GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332
(404) 873-4211

Nuclear and Biological
Sciences Division

February 27, 1970

U.S. Atomic Energy Commission
Washington, D. C. 20545

Attn: Division of Reactor Licensing

Reference: Docket 50-160, License No. R-97

Gentlemen:

This is to inform you of the occurence of a possible unsafe incident in the operation of the Georgia Tech Research Reactor. On February 18, 1970, at the end of the scheduled operating day the reactor was shut-down. Shim blade No. 2 did not drop into the core; instead, it re-mained at its operating position of 25 degrees. The remaining 3 shim blades were inserted normally and the reactor shut down. The reactor was considered "not operable" and an immediate investigation began to determine the cause of the stuck blade.

The investigation showed the cause of the sticking to be in the shim drive mechanism located on the outer face of the reactor biological shield. It was demonstrated that no interference exists between shim blade 2 and any fuel or other core components. Several attempts were made to duplicate the sticking of blade 2 as well as checks of the other blades. We found that blade 2 could be stuck consistantly but only at a position of 25 degrees $\pm \frac{1}{2}$ degree. We could not stick any other shim blade at any position. Following disassembly and testing of the drive mechanism for shim blade 2, we believe that the specific cause was a misalignment or "cocking" of the upper race of the thrust bearing. When the upper race is cocked on the drive shaft, a binding of the drive mechanism occurs. At a blade position of 25 degrees, this binding is a maximum. If the bearing race was intentionally cocked by wedging a piece of metal behind it and the drive mechanism assembled, shim blade 2 would stick at 25 degrees. With the metal wedge removed, the shim blade would not stick.

The cause of the cocking of the race was a loose fit of the race on the drive shaft. A repair was made by machining the drive shaft and press-fitting a sleeve back onto the shaft. The upper race was then press-fitted over the sleeve. Examination of the upper race on the other shim drive mechanisms showed them all to be tightly press-fitted to the drive shaft.

When the repaired upper race was re-assembled, the mechanism still retained a tightness not exhibited in the other three shim drive mechanisms. Further investigation revealed that some bearing misalignment existed within the trunion support box of the mechanism. (The trunion support box contains the thrust bearing, flexible coupling, radial needle bearing, trunion bearings and trunion cup). We believe that this misalignment could, over a period of time, cause the drive shaft wear which ultimately resulted in the upper race becoming cocked on the drive shaft. By relocating the trunions slightly, the bearing misalignment was corrected. The entire mechanism then operated in an extremely smooth manner with no indication of binding.

On February 27, 1970, the drive mechanism for shim blade 2 was reinstalled in the reactor. Following verification of its performance, the reactor will be started up.

The above matters were discussed with the USAEC office in Atlanta on February 19, 20 and 24, 1970. Additionally, the matter was discussed with the Nuclear Safeguards Committee at its regular meeting on February 25, 1970.

We believe that the problem has been resolved satisfactorily. We have modified our maintenance procedures such that the upper race of the thrust bearing is carefully examined during the regular scheduled maintenance work on the drive mechanisms. Should any information subsequently develop to significantly change the above conclusions, we will advise you.

Sincerely yours,

Robert S. Kirkland

Robert S. Kirkland
Reactor Supervisor

cc: Nuclear Safeguards Committee
John G. Davis, USAEC, Compliance Div.
Atlanta(2)

INDUSTRIAL DEVELOPMENT COUNCIL 4/13/1937 founded Inc!
2/9/46

BECAME GEORGIA TECH RESEARCH INSTITUTE (GTRI) INC.
(was Engineering Experiment Station)

4/6/84 also became 4/6/84 GEORGIA TECH RESEARCH CORPORATION

No business license
GTRI INC.

