please advise.

By Counsel Hoekje:

Q. *Is this the memorandum that you wrote to Mr. Cookingham?*

A. Yes. I am frankly delighted, I was delighted when I saw it the other week, to see that it was directed at Mr. Cookingham because it enforces my recollection that Mr. Cookingham continued to support it, because he didn't respond, he continued to support this acquisition and, of course, Mr. Pyle and others worked for Mr. Cookingham.

Q. *Did you have any discussions with Mr. Cookingham in connection with this memorandum?*

A. I am sure I discussed the dam with him before, during and after this memorandum on many occasions.

Q. *Were there any conversations directed to this particular memorandum?*

A. I don't know. I saw him regularly on a regular basis and, you know, I don't recall any scheduled meeting to discuss this memorandum, but I am sure it was discussed, the substance of it was, if not the memo.

Hubert apparently took no other action, other than to write the memo to Cookingham:

Q. *Did you consult the attorney on the sale, [Deputy Attorney General Alan] Rothstein, with respect to the possibility of delaying the sale for the purpose of following up on the new information?*

A. No.

Q. *Now, do you recall that once you received the memo from Mr. Pyle on May 6 whether you did anything other than writing the memo? Did you pick up the phone and speak with Director Cookingham or try to communicate with Mr. Pyle?*

A. I spoke with Mr. Cookingham on many occasions. Whether I did and how often I did between May 6 or whenever I received that memo and the 18th when I responded, I can't recall. I just had many, many conversations with Mr. Cookingham.

Q. *So you have no specific recollection of a communication between those two dates in respect to the subject matter of Mr. Pyle's letter?*

A. I cannot specifically say on such and such a date I talked to Cookingham about this memo, no, but I did talk to Cookingham about this issue.

Q. *Forget about Mr. Cookingham, did you talk to the commissioner or the deputy com-*

missioner in regard to the subject matter of Mr. Pyle's letter?

A. I can't say yes or no. I can't say specifically. I know, again, that I talked to the commissioner and the deputy commissioner on many occasions concerning all the issues related to this acquisition. What dates, I just don't know.

Hubert testified that he did not take any action with regard to the contract:

Q. *Well, if you had an agreed upon contract, would it have been possible for you to, on behalf of the State, basically [heed] what Mr. Pyle had stated in respect to the dam and insisted [on] or negotiated a condition in respect to the dam in the contract?*

A. I believe it would be possible, yes, would have been possible.

Q. *Did you attempt to do it?*

A. Nope.

Q. *Did you discuss this with the attorney for the State at that time, the individual who was preparing the contract? That would have been Mr. Rothstein?*

A. He only represented us in closings and in condemnations. He had never played any role in the acquisition process.

Q. *When you discussed the agreement with him, did you discuss a condition in respect to the dam?*

A. The issue of the dam [and] its condition was resolved between myself, Water Resources and the Commissioner's office.

Donlon recalled Hubert's reaction to the Bruce Pyle memo:

A. I recollect that shortly before the title was closed, he received a memorandum from Bruce Pyle and Bruce Pyle's memorandum mentioned the possible problem with the dam. And I recall that Mr. Hubert said, "why didn't he raise this issue before, why did he wait until we are ready to close title to it?"

Q. *What is the basis of this recollection?*

- A. Just a recollection of his comment to me that he had received this memo and why did he not mention it in a more timely fashion.

Fisheries chief Pyle discussed his memo during testimony at the SCI:

- A. This is the memorandum that I sent directly to Curt Hubert and a copy to Director Cookingham and [Deputy Director Paul D.] McClain advising Curt that my efforts to get a copy of the Phase II [O'Brien & Gere] report were unsuccessful and that Mr. Moyle had advised me—I had been working through him to get the report—Mr. Moyle advised me that he had been informed, but they wouldn't release the results of the study because it may jeopardize negotiations over the sale of the lake and the property, so I left it to Mr. Hubert to decide what to do. I couldn't offer any suggestions.

CHAIRMAN PATTERSON: What would you assume the Phase II report would have said?

THE WITNESS: If somebody told me it was going to jeopardize negotiations, I would assume that the report probably indicated there was something materially wrong that Wawa didn't want us to know about.

CHAIRMAN PATTERSON: And knowing that and thinking that, and I agree with you, certainly, if I were in the position of power, if you will, I would insist upon seeing the report before I bought the property. Would you agree?

THE WITNESS: I would love to have seen the report before the property was purchased, yes.

As to whether he received any response from his superior, Director Cookingham, Pyle testified:

- A. I don't believe so. As I said, after the fact, after the purchase had been completed and I was assembling the files, I saw the memorandum that Hubert had sent to Director Cookingham in response to this. My normal routing of this memo should have been through Director Cookingham. But because I felt the negotiations had moved along, you know, I wanted Hubert to have this information as quickly as possible, so I sent it directly to him with a copy to Cookingham and McClain.

- Q. *Had you had any prior contacts with Mr. Hubert during these negotiations?*

- A. I can't say definitely no, but I was not working with Mr. Hubert on the acquisition directly. If I was, it was very incidental to the thing and my input to it was primarily through McClain and/or Cookingham, whoever was present that particular day, and this was I think about the only direct communication I had with Hubert, for the reasons given.

Director Cookingham discussed conversations with Pyle:

- Q. *At the time you first received a copy of [the memo] did you have any conversations with Bruce Pyle about what he had written?*

- A. I'm sure we did. I can't remember the time and date, but, as I say, we were in contact. We always had been in contact at least a couple times a week, so I'm sure it was brought up.

CHAIRMAN PATTERSON: Was it likely that you met with him and discussed the memo before he actually wrote it?

THE WITNESS: I'm sure that if he wrote the memo that we either—we presumably had discussed it before, yes.

- Q. *And do you recall what Curt Hubert's response was?*

- A. No. Communication probably was not ever that great between Curt Hubert and myself, to be frank, not that I'm trying to blame him or anybody else. But we didn't chat a lot over the phone. If he called me I responded and vice versa. We didn't have a close working relationship on this or any other project, for that matter.

Cookingham was then asked how he reacted to Hubert's memo:

THE WITNESS: I did not respond formally to it. I suspect we may have talked about it over the phone. I don't recall.

By Counsel Hoekje:

- Q. *Did you take any steps yourself to verify whether or not the information was correct that Bruce Pyle set forth in his memo?*

A. I didn't personally, no.

Q. *Did you bring Bruce Pyle's concerns to the attention of anyone above your level?*

A. I don't remember.

Q. *Do you recall considering whether or not you should raise this matter to someone above your level and Curt Hubert's level?*

A. Yes.

Q. *And do you recall what you did?*

A. I don't remember I did anything. I know I was concerned. Whether I actually went above—we were maybe part of the new administration we were dealing with at the time. I don't know. Obviously, I should have been more aggressive. I'm not trying to, you know, I probably should have got more involved. . .

Chairman Patterson then had the following discussion with Cookingham about Pyle's memo:

CHAIRMAN PATTERSON: Let's go back to [the memo]. Do you have it in front of you?

THE WITNESS: Yes.

CHAIRMAN PATTERSON: [The] second paragraph, last sentence, says, "Upon contacting the WaWa Company, Mr. Moyle was informed that they would not release the results," meaning the results of their study of the dam, "because it may jeopardize negotiations with the state over the sale of the lake or adjacent property." You're not an engineer, I'm not an engineer, but wouldn't that wave a red flag in front of you?

THE WITNESS: It was discussed over the phone, but I didn't write a memo and I probably should have. I should have.

CHAIRMAN PATTERSON: Well, whom did you discuss it with?

THE WITNESS: Well, I certainly discussed it with Hubert.

CHAIRMAN PATTERSON: Would you have told Hubert that, "Gee, there must be something wrong with the dam?"

THE WITNESS: No. We told him that we should

have [a] copy of the report before the acquisition was final.

CHAIRMAN PATTERSON: Would you have assumed that the report must be a bad report if [WaWa] wouldn't give it to you or wouldn't give it to the State?

THE WITNESS: I'm sure we were concerned. Not having seen the report I couldn't answer that.

CHAIRMAN PATTERSON: Why would somebody refuse to give the State a report unless the report was on the dam [and] critical of the dam?

THE WITNESS: Well, you're being very specific to me and I'll be very specific with you. I was concerned why the acquisition was moving at the rate it was at that time. I didn't know what the hurry was. I was concerned about the property boundaries at that time. I was concerned about a number of things and there was a real effort to move the acquisition, and whether it was because we had a new administration, and they wanted to wrap it up, I don't know what. I don't know. I was not involved in negotiations, other than we made recommendations, and that's what our role was at that time, to make recommendations.

CHAIRMAN PATTERSON: Are you telling me, and please correct me if I'm wrong because I don't want to put words in your mouth, that you got the impression that the acquisition was going to go ahead full speed and putting road blocks in the way or questioning the speed and questioning some of the facts of the acquisition weren't going to help?

THE WITNESS: I'll say it in my own words.

CHAIRMAN PATTERSON: Please.

THE WITNESS: I felt that the acquisition was proceeding exceptionally fast. I didn't see the reason for it. And where I presume I discussed the issues with the various people involved, obviously I should have put my feelings in writing in a more vivid manner, which I did not do. I'm not denying that. But there was concern and probably I should have been more aggressive of my concern over it.

CHAIRMAN PATTERSON: I'm trying to find out whether your lack of aggressiveness was because you felt that it wouldn't do any good if you were aggressive or because it's just not your nature to be aggressive?

THE WITNESS: I'm usually accused of being too aggressive, but I did not have that good a working relationship with Green Acres at that time. I didn't put myself in a position where I was trying to tell them how to run their business. I was trying to help provide information, cooperate, but I was not in a position to tell them how to do their job.