CEO: J.G. ROCHE
270 CRB GEORGIA TECH
ATLANTA GA 30332
CFO: RONALD M. BELL
SEC: R.H. TRULY
Appl. Att: P.S. ARKWRIGHT
NO ADDRESS
AGENT: RON BELL
Vice Pres: RON BELL
PRESIDENT = PRESIDENT OF GA TECH (CLOUGH) ACCORDING TO SECRETARY CALLED ERIN AND LIBRARY
LIBRARY: TREAS: W.D. FREESTONE, SEC. DR D.J. PARIS, PRES: CLOUGH

No business license
GEORGIA TECH RESEARCH CORPORATION

CEO: SAME
AGENT: SAME
CFO: SAME
SEC: SAME
Appl. ATTORNEY:
GEORGE H. LANIER
2500 TRUST CO. BANK
ATL. 30303

* Gets the EPD/DNR RADIATION CONTRACTS

RE: GTRC

R.H. TRULY IS ADMIRAL RICHARD TRULY
HIRED(?) DEC. 1992 AFTER RESIGNING AS HEAD OF NASA. (SEE ATLANTA BUSINESS CHRONICLE 4/9/95 ARTICLE ON GTRI by DEAN ANASON "GTRI Feeling the Pinch of Defense Cuts. TRULY IS A 1959 GA. TECH GRADUATE.

Bell told me April 8th 1996 that GTRC is a private corporation not part of University. Founded in 1937 as an industrial advisory board to the University and that GTRI was State - a dept. of the University He conveniently neglected to mention they were basically the same outfit. He said that the GTRII used to be called the "Engineering Experiment

Station", but changed it's name to GTRI (Institute) to keep up with the times, more modern name.

He implied, and agreed GTRI + GTRC not the same - Institute being State + Corporation being private and a corporation.

He refused to give out names of board of trustees, said people might pester them to get contracts. He said GTRC is private like the Athletic thing is.

See Atlanta Business Chronicle 10/9/92 "Georgia Tech racing into biotechnology" article. This article also mentions ROBERT NEREM (of radioactively contaminating his lab-future!)

* Stelson signed one EPD contract (w/ Tech + EPD) Stelson was the fellow who [redacted] to dissolving the Rad. protection committee + reorganizing it under Dr. Harman.

* someone called Preston Arkwright was one President of Ga. power in the 30's or 40's.

APRIL 16TH 1996

Ref. library: on GTRC: DUN+BRADSTREET MILLION DOLLAR DIRECT. 1996

GTRC: JAMES ROGUE, R. BELL, W.D. FREESTONE, DR. D.T PARIS

NO BOARD - MADE $136,000,000 (1994)

1500 EMPLOYEES, FOUNDED 1937.

REF LIBRARY: GTRC contracting agency for extra-murally sponsored projects conducted by Tech. Corporate depositary for patents on discoveries and inventions developped in course of field research. 1400 research professionals, 1300 research personnel rep. incorporated organization. Private Corp. (no annual report) (GTRI former research name)

BCNT
[illegible]

Neutron Technology Inc. — No liscense — nothing at Sec. St. office

Secr. of State Idaho: 1208 334 2301

Neutron Technology Corporation: ~~Boise~~ Idaho (where INEL is)

Incorporated: Jan 14th 1992 out of Delaware.

Officers:
MERLE L. GRIEBENOW
436 N. 55 WEST. ST
IDAHO FALLS, ID

RON J. TWILEGAR (chairman + CEO) (politician + venture capitalist who lost 1990 U Senate bid)
1205 N. 11th
Idaho Falls.
agent: same.

Floyd Decker V.P. of corporate + govern. relations for Neutron Tech.

Delaware agent for Neutron Technology Corp is: CORPORATE AGENTS INC. 1013 Centre Rd Wilmington DE 19805 (THEIR agent is themselves)

(Incorporator for some of the garbage bags is at same address.)

Neutron Technology Corporation has signed an agreement with GTRC to convert part of the reactor for "BCNT," and plans to pour $10 mill. over next 7 years into a joint venture involving scientists at Tech, Emory, UGA + Medical College of Ga.

Neutron was founded in 1991 with principle investors MORRISON - KNUDSON of Boise (engineering + construction and VESTAR INC. of San Dimas, CA (pharmaceuticals)

(see Atlanta Business Chronicle 7-9-93)

They say they want to use/research GLIOBLASTOMAS (a brain tumor) which is interesting as, according to NIOSH documents, main reasons for glioblastomas are:
ELECTROMAGNETIC RADIATION/power lines
exposures to CHLORINATED ALIPHATIC HYDROCARBONS (carbon tet., chloroform, methylene-chloride, methyl chloroform, tetrachloroethylene and trichloroethylene) in a study of men in men employed in petrochemical and chemical industry, and methelyne chloride a particular culprit! VINYL CHLORIDE EXPOSURE links to HERBICIDE exposure, BENZPYRENE EXP. lead and cadmium exposure
and RADIATION FROM LOW ENERGY/HIGH DOSE RADIATION, SOLAR FLARES, FOR MILITARY SPACE CREWS (WHICH ALSO INCREASES ENDROMETRIOSIS IN WOMEN) possibly also workers in nuclear fuel processing facilities
EXPOSURE TO MUSTARD GAS IN WORKERS WHO WORKED AT AN ARMY RESEARCH CENTER