CHAIRMAN PATTERSON: I still get the distinct impression that you weren't as aggressive as you might have been because you didn't think it would do any good.

THE WITNESS: Well, I'm not going to disagree with you.

The "11th hour" questions that Pyle's memo raised over a report WaWa had hidden since receiving it in September, 1980, produced revealing hindsight testimony at the SCI, including this dialogue with Jeanne Donlon, the Green Acres state land acquisitions chief:

CHAIRMAN PATTERSON: Were you aware that the owners of the property had a report on the dam which they never turned over to the State?

THE WITNESS: No, I wasn't.

CHAIRMAN PATTERSON: Are you aware of that now?

THE WITNESS: That's what I wish I had been aware of. I was not aware of that.

By Counsel Hoekje:

Q. *Do you know whether Curt Hubert was aware of it, from your recollection at the time?*

A. I am not certain. I have tried to remember that and I really am not certain whether he was aware of that. I think he was aware that there was one in process, a further investigation.

Q. *Well, if it would be true that WaWa had this report and that they had received it and they*

weren't turning it over and Green Acres became aware of it at the eleventh hour, so to speak, the contracts had been signed and I am not asking you to second guess what happened then, but in your position now and if that knowledge came to you now, is there any action that you would see or that you would take, could take and would take?

A. Well, I certainly, given what I know now, I would hope we would not get to the fully executed stage before we would be aware of the problem. And certainly we would not close title if we became aware of that, until we had had a chance to examine that report.

CHAIRMAN PATTERSON: But putting it in a theoretical guise, if you signed a contract to acquire the property and if, after you signed the contract, even maybe after you took possession of the property, took title, you found out that there was some important document that the other side had hidden from you, you would try to get the document; and if the document was very bad, you would say, well, the deal is void and then you would go into court to determine whether or not, in fact, it was fraud or non-fraud or whatever the proper legal words are. Isn't that what would have happened?

THE WITNESS: That's possible. If one certainly had any evidence of deliberate suppression and misrepresentation.

CHAIRMAN PATTERSON: The item being suppressed would have materially affected the deal, the arrangement?

THE WITNESS: Sure.

CHAIRMAN PATTERSON: I don't understand it either. I haven't met anybody that quarrels with the idea that [the property should] have been acquired. You are not the first one that has said that.

THE WITNESS: Exactly. It's very difficult.

An Expert's Evaluation of the Dam

In order to obtain a more precise and objective interpretation of data available on the Union Lake dam at the time of its acquisition, the Commission employed an engineering consultant who has specialized in the design, construction

and maintenance of dams. He is Dr. Melvin Esrig of Woodward-Clyde Consultants of Wayne. Dr. Esrig, a principal and vice president of Woodward-Clyde, described himself as a geotechnical engineering specialist "in dealing with construction on or with soils and rocks and water associated with the earth's crust." He has worked extensively with dams, primarily earthen dams (as is Union Lake's), and most recently was involved with construction of "the largest dam in the State" at Merrill Creek in Warren County.

Dr. Esrig was asked to provide the SCI with his analyses of the import of certain documents—the Phase One report, the O'Brien & Gere report and the Schiffman memo—in the Union Lake transaction.

Meaning of the Phase One Report: Dr. Esrig summarized his opinion of the Phase One report:

Q. I would like to turn your attention to the Phase One report of the Union Lake dam which is our Exhibit A-1 and ask you, in your opinion, was there sufficient information contained in it to assess the condition of the Union Lake dam?

A. No, there was not.

Q. Why not?

A. The Phase One report specifically indicates that they have no information about the internal structure of the dam or the spillway and they had some concerns about the spillway, making the statement, I believe, that the dam section has withstood the test of time reasonably well, but there was some indication that there had been trouble with the spillway in the past and the stability of the spillway was in question.

Q. Was there sufficient information in the Phase One report for the buyer of the dam to make a purchase decision about the dam?

A. That's a difficult question to answer, because buyers make decisions based on a variety of reasons. There was not enough information in the Phase One report for the buyer to estimate what his exposure would be to repairing the dam in the event that the

spillway were, in fact, found to be inadequate, so that the buyer could make some rough estimates as to what might need to be done to the embankment and for the repairs that were specified as immediately necessary in the Phase One report. But the critical issue of, was there major instability in case a major flood occurred, that question was left unanswered, was specifically left unanswered because there was insufficient information. And subsequently, there was no way to make an estimate as to whether or not that was, in fact, a problem or would, in fact, prove to be a problem and if it were a problem, what, then, would the cost of repairing that problem be.

Dr. Esrig explained why the buyer—in this case, the State—needed another study to forecast repair costs:

Q. How could the buyer make such a determination?

A. Only by doing the kind of analysis that had to be done as part of the Phase Two study and was recommended specifically in the Phase One study.

Dr. Esrig described an inadequacy of the Phase One report:

The summary to the Phase One report did not emphasize the issue of the problem of inadequate information about the character and stability of the spillway, therefore, it seemed to be missed.

The Phase One report only indicates that they don't know the history of construction or raising the crest of the earth dam and does indicate specifically that the data relating to the spillway structure modification is considered inadequate to base any assessment upon design procedures and stability, and then indicates that additional information is needed.

Dr. Esrig also reviewed the impact of the age of the dam:

Q. Does the age of this particular dam raise any important considerations?

A. Yes. The technology associated with con-

structing dams, construction in general, has changed substantially. This dam was built about 100 years ago, 110 or so, and at that time, we didn't know a great deal about compaction, we didn't know too much about the design of dams; and consequently, the only thing that we would know about the Union Lake dam in 1978 when the Phase One report was written, was that whatever storms had taken place during the prior 100 years appeared to have been inadequate to cause the dam to fail, although the engineer said it might have failed, it might have been repaired and we don't know about it. . . It would be marginally stable and no one would know about it and since the method of construction in the 19th Century was one that would not produce a high factor of safety by its nature, the potential for failure of the dam in the event of a large storm could exist.

Dr. Esrig also discussed the importance of the observations about seepage in the Phase One report:

Q. *I wanted to ask you what the significance is of seepage observations?*

A. Dams fail because of seepage. It is the most prevalent cause of failure of dams that exists. In the jargon of the dam designer, it leads to piping. Piping is the erosion due to seepage of materials within the dam causing a hole as a consequence of the erosion, which hole gets enlarged as the quantity of water increases as the hole becomes bigger, so it's a self-failing mechanism that is one of the most significant major causes of failure. And the reason that the report says the seepage appears to be clear, what they were looking for was to see whether or not there was any material being removed by the seepage that was coming through the dam. The water itself is not critical, it's the erosion of the particles that is.

O'Brien & Gere Report: Dr. Esrig described the limitations of the O'Brien & Gere report:

Q. *Let me ask you whether that report was, in your opinion, a complete follow-up study on the Union Lake dam?*

A. That report was not a complete follow-up study and it was not designed to be. They were apparently hired by WaWa, Inc., to deal with only certain aspects of the dam and were not requested or paid to investigate the spillway, because it's specifically excluded from their scope of studies, according to their words.

Q. *Does the O'Brien & Gere report contain information that is not found in the Phase One report?*

A. Yes.

Q. *What is that information?*

A. It contains information indicating something about the history of the dam. The O'Brien & Gere report on page 5, section 2.04, indicates that the dam was built on soft materials, that those soft materials led to failure on first filling, that the failure of the dam on first filling required that the dam be cut down and be reconstructed, [which] leads to the conclusion that there were some soft materials beneath the dam and only some of them, at the toe of the dam, apparently were taken out; and, therefore, some soft materials are likely to remain under the dam. And stability of the spillway was clearly a major problem because buttresses had to be built and other stabilizing measures had to be taken, so from the viewpoint of understanding the stability of the dam, the O'Brien & Gere report had historical information that was extremely valuable.

Dr. Esrig was asked whether the O'Brien & Gere was a Phase Two report:

Q. *O'Brien & Gere was not a Phase Two report, because important elements of the normal Phase Two study were not to be addressed by them in accordance with their agreement with the owner.*

A. What were those important elements?

Q. *The stability of the spillway. They were not to investigate the spillway.*

Schiffman Memorandum: Dr. Esrig identified the missing parts of the Schiffman memorandum:

Q. Directing your attention, now, to our Exhibit A-4 [Schiffman's memo] which you have before you. Let me ask you first, in your opinion, does Exhibit A-4 accurately summarize the contents of the Phase One report?

A. It summarizes the contents of the summary of the Phase One report. It misses the critical statements associated with the inadequate information available about the stability of the spillway and, in fact, about the stability of the dam itself, where no information was known about the soils that the dam was composed of.

Dr. Esrig also discussed inadequacies of the Schiffman memorandum:

CHAIRMAN PATTERSON: So your testimony about Mr. Schiffman's memorandum still would be that he emphasized the conclusions, but missed the point that the spillway could be suspicious because there wasn't any real analysis of it?

THE WITNESS: Yes, that's correct. I believe that he missed the words in the summary that said that it was important to more accurately determine the extent and locations of seepage through the embankment and stability of the structure. The stability of the structure is a very expensive piece of information, if the structure turned out to be unstable.

CHAIRMAN PATTERSON: Is that an omission that surprises you?

THE WITNESS: It's an omission that surprises me because of my knowledge of dams. I am not sure that if you were to read only the summaries of the report, that it would be unreasonable to miss that. You have to read the report in full and appreciate the statement that says there is no information available to make this assessment.

CHAIRMAN PATTERSON: Certainly someone in the state should have read the report in full and if they had done that, that they probably should not have omitted the information about the spillway?

THE WITNESS: I would agree with that.

Schiffman, who testified after Dr. Esrig, was asked to compare part of the Phase One report with his memorandum:

CHAIRMAN PATTERSON: Well . . . do you think that item B [of the report] is important? Item B says that within six months from the date of approval of this report engineering investigations and studies should be performed to more accurately determine the extent and locations of seepage through the embankment and stability of the structure. Then it continues another sentence. But just that part, do you think that's important?

THE WITNESS: Yes.

CHAIRMAN PATTERSON: Do you think it's important enough to have been included in the memorandum almost verbatim so that the reader of the memorandum would have no misunderstanding as regards the need for further engineering investigations? And I appreciate that you did not write the memorandum, and I appreciate that you may not have read the Phase One report. So what I'm saying, what I'm asking is do you think that your subordinates should have included specifically paragraph B or reference to paragraph B in the memorandum that you sent to Mr. Hubert?

THE WITNESS: I think the memorandum could have been a little stronger, but I'm reading into it that there was a judgment call made. The judgment call was that—I'm reading from the second paragraph of the memo—that it was judged to be in fair overall condition, though some seepage was observed alongside the downstream embankment.

CHAIRMAN PATTERSON: But to me that doesn't say that you are within six months to do an engineering investigation. To me it's the opposite.

THE WITNESS: What I'm reading into this is that if you read this—I'm reading into it that a judgment was made that the seepage was minor, and that the major problem was the inadequate spillway, and at the time there was a lot of concern about inadequate spillways. Whether that deserved to be downgraded is another question.

CHAIRMAN PATTERSON: But if the judgment was made as an individual judgment by someone who went out and looked at the dam—

THE WITNESS: In other words, from what I'm reading into this, in this memo it was judged by the Division that the inadequate spillway was the major issue, and that the seepage was secondary. If I read this item from the Corps, one could make the judgment that more attention should have been paid in the memo to that paragraph B.

CHAIRMAN PATTERSON: Now, in hindsight, and I'm sure you know that the dam has to be rebuilt.

THE WITNESS: I don't know. I don't know the details of what, when, where, why.

CHAIRMAN PATTERSON: What's your reaction to item B now?

THE WITNESS: I'm not sure of the exact nature of the construction of the dam. If it's earthfill, then I would ask that question. I'm not sure. Being from California, having been caught in something called the Baldwin Hills dam failure, if I saw the term seepage through the embankment and it was an earthfilled dam, I would be very concerned.

CHAIRMAN PATTERSON: It is earthfilled.

THE WITNESS: I would be very concerned.

CHAIRMAN PATTERSON: So in hindsight you think that paragraph should have been included in the memorandum.

THE WITNESS: Yes. If I would have seen this myself, I probably would have been more aggressive about it.

Arsenic as a Negotiation Factor

Much Data Available—But Ignored

At the time of the negotiations concerning the purchase of Union Lake, the Department's files contained much information relating to arsenic contamination of the lake. This information included DEP and Department of Health testing records, DEP Enforcement Bureau allegations, legal briefs and memos and opinions or decisions in judicial and administrative actions, let-

ters to and from concerned citizens, and results of scientific and environmental studies. In addition, many newspaper articles reported the presence of arsenic in the lake and also quoted various DEP officials on the issue.

This information was never collated, expanded or evaluated for its impact on the price of the acquisition and on the lake's future management and maintenance. Instead, Green Acres summarily dismissed the arsenic problem at an early stage of the negotiations. As with the issue of the dam, no one involved in the deal remembers asking WaWa about its potential obligations for resolving arsenic poison problems, nor, of course, did the owners apparently ever voluntarily raise the issue.

As a result of DEP's failure to assess the present and future impact of arsenic contamination prior to buying Union Lake, the State was confronted with increased costs (in the millions of dollars) for dam repairs that were not even partially factored into the \$3.1 million price WaWa was paid for the tract. In addition, the contamination now confronts the State with ongoing expensive and time-consuming attempts to, at long last, halt further pollution, and to eliminate what risks remain so the lake can be returned to public use. Nothing can be done at this stage to rectify the misjudgments that diminished the role of the contamination issue in the DEP's acquisition process but much can be accomplished by way of procedural reforms to prevent such misjudgments from recurring. A restructuring of DEP's processes for assembling and evaluating data potentially affecting any Green Acres land purchases in the future, particularly information available in various sections within DEP itself, is proposed in the conclusions and recommendations of this report.

Anti-Pollution Enforcement Lax

As noted, the DEP (and its predecessor department) has pursued since the 1960s a prolonged series of administrative and legal actions against the Vineland Chemical Company (Vichem), the Union Lake polluter. This manufacturer of arsenical pesticides is appealing an administrative order revoking its operating permits—an order that certainly should have been issued and tested in the courts years ago. The

Vichem plant's arsenic emissions have for decades threatened the State's rich shellfish resources, including oyster beds, at the mouth of the Maurice River. Vichem poisons have also been a constant threat to the health and safety of citizens residing in or visiting the area.

Evidence of the arsenic peril was abundant prior to the negotiations for the State's purchase of Union Lake. As long ago as 1976, testings by the State Department of Health utilized in DEP enforcement actions against Vichem showed water samplings at Union Lake which exceeded state and federal standards for safe drinking water. The current State and federal drinking water acceptability standard for arsenic is .05 parts per million (PPM). The samplings at Union Lake showed readings of .062, .056, .083, .064 and .167 PPM. It should be noted that Union Lake is not a potable water source for the area.

No connection appears to have been made by Green Acres between the Union Lake negotiations and the DEP's enforcement files against Vichem. It did not occur to Green Acres—or to chief negotiator Hubert—to ask about such files, nor did anyone else in the Department apparently offer Green Acres the voluminous data that had been accumulated during its ineffectual enforcement actions against the source of the contamination. Since enforcement and regulatory efforts at DEP and the arsenic emissions at Vichem were ongoing (as they still are), it is hard to imagine how Hubert and others in the DEP and Green Acres could have completely avoided the subject throughout the entire two years of negotiations with WaWa.

There were other warnings about the arsenic that should have alerted the State's negotiators of trouble ahead. During 1979, a flurry of local newspaper articles elaborated on the lake's arsenic contamination and the DEP's enforcement actions against Vichem. For example, on July 18, 1979, the Atlantic City Press wrote, "A 'very serious' arsenic pollution problem may prompt state officials to ban fishing and swimming in sections of the Maurice River and Millville's Union Lake, a [DEP] researcher said Tuesday." On July 20, 1979, the Millville Daily wrote a follow-up story headlined "Union Lake Called Safe for Recreation," citing another DEP researcher (Thomas Belton, who also testified in this SCI investigation). Also in the summer of

1979, the mayor of Vineland closed the City of Vineland beach at Almond Road on the Maurice River after newspaper articles alleged arsenic poisoning of the water. The beach was reopened only after the DEP insisted that no risk existed for swimmers.

Letters from the Department to concerned citizens around 1978 confirm DEP's knowledge and concern about the arsenic problem. Earlier, in a press release dated December, 1976, about a DEP court order action against Vichem, the Department cited the presence of excessive arsenic levels in the Maurice River and at Union Lake. A letter to Assemblyman Hurley dated February 28, 1980, from DEP's enforcement section advised him that Vichem was scheduled to complete its new waste water treatment system by mid-March of that year. The letter continued, "With successful operation of this facility, the source of arsenic contamination in Union Lake will be abated. The Division will continue to monitor the progress of Vineland Chemical Company to insure that the plant is completed in a timely manner." Whatever the new treatment process, the contamination continued.

On February 23, 1981—more than a year before the lake was sold—the Atlantic City Electric Company wrote to Arnold Schiffman at DEP's Division of Water Resources about its "continued concern . . . with regard to the arsenic contamination of the Maurice River and Union Lake". The letter referred to Atlantic City Electric's plans at that time (since abandoned) to use Union Lake water in its proposed power plant in Millville. The letter continued:

During the fall of 1980, our staff and representatives of our consultant, Environmental Science & Engineers, Inc., had contacted members of your staff with the two-fold purpose of certifying present arsenic levels in the Union Lake area and in developing an understanding of your attempts to further minimize the arsenic emissions from the Vineland Chemical operation. Although your water quality data was supplied to our consultant, we met with limited success in our attempts to have you project water quality for the 1988 plant start up and beyond.

We understand that litigation against

Vineland Chemical prohibits you from discussing some specifics of your plan. However, we do require continued assurance that the State of New Jersey is doing everything within its power to eliminate this problem and to prevent potential downstream users, such as Atlantic City Electric Company, from being forced to provide secondary treatment, at great expense, of this pollutant.

This letter alone should have caused Schiffman to send a warning to negotiator Hubert at Green Acres about the Union Lake poison contamination, but he did not. Indeed, although officials in various DEP sections knew about the severity of the contamination, hardly anyone in the Department who knew about the trouble (a DEP scientist was a notable exception) ever even tried to warn anyone else about it. It was apparently generally accepted at DEP at the time of the negotiations for Union Lake that: 1) although arsenic existed in the lake in amounts in excess of federal and State standards for drinking water, Union Lake was not a potable water source; 2) no health risk was posed to swimmers, who would have to ingest large amounts of water to suffer injury; 3) arsenic levels found in fish in and around the lake did not exceed federal fish safety standards, and 4) arsenic tended to accumulate in the lake bottom, a pattern which did not generate much attention.

Arsenic Poisons Lake Bottom

The pesticide plant's poisonous emissions polluted the water far downstream from both Vichem and Union Lake, according to expert testimony at the SCI, but the most serious threat was the previously noted infection of the lake bottom. Contamination of the sediments was to generate a dilemma in restructuring the dam since the lake could not be drained—which would have eased the repair burden—for fear the poison would be wafted from the dried-out bottom soil into the air. As more than one authority noted in testimony at the Commission, inhaling arsenic is far more dangerous than ingesting it in tainted water.