Solvents are used in conection w. engineering and construction

The D.O.E. did a study (according to A. Ice) which rated the Teeh Reactor the best in the nation for "BNCT"

Dr. Hahn is on the advisory committee for cleanup at D.O.E. Savannah River/Westinghouse.

Dr. Hahn does the reports for EPD/DNR rad. div.

add stability, safety and comfort, Stangeland said. (Associated Press Wirephoto)

EXPERIMENT STATION

Tech Pushes Merger Plan

The Atlanta Constitution 4-1-71 P. 20-D

Georgia Tech is apparently proceeding with a controversial plan to integrate the Engineering Experiment Station (EES) into the school's graduate level academic program.

Word of the proposal came to light this week. Tech president Dr. Arthur G. Hansen originally stated the EES would be reorganized by July 1, but Dr. Maurice W. Long, director of the agency since 1968, now says the plan has been scaled down simply to a "study."

Long's statement, however, seems to contradict a letter he wrote on March 27 to T. Hiram Stanley, chairman of the State Board of Regents, in which Long said he had been informed by Dean Thomas E. Stelson that the EES reorganization would definitely be implemented.

APPOINTED MARCH 8

Stelson was appointed by Hansen on March 8 to "assume the responsibility for the direction of the reorganization of the Engineering Experiment Station."

The EES is a research facility which operates on a $7.2 million annual budget. It is loosely tied to Tech but receives most of its funds from the Department of Defense, with the rest coming from the state of Georgia and private contracts and grants.

It has a staff of 565, including several internationally known scientists.

In his letter to Stanley, Long wrote: "He (Stelson) said that the question has been decided. Also, he said he was not in charge of a study, but he was in charge of developing a reorganizational plan that will be implemented."

REQUESTED HEARING

Long told The Constitution he requested a hearing before the Board of Regents when he was informed of the reorganization plan earlier this month.

Now, however, he says he has reached an "agreement" with Hansen and says the hearing probably will not materialize. Long will not say why he has changed his mind about the hearing or elaborate on the agreement.

In a statement to EES personnel on March 11 concerning the proposed reorganization, Long said, "I have received no information as to why this change has been made . . . In my judgment, the Engineering Experiment Station has fulfilled its stated role in a superb manner."

The plan to integrate the EES into Tech's graduate academic program is seen as an effort to bolster the school's sagging graduate level prestige.

DISPLEASED BY SCORES

Hansen has expressed displeasure with the scores of Tech's graduate division on the latest Carter Survey charts. The survey is a national rating report on the nation's institutions of higher learning.

Although the EES already is an adjunct of Tech, its programs are not reflected in the school's performance on the Carter Survey.

Neither Long nor University System Chancellor Dr. George W. Simpson would comment directly on the issue, but Hansen laid it on the line.

"We've got a problem with our image," he said.

In the past year, Hansen said, he has seen research dollars cut, the school given a beating in competitive scoring with such schools as Cal Tech, Stanford and the Massachusetts Institute of Technology (MIT), and the state legislature become more reluctant to increase Tech's budget.

He said the plan to merge the EES with the graduate program would accomplish several things: (1) make for a more cohesive operation; (2) gain millions in research funds not now listed in the school's general budget; (3) open federal fund sources to Tech; (4) build the overall prestige of the academic section of the school; (5) make a greater impact on the state by allowing for future development of state projects through existing Tech operations; and (6) gain for Tech the "reserve" funds — calculated at upwards of a million dollars — now in the EES coffers.

MET PRIVATELY

It is known that Chancellor Simpson and President Hansen have met privately to discuss the issue. The Board of Regents must approve the reorganization plan before it can take effect.

One source who asked that his name not be used said there is fear among EES personnel that a change would "disrupt the team" of technicians and scientists now working there. The source said the result would be a dilution of the reputation of the facility, now internationally known.