Helpful commentary on the arsenic poisoning peril was provided at the SCI by Thomas Belton, a senior research scientist and special consultant

in the DEP Commissioner's Office of Science and Research (OSR). He recalled the first Union Lake contamination study in which he participated, in 1979, which showed "some of the highest levels of arsenic in surface water in the State." In fact, he testified, the safety standard for arsenic in drinking water "wasn't met until you were 23 miles away from the facility and well into the [Maurice River] estuary beyond Union Lake. Further, the poison build-up in the lake bottom was accelerated in the area of the dam, according to Belton, with the arsenic levels "as high as at the top of the lake." The complex import of Union Lake's sediment contamination problem was indicated as Belton described its impact on plans for repairing the dam. He testified:

... Initially, when we began the study on arsenic, we were concerned about human exposure. There didn't seem to be a lot of human exposure. No one was drinking the water and the fish weren't contaminated. The estuary was filtering out the arsenic before it made its way to the shell bed at Delaware Bay. Now if they took the dam down, it [would be] a totally different system. Instead of having the lake essentially protecting the lower estuary, you would have a river and a lot of the river that was built up in the storage pockets might now be eroded and even the marshes down in the estuary. . .

That material, with its arsenic, might be transported downstream in a large concentration. Because of the larva toxicity I mentioned before, if it happened at a time when the oysters or crabs were spawning, it could have a very serious impact on the ecology of that stream.

My second concerns were the fact that we did find that there were these organic pockets in the bottom of Union Lake that the arsenic was associated with, if they dropped the lake and essentially turned it into a river again, that these arsenical contaminated muds could then become available for weathering.

Weathering is simply the process of which sediments or dredge soils dry out and become very, very fine material, which is very easily picked up by the wind and blown

about. I was concerned with an air pollution problem.

Belton explained the respiratory danger of the arsenic in sediments:

The exposure routes that you would be concerned with about arsenic are ingestion or inhalation. In fact, inhalation, the exposure for inhalation is more extreme than it is through ingestion. . . .

Once the arsenic is inhaled, the lung is very, very permeable to the arsenic, whereas if you ingest it, the lining of the stomach is not as tenable [in] getting that material into the blood. . .

No Poison Impact on Swimmers, Fish

No safety standards currently exist for swimming so far as arsenic contamination is concerned. When Vineland closed the Almond Road beach in 1979, Belton said "there was a lot of debate back and forth on the existence of such a [safety] level" but it was apparently never formalized. The Department concluded that the arsenic poses no health risk for swimmers.

Asked about the relation of the arsenic sediments to the bathing beach at the Lake, Belton responded: "From the mapping that we did and the analysis that we did, the people who were bathing were not walking through the contaminated sediments in the process of bathing". However, he added, because of the "weathering" exposure of the mud that people might walk through, "it's a different ball game" subject to the findings of ongoing studies.

Belton also described the results of the 1979 arsenic studies that applied to fish in the lake:

Q. Have any of the studies that you have participated in ever shown levels of arsenic in the fish that exceed these standard levels?

A. No, neither here nor anywhere else in the State, for that matter.

Q. What about fishing in Union Lake?

A. The fish as we see it, they are not bio-accumulating any of the arsenic from what we had seen back in the late '70's. I think it's time that someone went back and did some

more work to see if those levels have changed.

As for the contamination's impact downstream from the dam, Belton said that arsenic was extremely toxic to fish larvae, particularly that of shellfish such as oysters. An earlier study on arsenic had focused on the effect on oyster larvae because of the oyster industry at the mouth of the Maurice River. The study indicated that the estuary was filtering out much of the arsenic so the oysters did not appear to be in imminent danger.

As to present concerns about the effect of the arsenic on the oyster industry, Belton testified that the decision to keep a layer of water in the lake while the dam repairs proceeded is likely to keep any threat to the industry under control.

As long ago as July 11, 1977, the DEP wrote to Curtis Parker, the Maurice River Company vice president, advising of the presence of arsenic in Union Lake. The letter stated that the State water standard for potable water is .05 mg/1 and reported samples taken as having levels of .407 mg/1 at Almond Road and .083 mg/1 at the spillway of Union Lake. The letter further advised that the Department was involved in litigation against Vichem, had progressed in forcing the company to take corrective action, but that much remained to be done. The letter concluded, "Here again, the ground water has been contaminated and it may be a number of years before decontamination procedures are effective". The Maurice River Company, as previously noted, became a subsidiary of WaWa shortly after the receipt of the letter. It was Parker whose name appeared on the initial letters in 1978 to Bruce Pyle of DEP's Division of Fish and Game regarding the proposed State acquisition of Union Lake.

Arsenic Known by WaWa Before The Sale

There are strong indications that WaWa's decision to dispose of its Union Lake property may have been influenced by its fear of being held responsible for repairing the dam. Since WaWa, as the SCI's inquiry confirmed, also knew of the contamination of the lake at least as early as 1977, it would be logical to assume that the arsenic problem may also have motivated the

company's efforts to persuade the State to buy it.

WaWa's management was notified of DEP's letter to Parker and indicated a concern about the State's references to the contamination. The WaWa response to Parker was: "Do we test for this and if not, should we not do so?"

WaWa did conduct its own tests, but its reaction could not be determined because the Commission could not subpoena the corporation's out-of-State officers. However, according to WaWa records, Parker indicated in 1979 that WaWa's internal concern about the consequences of the arsenic pollution of the lake had not abated. On August 7, 1979, Parker wrote a corporate memo on the subject for general distribution:

As to the matter of the arsenic pollution, I have been in contact with Cumberland County Public Health Coordinator, who reported his department is monitoring the situation closely. If the situation worsens, we will be advised. At the present time, Union Lake water quality is safe for recreational purposes.

In December, 1981, when the Union Lake negotiations were approaching a sale agreement, WaWa again was alerted to the arsenic situation—this time by the federal Environmental Protection Agency. The EPA wrote the corporation in connection with its later abandoned hydroelectric project:

... we are aware that there are high levels of arsenic in Union Lake. Your application should assess the potential for arsenic contamination to be extended farther downstream in the Maurice River than now occurs. We are concerned that the location of the tailrace downstream of the existing lake outlet may result in less dilution, and thus, higher concentrations of arsenic reaching the oyster and hard clam seed beds in the Port Elizabeth area. Also, any sediments dredged from the tailrace area should be tested for arsenic, and if present in high concentrations, they should be disposed of accordingly.

Again, because WaWa officials avoided the SCI, the corporation's reaction to this federal

alert on arsenic contamination is not presently known.

Who Knew What About Arsenic

As the chief negotiator—in fact, the only one—for the State's acquisition of Union Lake, Green Acres Administrator Hubert's outlook on the basic issues was decisive. Therefore, since he early-on dismissed the condition of the dam as a key element in the deal, that issue never fully surfaced. Similarly, he accepted without question at the outset reports that arsenic contamination of the lake was harmless to humans or wildlife and had no significance in the negotiations. Unfortunately, he was mistaken on both issues. Since he had failed to assemble a Green Acres team with which to work, he deprived himself of any check-and-balance judgments on various elements of the deal. It is doubtful, however, whether this would have caused him to regard the two issues he had cast aside any differently. According to his testimony at the SCI, arsenic contamination was at most a non-issue. Questioned by SCI Counsel Hoekje, Hubert told how he regarded the arsenic peril at the outset:

Q. I would like to ask you whether you recall, at the time that you entered into the negotiations for Union Lake, being aware of possible arsenic pollution of the lake?

A. I was advised that the arsenic, if any, which occurred at the bottom of the lake, was of absolutely no threat to health or life. And the fact that I saw the City of Millville maintain the swimming facility on that lake, the fact that the lake was used for boating and fishing and other water activities tended to corroborate that. That issue, I don't believe, ever came up more than once during the entire period of time, I hesitate to say summarily but it was dismissed after consideration...

Q. When you say it really only came up once during the entire process, what are you referring to?

A. Meaning that it was not an issue like the dam which was a recurring issue. It was something that was brought up, was considered, a recommendation was made and it never came up again.

Hubert was also asked whether he ever discussed the arsenic issue with the sellers:

Q. *Do you recall whether the sellers were aware of the arsenic in Union Lake?*

A. No, I don't recall.

Q. *Was the arsenic ever a subject of discussion between you and the sellers?*

A. I don't recall.

Hubert was asked to explain a memorandum dated September 19, 1979, in which he wrote, referring to newspaper reporters, "they are trying to tie the purchase of Union Lake with the presence of arsenic":

A. The one thing it tells me is that the issue of arsenic was brought up very early in the acquisition process and that [it] was put to bed as a result of information given to me from within the Department.

Q. *Do you know what you meant by writing "they are trying to tie the purchase of Union Lake with the presence of arsenic?"*

A. I suppose I meant that they are suggesting that there was arsenic in the lake and that it should be considered before it was acquired, which, of course, it was considered.

Hubert was asked whether problems of a potential clean-up of the poison ever figured in the negotiations:

Q. *Was the possibility of potential clean-up problems involving the arsenic ever a consideration?*

A. It never came up. Once the matter—once the issue of arsenic on the bottom of the lake was dismissed, then no related issues concerning arsenic were ever brought to my attention.

Q. *Do you recall at what point in the transaction the issue of arsenic was brought up or dismissed?*

A. No. I am sure it was early, but I don't know. I don't know if it was in the first five percent of the time or ten or twenty-five or first fifty percent but it must have been early in the negotiations or deliberations.