In an unsigned letter to Gov. Jimmy Carter, some EES staff members said they "were not only stunned and incredulous, but also furious" at the proposed change. "The rug has been pulled out from under the whole operation with absolutely no attempt to explain what is going on," the letter said.

The letter attributed the change to "continuous rivalry or perhaps jealousy and resentment" on the part of Tech's academic divisions.

Unquiet Sleep

LONDON (UPI) — Greavsy the hamster found a warm place for hibernation — inside a pop group's amplifier. After being trapped for two days he was rescued from the noisy retreat by his owner, Jenny Dawson.

Atlanta Constitution 4-21-71 p.7-B

ILLEGAL?

Merger At Tech In Peril

By RICHARD MILES

What could be a roadblock in the path of merging the Engineering Experiment Station at Georgia Tech into the school's graduate programs was described this week by a state legislator.

The obstacle in reorganizing EES and its $7 million annual research funds is lodged in the very nature of the state-chartered facility itself, according to Rep. Clayton Brown Jr., a member of the University System Committee of the House.

In a letter to The Atlanta Constitution dated April 17, Rep. Brown said, "Hopefully, the policymakers will reappraise their judgments in light of opposition." He suggested three legal points that could block the merger.

3 POINTS

1. According to the Georgia Code Annotated 1960 which establishes the operational procedures for EES, the research facility was established "'At' Tech and not as a department per se."

2. "The director (is appointed) by statute . . ."

3. "Funds for its operations are to be appropriated on a line-item basis. All other operations of the University System are not line-item."

Regardless of the advantages or disadvantages of the reorganization plan, Rep. Brown said, "It appears to me that changes in the law will be required before any merger can be effected."

Tech President Arthur G. Hansen has talked freely about a total integration of funds, personnel and facility of EES into the graduate academic programs at Tech. But Tuesday he said he has "no more comment."

FEARFUL

While the director of EES, has stated that the productivity could be "destroyed" within five years should the reorganization take place, Dr. Hansen has listed at least six reasons he is pushing for the combine:

1. Consolidate Tech activities.

2. Add EES' applied research funds into the school's over-all budget.

3. Show government and industry that Tech, itself, is involved in applied research activities, which could lead to further financial advantages.

4. The prestige and $7 million annual budget of EES would significantly bolster the school's graduate program reputation.

5. EES, as a part of Tech, would allow the school to have a greater "impact" on the State of Georgia.

6. Tech would gain research reserve funds held by EES, of which Hansen said Tech has practically none. (Some sources say EES' research reserve funds approach $1 million.)

from the club's treasury, over the past four years. However, the grand larceny charge involved only $300 because the statute of limitations prevented further prosecution.

Mrs. McCausland, who is married to an attorney, was active in numerous civic groups, including the United Fund and the Daughters of the American Revolution, club officials said.

"Of course, we'll make a denial," said her husband, John. "There was no theft involved."

Mrs. Kenneth Everly, who succeeded Mrs. McCausland as JWC president, said club officers became suspicious last March when a University of Florida coed wrote that she had never received a $400 scholarship awarded her by the club.

"We didn't want to believe anything was wrong," said Mrs. Everly Saturday.

But Mrs. Everly said an investigation revealed club funds and U.S. savings bonds were missing from two Miami bank accounts. Police said an audit revealed Mrs. McCausland cashed the bonds and wrote unauthorized checks payable to herself, her husband and to cash.

"They have surrendered," a police spokesman said.

More than 200 helmeted riot police and sharpshooters held at the ready in a nearby cargo building were never called into action. The whole operation ended without bloodshed or damage to the plane.

The jetliner carried 90 persons, including the four-man crew, when the three hijackers took over shortly after takeoff from Goteborg on a domestic Swedish flight to Stockholm. The hijackers forced the plane to fly to Malmo, about 150 miles to the south.

Jerry Busbee, executive director for the volunteers were persons who had called Republican headquarters asking if there was something they could do.

THEY ARE GIVEN kits containing literature and cards bearing the names and addresses of 25 to 50 persons in areas a block or two long.

Also in the kit is a sample conversation called a "60 days to Victory Canvass Conversations. Never speak against the opposition."

If the answer is "No" to the question "May we count on your support and vote for President Nixon on Nov. 7?" the volunteers are instructed to say "Thank you for your time. Goodby."

State Republican Chairman Robert Shaw and Rodney Cook, Republican candidate for the 5th District U.S. congressional seat, were among top GOPs present at the canvass headquarters, 3455 Peachtree Road NE.

devout Roman Catholic women and children celebrating the festival of their patron saint collapsed Saturday, crushing to death or drowning at least 100 persons.

Police said the 130-foot long, 18-foot-wide bridge fell under the weight of the religious faithful at Naga City, 160 miles southeast of Manila, while the region's biggest religious event of the year—the Penafrancia Fluvial Festival was in progress.

Detective Justino De Jesus said the bridge, repaired only two weeks ago by the Naga City engineering department, other persons were reported injured.

Manila television correspondent Jun Bautista, reporting from the scene, said, "Bodies after bodies are being fished out of the muddy river waters minute after minute."

Women and children crowded the bridge for a better view of the statue of the Virgin of Penafrancia which was to sail below them as part of the festival. De Jesus said the annual event is the largest of the year for the people of "Bicolandia" as Filipinos call the peninsula which forms Luzon's southernmost region.

under the weight of hundreds of people who were watching the Penafrancia River Festival, filling the air with shrieks of the injured and dying."

A crane was brought to the river to help pull wreckage away from trapped victims, authorities said.

It was the second festival tragedy for the wooden bridge which dates back to the American administration of the Philippines before World War II. In the late 1940s, the bridge collapsed during a similar Penafrancia festival, killing 30, authorities reported.

FROM CRIME TO ECOLOGY

Atlanta Journal-Const'n Sun. 9-17-72 p. 2-A

Tech Reactor Is Proving Useful Problem-Solver

BY CHUCK BELL

Atomic scientists in Atlanta beat Dick Tracy to the punch.

When the comic strip super sleuth used a technique called neutron activation analysis (NAA) to determine who had fired a gun during one of his adventures in 1971, he was at least six years behind the boys in Atlanta.

The nuclear reactor on the Georgia Tech campus, operated by the Nuclear and Biological Sciences Division (NBSD) of the Engineering Experiment Station, was first used to perform an NAA for the state crime lab in 1965. Since that time, the reactor has been used to analyze more than 300 evidence samples for the crime lab.

WHEN A GUN is fired, all nearby surfaces are coated with an invisible residue of gunpowder. If a person has fired a gun, a paraffin cast taken from the hand that held the weapon will pick up this residue.

When a paraffin cast taken from the hand of a suspect is brought to the NBSD for analysis, it is first irradiated in the nuclear reactor and then analyzed for the presence of two elements found in gunpowder — barium and antimony. A high concentration of these two elements indicates that the hand from which the cast was taken has fired a gun recently.

The NBSD reactor has found applications in other criminal cases. It has been used, for example, to detect the presence of arsenic in the hair of poisoning victims.

"In two cases right here in Atlanta," said Dr. D. M. Walker of the NBSD staff, "we were able to detect the arsenic before the victims died."

IN BOTH cases, Walker said, the poisoner was arrested and the life of the victim was spared.

NBSD has applied neutron activation analysis to several other problems.

At the request of the Georgia Water Quality Control Board, the reactor was used to irradiate more than 400 fish samples which were then analyzed to determine their mercury content.

NBSD asssisted the Center for Disease Control (CDC) in determining that Eskimos in certain areas of Alaska have abnormally high body mercury levels. In another study for CDC NBSD analyzed follow-up samples from a family in New Mexico who were disabled after eating pork from hogs that had been fed with mercury-treated seed grain.

NEUTRON activation analysis also has been used by NBSD to assist medical researchers to determine the exact composition of a sample of moon rock and to determine the potassium content of peanut hulls.

The concept of neutron activation analysis is a relatively simple one. When a sample is placed inside the reactor, it is bombarded by neutrons and becomes radioactive.

When the now-radioactive sample is taken out of the reactor, it begins to "decay" back to its stable state.

When any radioactive element decays, it emits gamma rays of a specific energy level that is characteristic of that element and no other. By measuring the energy level of the gamma rays coming from an activated sample, scientists are able to determine what elements are present.

Although the concept is simple, the practice isn't — and a great deal of complicated equipment is needed to make the measurements.

NEUTRON activation analysis is not the only use to which the reactor has been put. It is used to produce radiopharmaceuticals such as flourine-18 for use by physicians in diagnostic applications. It is also used to train operator for power reactors.