On the subject of his superiors' knowledge, of the contamination hazard, Hubert testified:

Q. *Did you ever have a discussion with any of your superiors about the arsenic situation?*

A. The arsenic, the issue of arsenic was made aware to at least the deputy commissioner or assistant commissioner. I can't say whether I ever spoke to Commissioner English or any other commissioner about it, but I know it was something that was discussed at the commissioner level.

Even though the arsenic issue was quickly discarded, Green Acres did receive notification in the spring of 1982 about potential complications posed by the settling of the poison in the lake bottom sediment. Thomas Belton, DEP's scientific specialist, testified about a telephone call he made on the subject to Green Acres:

I called someone from the Green Acres program and informed someone at the Green Acres program about the study that had taken place in Union Lake and the Maurice River and the fact that the system had a lot of arsenic in it and that they probably should take that into consideration prior to their purchase.

Belton testified at the SCI that his call was "subsequent to or contemporaneous with" a telephone call to the DFG referenced in a January 11, 1982, memorandum to the DFG file. This memo noted that Belton had expressed concern over the contamination problem in Union Lake and had requested that his OSR office be contacted in any review process for a permit for lowering the lake level. Belton recalled that at this point he had "started to pick up through the grapevine that the Department was buying this lake," as it soon did in mid-1982.

Belton testified about the reaction to his telephone call to Green Acres:

And the response that I received from the person that I spoke to was that the purchase of the lake was going forward rather quickly and that, in fact, they were within two to three weeks of signing the final papers on the purchase of the property and I told them at the time, "I understand that, but I think you should take into consideration that this

arsenic in the system may create some managerial problems down the road, especially if the Department wants to use it as a wildlife management area." At that time I informed my boss of the conversation which I had . . . and left it at that.

Q. Do you recall who you spoke to at Green Acres?

A. No, I do not, I do not.

Q. Did you ever hear anything more with respect to your concerns?

A. The next time I realized anything having to do with Union Lake was when one of our field projects was posted as a wildlife refuge, the deal must have gone through. . . .

Hubert was asked if he had ever spoken to Belton:

Q. Mr. Belton says that some time in the winter of 1982, he made a telephone call to the Green Acres program and spoke with someone who is a male but is otherwise unidentified and advised that person of studies of arsenic that had been done on Union Lake and the existence of arsenic and wanted to make Green Acres aware that there might be potential managerial problems involved with potential problems with the arsenic. My question to you is, if that, in fact, did happen, do you have any recollection of having this phone call?

A. No.

Q. Do you have any recollection of anyone—if, in fact, the phone call was made to anyone else, did anyone bring it to your attention?

A. Not that I can recall.

Others involved in the acquisition tried to recall the extent of their awareness of possible arsenic pollution.

For instance, fisheries chief Pyle:

Since nothing terribly detrimental was found [in prior fish studies of which Pyle was aware], we felt at the time of the Union Lake acquisition, and based upon other information that we had on the fish population

in Union Lake, that it was not causing any problem to the fish population.

And planning chief Stokes:

Q. Was there any consideration by your committee of any possible arsenic pollution of Union Lake?

A. No. I do not recall that ever being brought up.

Dam Safety Section's Moyle:

Q. Did you ever have any knowledge regarding any arsenic pollution of Union Lake, and if you did, at what point did you have that knowledge?

A. I think I was informed that there was an arsenic problem maybe a year ago, a year and a couple months.

The chief of State land acquisitions, Donlon, knew even less than Hubert knew:

Q. That's your knowledge from [what] you see now in the files?

A. Yes, that's correct. But at the time, I didn't know that he was aware of any arsenic contamination.

CHAIRMAN PATTERSON: Back in '79, '80, do you have any knowledge as to how the dam was to be repaired? Do you think that they put the arsenic problem and the dam problem together?

THE WITNESS: No. I don't think so at all.

CHAIRMAN PATTERSON: Did you know that's one of the reasons why the dam costs so much to repair?

THE WITNESS: I know that now. I frankly never had heard of the arsenic problem. I am aware from reading the files now that other people within the Department were aware of the arsenic problem.

CHAIRMAN PATTERSON: But you weren't?

THE WITNESS: I was not aware of the arsenic problem.

CHAIRMAN PATTERSON: You weren't aware of the arsenic problem until long after the property was acquired?

THE WITNESS: I wasn't aware of the arsenic problem until the investigation started.

Appraiser Jon Brody said knowledge about the extent of arsenic contamination would have affected the valuation of the Union Lake tract:

Q. *At the time you performed this appraisal of the Union Lake property, did you receive any information regarding the presence of arsenic in the water?*

A. No, we did not.

Q. *Would such information be relevant to an appraisal?*

A. Yes.

Q. *And to what degree?*

A. If there was arsenic in the lake, and, again, back in 1981, I'm not sure if the same environmental impact statements were required for potential development and if the State of New Jersey had the same type of criteria that it has today, but I think it would be incumbent upon the appraiser to analyze the impact on the development of the area, particularly the water system for the homes through wells, septic systems, which to me would be the greater impact of the carcinogenic or the arsenic or whatever happened to be in the water. You could prevent people from going into the water and putting up signs, but at the same time the water to me would potentially penetrate wells in the area which would have a potential effect on potential development.

Fish and Game Director Cookingham knew surprisingly little about a poison so threatening to his division's wildlife concerns:

CHAIRMAN PATTERSON: Were you aware at this time that there was arsenic in the lake?

THE WITNESS: At that time we were not—Office of Science and Research was doing the studies on this and other contaminants. To the best of my knowledge there was very little contact between that office and our office in Green Acres over the arsenic issue. If it was, it was through my Fisheries people and their people. But that at that time did not appear to be a major problem.

CHAIRMAN PATTERSON: So you didn't know about the arsenic?

THE WITNESS: We were aware that Vineland Chemical was on the lake, that there [were] pollution problems. There [were] also major problems with the sewage system for the town up there that we were dealing with. We spent a lot of time working on the spray irrigation project . . . There were other issues that we were involved in at that time.

CHAIRMAN PATTERSON: . . . I'm sure you realize now that if the dam had breached in any way and if the arsenic had gone downstream it would have been a catastrophe for the shellfishing down below.

THE WITNESS: . . . We didn't even think about the dam going out, but my understanding still is that arsenic is tied up in the bottom sediments and is not in solution in the water itself, so any flow of the water in or out of the lake, to the best of my knowledge, would not have impact on fish or shellfish resources.

CHAIRMAN PATTERSON: So you really didn't know much about the arsenic problem at the time the property was acquired.

THE WITNESS: In fact, I don't think the information that Science and Research had on the issue had been communicated with the Natural Resources section of our Department. I don't think it had. I may be wrong.

Arnold Schiffman, then DEP's Water Resources Division director, felt he should have been more aware of the arsenic threat and more reactive to it:

Q. *Were you aware of possible arsenic pollution of the lake at the acquisition time?*

A. No, although since I'm responsible for that activity still, I have a nagging feeling that I should have been, although if I was, I certainly would have done something about it. I might have been aware of the Vineland Chemical. I was aware that Vineland Chemical—the exact contiguous nature of Vineland Chemical and this particular activity I'm not sure of, but I certainly was aware of Vineland Chemical. We had substantial

problems with them and we had issued them an administrative order to do remediations, and they were a troublesome facility. I have no recollection of a connection between that and Union Lake. We were more concerned about the immediate ground water pollution problem in the area. That's my recollection of that. The ground water pollution was the major issue.

CHAIRMAN PATTERSON: Did I understand you to say if you had known about the arsenic in the lake you would have done something about it?

THE WITNESS: I would have paid more attention to it.

CHAIRMAN PATTERSON: Can you be more specific as to what you might have done?

THE WITNESS: I would have been much more concerned about the continued operation of Vineland Chemical.

CHAIRMAN PATTERSON: But not about the acquisition of the lake?

THE WITNESS: I might not have made the connection. It's hard to tell. It depends what was going on at the time. The more likely connection would have been from Vineland Chemical to the stream. From the stream, to the dam, to the lake would be another leap, although there may have been data available at the time that would show that. I'm not sure.

CHAIRMAN PATTERSON: There was available data. The problem was, as it happened in a lot of this, a person over here had some information and a person over there had some and the communication between the two was not that good.

THE WITNESS: The level of concern, whether it would have related to the property, may or may not have. I have experience in other situations and other states with heavy metals and toxics in reservoirs and I might have had more of a concern over fish than remediation.

CHAIRMAN PATTERSON: And if you inquired about the fish, they would have told you, as is a fact, that the arsenic level in the fish was

not unusually dangerous and posed no problem. Apparently, the only problem that the arsenic poses in this present day is it makes the repair of the dam that much more expensive because you can't de-water the lake.

Updating the Vichem Pollution Case

Schiffman, whose DWR was heavily concerned, of course, about water pollution, was asked to update the status of the State's efforts to force Vineland Chemical to cease poisoning the rivers feeding Union Lake:

Q. What's the present status of the Vineland Chemical enforcement actions?

A. At the present time I've revoked what amounts to their discharge permit and their RCRA [Resource Conservation and Recovery Act] authorization. They are appealing that. That was a recent action. From a practical standpoint that means the facility cannot operate without those approvals.

CHAIRMAN PATTERSON: So from a practical point of view they've been shut down?

THE WITNESS: From a practical point of view they've been told that they can't operate.

CHAIRMAN PATTERSON: But they are not operating?

THE WITNESS: I believe that they are still operating. I've taken the action to revoke their appeal.

Q. Why did it take them so long to get anything done about the pollution?

A. That's not quite the proper [question]. The proper question would be why did it take so long to get something properly done. There were things that were being done. They turned out to be inadequate. And as the evaluation process went forward, the inadequacies revealed themselves. They were doing remediation. After a review of that remediation it turned out to be not only inadequate but inappropriate. So to say that nothing was being done is incorrect. To say that enough was not being done is correct.

Questionable DEP Procedures

Green Acres Administrator Hubert contended throughout his testimony at the SCI that he kept his superiors informed on the Union Lake negotiations, although he remained hazy about how fully he reported on issues that he himself had dismissed as negotiation factors, such as the condition of the dam and the arsenic contamination. His appointment calendars confirm an array of meetings with DEP's commissioners and assistant commissioners, but there is no indication of the frequency with which Union Lake might have been an agenda item, if ever. Indeed, in their discussions with the SCI, those Commissioners who were in office during the period when the negotiations took place could recall relatively few specifics of the Union Lake transaction.

Staff personnel in the Divisions of Water Resources and Fish and Game and of Green Acres knew that WaWa had engaged an engineer to study and report on the dam and had ample opportunity to bring this information to their superiors' attention. The apparent failure to do so is regrettable. If Hubert is correct in his claim that he did bring vital information to his superiors' attention, then it was gross misjudgment by top management not to obtain the O'Brien & Gere report before signing the purchase agreement. Even more inappropriate than DEP's failure to obtain the WaWa report, however, was the Department's decision not to conduct its own technical evaluation of the condition of the dam. It is impossible from the records available to the SCI to determine what Hubert's superiors did and did not know, and what significance was attached to whatever they knew. It is clear that in any event no coordination occurred between or among the various DEP divisions and Green Acres and that there was no upper level supervisory effort to ensure such coordination. The Department, furthermore, failed to put into useful perspective whatever existing data it possessed.

The lack of continuity on the part of key executive staff has been recognized and addressed by the Department since this transaction. Donald Graham, then DEP's assistant commissioner for natural resources, testified about his perception of current management conditions within DEP:

We have at the present time excellent program managers that we have recruited professionally. That's one of the things, key things in the department that I think we have done over the years is try to professionalize the department. Bob Hughey made that his number one highest priority in professionalizing this department to try and keep people in the profession, to try and rid it of whatever partisanship there may have been.

At the time of the negotiations, according to Graham, departmental coordination and communication between various DEP entities was minimal. For example, he was asked by Counsel Hoekje about Hubert's failure to bring fisheries chief Pyle's vital memo—raising ominous questions about the lack of a study of potential problems with the Union Lake dam—to the attention of his superiors.

Q. My question to you is if the administrator of Green Acres receives a memorandum that sets forth the kind of information that I have just read, in your opinion, and based upon your experience in your former position, does the administrator at that point have the discretion to decide whether or not he should bring that information to his superiors' attention?

A. If that reached me, I don't know who was copied on that, if I was copied on that or I had knowledge of that, it would be a flag that would be waved that you stop at that threshold until we get something that would be germane to the acquisition. I mean I would certainly, if I received that question, if that were the case, he would not, in my opinion, be given the authorization to proceed without a discussion at a higher level on that. That's how I would have operated.

It should have been made known to the assistant director at that time that you are reaching a critical point here and we have certain questions on non-Green Acres dollars problems. At that point in time it should have been flagged to someone. It was flagged to a division director and I think that goes to the inadequacy of the system in place at the time when I was there.

Role of Fish and Game Division

Fish and Game Director Cookingham, whose division was initially extremely active in promoting Union Lake as a Green Acres acquisition, testified in a peculiarly ambivalent manner about his unit's involvement:

Q. *What was the role of the Division of Fish and Game during the time that Green Acres was actually negotiating with the owners for the property?*

A. At that time we, to the best of my knowledge, we were not involved in negotiations, only when we were asked to be.

Q. *Asked by whom?*

A. By Curt Hubert who was the director of Green Acres. Their responsibility was to administer the Green Acres Program, which included the appraisals, the negotiations, and basically that's still the case. We don't negotiate. If they ask us we become involved, but it's rarely that we do.

Because his division did not engage in any negotiating, Cookingham apparently believed it had no obligation to respond to any issues that might arise—unless specifically asked. As he testified:

Q. *At the time of the acquisition did you have an opinion about the role of the Division of Fish and Game in pursuing information about the dam?*

A. Well, number one, I wasn't really, to the best of my knowledge, I wasn't consulted. We let Green Acres know what our concern was, but, as I say, we were not a part of the negotiation process per se, except when we were called on to do comments specifically on some phase of it, like boundary lines, et cetera, et cetera.

Q. *Do you think the Division of Fish and Game had any responsibility to do its own research on the [condition] of the dam?*

A. We probably, you know, certainly if we were the negotiating agency, we were going to buy it under state Fish and Game funds, monies we were directly responsible [for]

and assuming we probably had a federal aid project, if it was that type of project, yes, we would utilize either consultant engineers or engineers that would belong to us from the Fish and Wildlife Service, another agency.

Q. *Do you see [that] the division has any responsibility to do its own research on the condition of the property?*

A. Are you talking about physical—yes, sure.

Cookingham could recall discussing the dam "a number of times," adding, "I can't remember any one time, but I know we talked about it." (Hubert, however, had insisted in his SCI testimony: "The dam's condition was probably discussed with Fish and Game on a number of occasions as well. The essence of the conversation[s] being, is the dam safe, yes, here is a report saying that it is, what about operating the dam, you are going to have to go to the owners to learn about that, sure, it was discussed. . .").

Fisheries chief Pyle, who warned about the condition of Union Lake's dam to Hubert just weeks before the contract was finally signed, testified that a copy of the Phase One report was available within his division.

Green Acres Engineering

One of the disturbing questions about the negotiation process was why, since such surveys were vital to the State's posture as the prospective buyer, the DEP failed to obtain engineering and other expert studies of potential problems at Union Lake. The Green Acres statutes explicitly empower the DEP commissioner to employ "engineering, inspection, legal, financial, geological, hydrological and other professional services, estimates and advice. . ." Indeed, the law states the commissioner "may do all things necessary or useful and convenient in connection with the acquisition of lands by the State. . ."

Former Chief Appraisal Reviewer Bogdan was asked about use of an engineer in the appraisal stage of a Green Acres purchase:

Q. *Is there a provision at Green Acres in the appraisal process for calling in a specialist or an engineer?*

A. The determination of an additional opinion,

every additional technical opinion would have to come from either the chief of land acquisition or from the administrator.

Q. *At what stage in the process would that opinion be called for?*

A. Basically, from the outset.

Bogdan had noted that the employment of a technical consultant would have to be decided by either the Green Acres administrator or the land acquisition chief. The latter, Jeanne Donlon, explained why she was powerless to call in an engineering consultant at a time when her boss, the administrator, was operating in the field as the chief negotiator.

CHAIRMAN PATTERSON: It's your responsibility today?

THE WITNESS: Yes.

CHAIRMAN PATTERSON: But back in [the] Union Lake [period], you were, in effect overruled?

THE WITNESS: That's absolutely correct.

CHAIRMAN PATTERSON: By your superior taking over the job?

THE WITNESS: When I came to the job, that was not the only project that he was in charge of. As I said, he enjoyed doing that, saw it as part of his job and thought he was good at it. I think he was.

By Counsel Hoekje:

Q. *To return to the present, you think it would be your job to identify it?*

A. I believe it would. Certainly the division suggesting acquisition could make that recommendation too, so it could come from the division making the recommendation for purchase, but I consider that presently it would be my responsibility to see that all factors in the acquisition process be investigated, unless I am overruled by someone in a superior position, obviously.

Q. *Where, in the acquisition process, would you see such a determination?*

A. In the evaluative stage. For instance, in the

early time when appraisals were being done, I would consider it at that time.

Q. *Was the possible cost of doing an engineering inspection of the Union Lake dam at all a factor to Mr. Hubert?*

A. No, I don't believe so. I think he believed that a reputable firm had done a report and that, you know, it [the dam] was not a hazard.

As to the responsibility of the receiving division, Donlon testified:

Q. *In your opinion, does the receiving division have any responsibility to identify issues such as the condition of any structures on the property?*

A. Certainly, they have a responsibility, but that's not to say we don't have the responsibility too.

The SCI's expert, Dr. Esrig, testified about the cost of obtaining engineering advice relative to the value of it:

Q. *Are we talking about a costly proposition?*

A. If you measure it against a million or \$2 million for repairs, my opinion is no, we are not talking about a costly proposition.

CHAIRMAN PATTERSON: If you measure it against the possibility that the dam might break or somehow fail, it's almost nothing, in comparison to the liability that then could occur?

THE WITNESS: That's correct.

Bogdan, himself a former chief review appraiser at Green Acres, was questioned about the procedure the State would follow for the assessment of a dam that might be unstable:

COMMISSIONER PATTERSON: I am just wondering in my own mind, assuming that the dam was not in that good shape, how would the State find out that the dam was not in good shape and what if they did find out, what would the State do about it? Because to me, if the State bought the property, as they did, and the dam burst the next day, the State would have bought it, it would have been a bad deal, however you want to put

it. I am just wondering what procedure, if any, was in place or should be in place to make sure that that could not happen.

THE WITNESS: When the order came down, when the administrative order came down, to the best of my recollection, there was a request to have an appraisal made and establish a fair market value. There were no additional requests to specify whether the dam should be valued separately, whether the water should be valued separately, whether the land should be valued separately, just a request to value the property for negotiating purposes to arrive at an amicable agreement.

If, in the event that there were additional instructions insofar as valuing the dam separately, if someone was aware that the dam was faulty, then, of course, a separate opinion would be requested in order to value that dam in its current condition. The appraiser does not have that type of expertise and he would not have been able to do so.