The NBSD reactor, which cost $4.5 million to build, has been operating since Dec. 31, 1964. It is not particularly large as reactors go, but it is the largest one on a university campus in the Southeast.

Because it is unique in the South, it acts as a magnet for scientists who have problems that a nuclear reactor can solve.

In fact, its drawing power is not really limited to the South. Researchers from as far away as Cornell University in New York and Tuscon, Ariz., call on NBSD for help with their research problems.

The impressive utility of the reactor makes its undramatic appearance almost disappointing. The reactor itself is not visible. It is contained inside a cylindrical tank and shielded from prying eyes by layers of aluminum, graphite and a special high-density concrete.

The actual purpose of the shielding is not to protect the reactor from prying eyes, but to protect prying eyes from the reactor. Elaborate precautions are taken to insure that the intense radiation inside does not escape and that no one is injured or killed if it does.

THE CORE of the reactor consists of 19 fuel elements. Each element is made up of 19 thin, flat plates of uranium-235.

When the reactor operator is ready to start the reactor, he operates a control that rotates four neutron-absorbing "shim blades" out of the core, allowing a chain reaction to start. If an accident should occur, automatic equipment drops the blades back into place, stopping the reaction in less than half a second.

The worst accident that could occur would be a complete loss of cooling water.

"The biggest problem with any reactor is getting rid of the heat it produces," explained reactor supervisor Robert S. Kirkland. "We get rid of it by pumping heavy water through the core at a rate of 1,380 gallons per minute. It's a closed loop so we keep reusing the same heavy water over and over again.

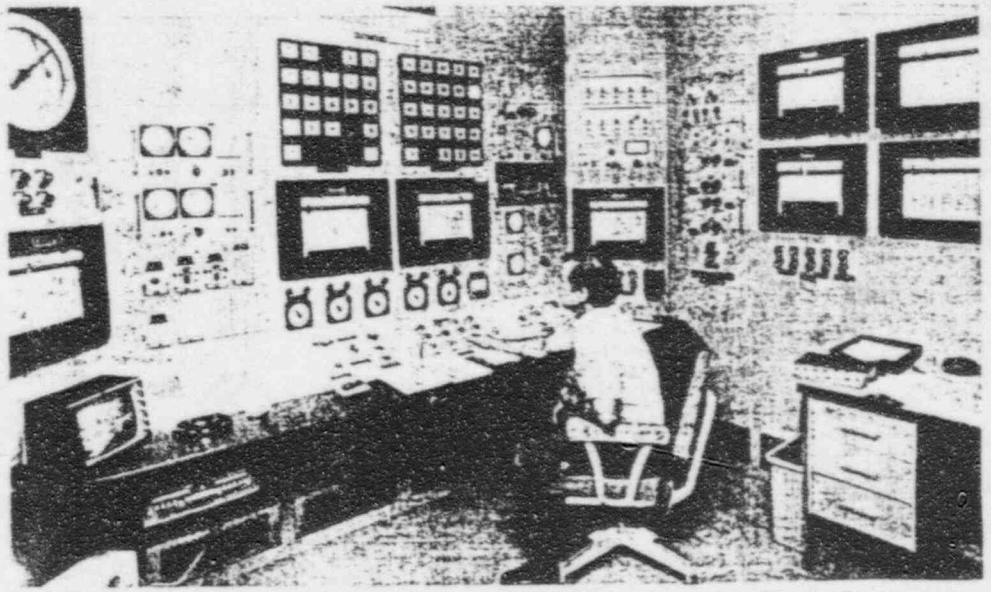
"After the heavy water leaves the core, it goes into a heat exchanger through which we pump light water. The heated light water is pumped out to a cooling tower and allowed to evaporate."

THE EFFECTS of a complete loss of cooling water would be expensive but not disastrous, Kirkland said. "It would hurt us economically, but it wouldn't destroy the reactor," he said.

Another problem with reactors is disposing of used fuel elements. At NBSD, this is handled by storing the spent elements in a deep pond near the reactor building until they can be shipped back to the Atomic Energy Commission's Savannah River plant for reprocessing.

Dr. Walker said the reactor has more beneficial uses than the average citizen realizes.