Soliciting Data Within DEP

Donlon was asked whether any formal mechanism existed for solicitation of information from and within various divisions of the Department:

... One would have to do it on a case-by-case basis. You would have to contact the division to ask for the information that they had available on the dam. I mean I can't think how you would know that they would have such a report unless when you ask them about the condition of the dam they said we have a report here, a complete report in the file and here is a copy for your information.

Q. *So in other words, you would, at Green Acres, have to identify a potential source of information?*

A. That's right.

Belton was asked whether there are any procedures for soliciting information from his own Office of Science and Research:

Q. *Are you aware of whether there is any for-*

mal procedure within the Department at the present that would pick up from the Office of Science and Research studies such as exist in the arsenic situation?

A. No. There was no formal process then and there is no formal process now because we were essentially in a problem solving mode with one division—two divisions. . .

John Moyle of DWR's Dam Safety Section testified about obtaining information from his section:

Q. *At the time, talking about 1978 to 1982, when the Green Acres acquisition of Union Lake took place, was there any formal procedure [for] requesting information from the Dam Safety Section about the condition of a dam that had been inspected?*

A. No. If somebody wanted some information on a particular dam, they would telephone; a call or memo would be transferred right back to our section, unless it was directed specifically to the bureau chief, and then we would handle it as needed.

Q. *For all State properties that have dams, is there any formal procedure whereby someone asking for information about a dam can get it from your section?*

A. I don't think there is a formal procedure set up.

Arsenic Would Be Studied Today

Donlon said the State has a relatively new "disposal site" review process that would require a more deliberate assessment of Union Lake's arsenic contamination than occurred when the tract was acquired. The procedure resulted apparently from what many witnesses characterized as an increased environmental awareness by public officials and by the public. She and SCI Counsel Hoekje discussed this in connection with the arsenic issue:

Q. *Would the arsenic be picked up by any procedures that you have?*

A. I would think so, yes.

Q. *Is the procedure that you talked about*

earlier, the form that you send around for disposal site review, is that something that, in your opinion, would pick up the existence of the data?

A. Yes, it should.

Q. How would you evaluate that sort of situation?

A. Well, we would certainly not rely on our own expertise . . . I think today the Federal Government, being involved in the grant procedure, also would evaluate the safety of it as far as its participation in the grant process is. We would call in other experts to make the decision of whether it's safe too, but, of course, whether it's safe to us for acquiring is part of a larger issue because, regardless of ownership, the people fishing there every day, if the State had never acquired it, there were people swimming every day as they still are. So if it were hazardous for the State to have owned it, it certainly would be hazardous, regardless of who owned it, and something should be done about the arsenic situation, if indeed that needs doing. I am not so sure that the ownership is the ultimate question.

Donlon described how prospective Green Acres land purchases are evaluated to determine if they are contaminated by toxic matter:

Prior to acquisition, we send out to specifically named persons in the policy and procedure who are directors of specific bureaus, divisions, et cetera, to evaluate whether they are aware of any dump sites, hazardous sites, water pollution problems, et cetera, in the area. These notifications go to [divisions for] hazardous waste management, solid waste, environmental quality and water resources to ask their evaluation of the site.

Donlon identified the form that Green Acres circulates:

[A] memorandum is sent to those named persons to determine if land to be purchased may have been a disposal site. Actually their information that they supply includes . . . for instance, water quality, water pollution in the area, that sort of thing.

Q. At what point do you send this form out?

A. When we begin a project.

Arnold Schiffman testified that arsenic contamination at Union Lake would certainly be detected today:

Q. Are you aware of any current procedures within the department that would pick up the existence of arsenic in a proposed acquisition?

A. There's extensive procedures now to check all of these things, different things with State purchases near landfills, for example, and there's fairly extensive procedures that have been implemented. I know [the Division of] Purchase and Property has them. I sign off on them routinely. I would suggest that the probability of this circumstance occurring today is just about zero, without anybody picking it up.

The procedure now in use and referred to by Donlon, aimed at "determining if land may have been a disposal site before purchase by DEP," defines a disposal site as "land that has been used for dumping solid or liquid wastes". The procedure calls for the receiving divisions to conduct an on-site investigation and review their records, and make recommendations for further studies as well as any "precautionary advice". The reviewing agency must identify the type of waste potentially deposited at the site and determine if the land in question is within a mile of an active or abandoned site. As a practical matter, however, this procedure—and the form currently in use by Green Acres—does not technically require the identification of a Union Lake situation, even though Donlon was confident that in practice it would.

Role of the Priority Ranking System

Planning chief Stokes and Donlon discussed the role of the priority ranking system in addressing the condition of the property. According to Stokes:

Q. Where do you view the priority system in the state acquisition process?

A. It's a tool for objectively evaluating the relative merits of projects and to begin to arrive

at a priority list. There are other factors that are beyond the scope of the priority system to deal with that and have to also enter into the final prior utilization. One would be the land cost. What we do in this priority system is try to add to that to some degree, but it's very hard to judge where you are comparing values ranking from a quarter of a million or a hundred thousand dollars an acre to values that are maybe a couple hundred dollars an acre of wetlands.

As for assessing the condition of the property, Stokes's testimony continued:

Q. *Do you have an opinion as to where, in the acquisition process, the condition of the property should be addressed?*

A. I think at all levels that should be a concern. The priority system, it should be a concern at that level as information permits. You have to understand that there [are] 50 to 100 projects that are evaluated under the system. It is at a very preliminary stage, so much of the more detailed information that would be necessary to evaluate the condition, let's say, of a dam, a roadway, may not and cannot be available at that stage. I think questions of that nature should be very predominantly displayed through the various stages of that acquisition process so that they are answered, but at this stage, I don't think it's possible to answer every conceivable question about a project.

Donlon also testified on the subject of what a ranking procedure should include:

Q. *In your opinion, is the condition of the property an issue that should be addressed during the ranking system?*

A. Right. If it's feasible to do so. In other words, one couldn't spend any money to do it, because one is not authorized to spend any money on a project until there is an administrative authorization which allows the expenditure of funds for a particular project, so that the ranking system and the submissions for ranking are the product of the agency that is interested in the acquisition and they do submit backup material to a feasible, reasonable extent.

I don't see the ranking system as mandating the acquisition if other factors arise which you have later knowledge of.

Union Lake in Retrospect

Questioning of certain witnesses during the final stage of the SCI's inquiry focused on current conditions at Union Lake and on what a negotiation process more sensitive to omens of trouble might have pursued.

Dam Repair Plans

James G. Ton, director of the Department of Treasury's Division of Building and Construction, described the State's current repair plans, which are proceeding according to findings and recommendations made in an engineering report by PRC Engineering Co. of Iselin. This report was submitted in February, 1986. Ton testified that the reconstruction would take place in two stages. The first stage, which began in the spring of 1987, involves building a temporary cofferdam around part of the existing concrete spillway, building an auxiliary spillway, and partially breaching (cutting a hole in) the spillway. The second stage, to begin in 1988, will consist of building a new spillway about twice as long as the existing one.

Because of the accumulation of arsenic in Union Lake's sediments, the dam repair program could not include draining of the lake. Although this decision drastically increased the cost of the project, it was essential not to expose all 800 acres of arsenic contaminated lake bottom to the environment. Instead, the plan called for a 10-foot drop in the normal water level, lowering the lake from 26 feet to 16 feet. Even so, an estimated 300 acres of poisoned soil on the reduced periphery of the lake will be exposed, posing an ominous pollution threat in the area.

Ton also testified that the need to retain a protective shield of water in the lake during the course of repairing its dam added "close to four and a half million dollars" to the total repair cost (for which, as noted, \$15 million was appropriated by the Legislature).

Other testimony at the SCI also discussed the adverse impact of the arsenic contamination on

the dam repair program. For example, Thomas Belton, the DEP scientist, described concerns he had expressed within the Department about leaving arsenic contaminated sediments exposed during the dam repair.

My concerns were twofold, one [of] which was direct exposure, people who would walk across the exposed sediments. Also the issue I mentioned earlier, which was weathering, is that the exposed sediments tend to become very fine dust and are very accessible to being blown about and creating an air problem, so it would be a two-fold exposure.

Despite such concerns, Belton expressed overall confidence in the repair plans:

CHAIRMAN PATTERSON: Is it your opinion that the procedure being used by the State to solve the problem of the dam, and really the dam is the problem and the arsenic makes the solution of the dam problem a difficult part, is being carried out in such a way that the public is being protected?

THE WITNESS: Yes, yes. I agree. The issue here is the dam and that's the imminent threat and at no time did we want to really stop the dam work from going forward, we wanted it to be handled in a responsible fashion so that contingencies would be available for all of the potential threats as they arise.

CHAIRMAN PATTERSON: It is being handled in a responsible fashion?

THE WITNESS: I think it is being handled quite responsibly.

Health Risk Problems

In order to assure containment of any risks that might be posed during the reconstruction of the dam, the DEP in July, 1987, imposed a prohibition on any recreational use of Union Lake. This edict was issued in cooperation with Cumberland County health officials, as a "protective measure to ensure that public health will not

be threatened as a result of the lowering" of the water level during the dam repair. Nonetheless, because of contaminated soil that must be exposed, workers repairing the dam are being required to wear protective boots and gloves and to eat their lunches some distance away.

The DEP, in a "Union Lake Health Risk Assessment" dated July 8, 1987, concluded that, due to exposure of sediments on the lake's bottom as a result of the current draw-down, there was an increased potential for immediate and long-term human health hazards. The assessment recommended that while the lake's water level remained lowered, the potential health hazards from recreational use under normal water levels should be re-evaluated. The study noted:

1. Human exposure to the sediments poses the greatest potential for long-term and immediate health hazards.
2. It is possible that levels of arsenic may exist in Union Lake sediments that could substantially increase a person's chances of having long-term health effects, such as cancer. (This assumes exposure through ingestion and skin contact during a 34-day swimming season for 70 years.) The risk of cancer thereby is from 7 to 50 in 10,000.

The study also reported that the daily dose that a child could receive through inhalation and ingestion (one teaspoonful) would fall within the lake area's known range of short-term and long-term health hazards. The study also found that in some areas the lake sediment contamination reached 1,000 parts per million (ppm), with an average of about 160 ppm. The DEP standard that would prompt a clean-up of arsenic-tainted soil is 20 ppm. Arsenic levels of .24 ppm were found in the tissue of pickerel and .22 in catfish taken from the lake, but this is acceptable by federal standards. At the federal level, the Environmental Protection Agency is conducting an investigation for a projected remedial clean-up of the Vichem arsenic emissions site, but this study will not be completed until sometime in 1988.

Conclusions and Recommendations

Introduction

Certain of the Commission's investigative findings have demonstrated by their conclusionary nature where corrective steps should be taken by the DEP to smooth the path of future Green Acres negotiations and to reduce the threat of costly problems emanating from acquisitions. There can be no doubt, for example, that the Department's performance at the upper management levels was inadequate. An obvious inability to coordinate and communicate were leadership faults. Indeed, the overall failure of DEP's executive supervision was manifested in many ways:

- Failure to follow normal DEP negotiation procedures which were subverted by Green Acres Administrator Hubert's insistence on a "one-man" negotiation process.

- Failure to more closely supervise Hubert's negotiating activities, having inappropriately permitted him to deal unilaterally with WaWa.

- Failure to question Hubert's conclusions about the condition of the dam and the basis for these conclusions (assuming his superiors were informed, as he testified).

- Failure to recommend and to pursue an engineering follow-up of WaWa's studies of the dam.

- Failure to exchange and collate all information and available data in the Division of Water Resources, the division's research office and Green Acres, particularly with reference to the dam and to the arsenic contamination.

- Failure to ensure that incoming staff executives were adequately briefed on all aspects of the transaction.

- Failure to envision and consider potential management difficulties entailed by a "high hazard" dam and the ongoing arsenic contamination.

It must be conceded, in connection with mismanagement at the executive level, that the conduct of Green Acres Administrator Hubert in making the negotiation process a one-man performance was particularly detrimental to the pro-

gram's integrity. His failure to enlist the assistance and advice of others within the DEP who were more knowledgeable about certain technical issues resulted in premature and faulty judgments about the Union Lake dam and arsenic pollution based on inadequate and misleading data. Particularly harmful was this negotiator's unquestioning reliance on Water Resources Director Schiffman's one-page assessment of the Phase One report, itself an out-of-context misrepresentation of the report, as the basis for an unyielding insistence that the deal be consummated forthwith, without further reflection on problems that had actually never been fully resolved.

While the Department knew that WaWa was pursuing its own investigative study of the dam, its Division of Water Resources never fully determined the scope of the study and mistakenly failed to verify whether it was to be a complete follow-up of the Phase One report. The Department, of course, committed a grievous error in not aggressively pursuing WaWa's O'Brien & Gere report when it was completed.

WaWa deliberately withheld that report from the State even though the engineering studies on which it was based were completed in 1980 before the State's appraisals were even assigned and almost two years before the contractual agreement by the State to buy the tract. The O'Brien & Gere report contained material information not only about the condition of the embankment of the dam but also the history of the construction of the dam which confirmed that the stability of the spillway was questionable. WaWa representatives knew as early as the spring of 1980 that their report did not include an analysis of the spillway stability and that such an analysis had been recommended by its engineering firm. At no time did WaWa inform either the Dam Safety Section or Green Acres that its study was not a complete follow-up. Nor did WaWa provide DEP with its report until one year after the sale of Union Lake to the State.

So far as the arsenic contamination of Union Lake was concerned, the Department possessed voluminous information about both the Vineland Chemical litigation and arsenic testing results but did not utilize this data in any way in the negotiation process. Since Green Acres—and subse-

quently the Division of Fish and Game—had no control over the polluting source, more consideration and discussion should have occurred (and been documented) about the lake management risks associated with the poison. As to the arsenic in the lake bottom sediments, it is extremely unfortunate that Green Acres did not pay greater attention to the warning, late in the negotiation process, about the potential lake management risks associated with such contamination.

Recommendations

Procedural Reforms:

Just as the Department utilizes a checklist for evaluating the priority ranking of its proposed acquisitions, so it should maintain a checklist for problems with each acquisition. Not only should any question raised by anyone directly or indirectly involved in an acquisition be listed, and dated, but all responses to each problem question should be noted in writing on a problem-alert form. There should be a procedural mechanism within DEP that will guarantee the circulation of this problem list and initialled acknowledgement of its receipt and perusal by all managers, including particularly the commissioner and assistant or deputy commissioners. The SCI notes the existence of a real property "Review Sheet System" which the State Treasury Department's Bureau of Real Estate Management circulates among various agencies to solicit and coordinate data on land that is to be bought or sold by the State. The DEP apparently utilizes this "Review Sheet System" for review of property disposals but Green Acres maintains its own review process for acquisitions. Any refinement of DEP's land review procedures should also assure that the process will reveal the adverse impact on any land deal from sources outside the boundaries of the parcel under review (such as the arsenic contamination of Union Lake from 11 miles upriver).

Improved Record Keeping:

Minutes should be taken and filed on staff conferences within DEP, and dated documentation should be required of any consultations by executives of various units of DEP, on any matters of significance but particularly on Green Acres acquisitions.

The priority ranking system, the development of which coincided with the offer of Union Lake to the State's Green Acres Program, should be further improved to require that its various evaluations and rankings, including any re-assessments, be dated and documented.

All DEP contracts should be processed to final signatures in a specified order that will show precisely who signed what and when. In the Union Lake transaction, it has never been clear who signed various purchase authorizations and contracts, and when these papers were signed.

Improved Legal Representation:

Nowhere in the negotiation process for land acquisitions should Green Acres be without ready access to counsel, who should be kept constantly informed of any actual or potential legal snags. Particularly as a negotiation approaches a contract-signing stage, Green Acres should have an attorney close by for advice on all matters. It should be noted anew here that WaWA, which had its own staff counsel, also employed outside counsel in the sale of its land to the State, while the State never made appropriate use of available deputy attorneys general throughout the negotiation. Even the drafting of the final contract was left to WaWA's outside lawyers. All that the State lawyer for DEP did was a simple review of the sale-purchase agreement as to "form" only. Indeed, DEP and the Office of Attorney General should institute an expanded and formal legal review process for various negotiation phases and acquisition terms and conditions. This process, the Commission understands, is already in an advanced development stage.

Revise Dam Oversight Law:

The Commission urges that N.J.S.A. 58:4-3 be amended to give DEP automatic and enhanced access to information concerning New Jersey's reservoirs and dams which is available to their owners and operators. The revised law should read:

Every person (authority, county, municipality, corporation, partnership or individual) owning, maintaining, constructing, operating or having control of any reservoir or dam shall, upon written request therefor,

furnish to the commissioner or the commissioner's designee all documents, data or records concerning the reservoir or dam or its retained or released water or sediments. Such person shall, when so directed by the commissioner, cause to be made such surveys, plans, drawings, engineering studies, water studies and sediment studies as may be necessary, as determined by the commissioner, to provide sufficient information regarding the reservoir's or dam's safety. Whenever such person commissions or performs a study, survey or review of data concerning a reservoir or dam or its retained or released water or sediments, the person shall notify the commissioner or the commissioner's designee immediately in writing of the scope of such study, survey or review and its expected completion date.

Such a revision, as the proposed text demonstrates, would require the submission of the scope of any study at the time it is commissioned. DEP would be able to obtain any study deemed by it to be significant. The statute now merely refers to the transmittal of a description of a dam by its owner as full and true "as may be practicable." This law makes no reference to the owner of a dam submitting to the State or any other buyer any technical evaluation he may have obtained on the condition of a dam.

In addition, the funding and personnel of the DEP's Dam Safety Section should be increased to enable more thorough follow-up of reports of high hazard dams that represent a potential threat to life and property.

Responsibility of Private Sellers:

All Green Acres acquisitions from private sellers should be covered by State contracts that include provisions whereby all officers, agents and individuals connected with the seller, not-

withstanding that they and/or the seller be out-of-state corporations or residents, consent to accepting service of subpoenas for submission of books and records and for giving sworn testimony to the State and its subdivisions.

WaWa Should Indemnify the State:

The Commission in this report has condemned WaWa for failing to submit a timely engineering report on the Union Lake dam that it had contracted for, for withholding certain documents and for refusing to testify under oath before the SCI about its role in the transaction. The Commission believes that WaWa is obligated to share in the cost of restructuring the Union Lake dam, since it withheld data in advance of the acquisition about the instability of that dam, and is further obligated to share in the additional costs of dam repairs caused by the presence of arsenic contamination of Union Lake. The State Attorney General is urged to institute legal proceedings against WaWa immediately for indemnification of the State's post-acquisition costs for reviving Union Lake for public recreational use.

Arsenic Poison Reparation:

As with the proposal above, the Commission urges the Attorney General, and the DEP in its continuing effort to force Vineland Chemical Co. to cease and desist from further arsenic contamination of the waters feeding Union Lake, to include in any enforcement or litigation action against the company a demand for indemnification of the cost of coping with the company's arsenic emissions while repairing the Union Lake dam.

(The investigation upon which this report is based was conducted under the direction of SCI Counsel Carol L. Hoekje, assisted by Special Agent Jeanne M. Jackson).