"Contrary to what the man in the streets thinks," he said, "most of the things we do here are things he would understand completely and things that relate to some of his problems."



Dean McDowell, Shift Supervisor, Is at Controls of Tech Reactor

CHRONICLE

7-9-93

ullstedt files for bankruptcy

Owes $481 million; leaves Midtown projects high and dry

... out of luck

By David Rubinger
Staff Writer

G. Lars Gullstedt, the Swedish developer who planned to transform Midtown Atlanta with parks, pedestrian malls and soaring high rises, has filed for personal bankruptcy in Sweden.

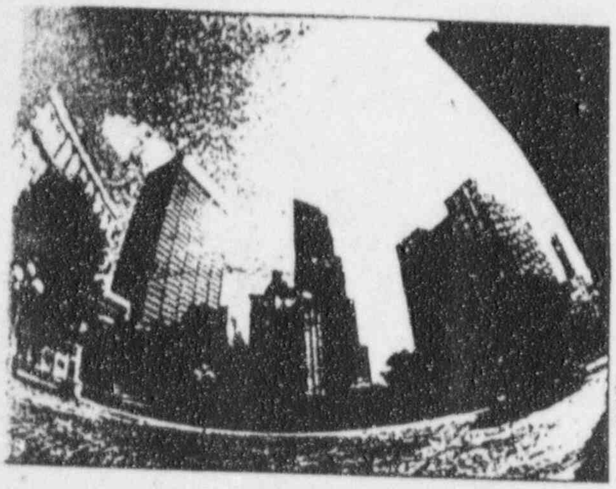
Gullstedt's financial demise spells a major blow for Atlanta, which wanted to believe that somehow, despite real estate recessions here and in Sweden, Gullstedt could find a way to finance his Park Plaza master plan in time for the 1996 Olympics.

According to the Direkt news agency in Stockholm, Gullstedt filed on July 6, reporting debts of $481 million. The lead creditors are said to be two of Sweden's largest banks, SE Banken and Gota Banken. About $425 million of debt is tied to Gullstedt's developments in Sweden, according to published reports there.

Gullstedt is expected to leave behind GLG Grand in Midtown. The brand new 54-story hotel, office and residential high rise on 14th Street "will continue to have a life of its own," GLG says in a prepared response. As of July 1, GLG Grand was past due on $1 million in interest payments owed to its lender on the project.

Gullstedt is also expected to hand back several acres on Fifth Street to the First Baptist

▶ see Gullstedt, page 13A



THE VISION THING

Everybody says Atlanta needs it, but nobody seems to be stepping forward

Listen to longtime civic bulldozer Dan Sweat and you can most hear the sound of Atlanta's big chance slipping away.

"Atlanta, for a long time, had a vision of growth, dynamism, business development and progressive race relations. But today it's difficult to determine where we're going. We've got to have a vision because the Olympics will provide a once-in-a-lifetime opportunity to mobilize this community."

POWER & INFLUENCE IN ATLANTA

The Olympics are presenting Atlanta with an urgent desire to be the perfect city. But can the city's leaders solve the "vision thing" before 1996?

The final installment of Atlanta Business Chronicle's comprehensive study of Atlanta's most powerful business leaders addresses the future of downtown, the future of Atlanta and what kind of vision the city needs to succeed in the 21st century. The study, conducted by Nucifora Consulting Group, involved more than a year of research and interviews with 100 of Atlanta's top business and civic leaders.

Perhaps no issue sparks more controversy than the future of downtown and the role it will play in the years to come. Atlanta's leaders have an easy time placing blame when discussing the future of downtown Atlanta. Most say the lack of political leadership and personal security are the main threats.

Even the most optimistic and ardent boosters sense the city is

▶ see Vision, page 24A

Investors back off Eagle board fight

By Jon McKenna
Staff Writer

A plan to gain control of the board of Tucker Federal Savings and Loan's parent company, in hopes of making the thrift more attractive to buyers, fizzled last week, according to people familiar with the effort.

Atlanta investment banker Lee McClurkin decided not to slate a slate of new directors at Eagle Bancshares' annual meeting on July 27, sources say. The strategy hinged on the expectation that, because of a death and a resignation, four director's seats — comprising a majority of the seven-member board — would come up for election.

Whether that many seats were actually open is unclear. Eagle Chairman Conrad Sechler said recently that he thought only three directors were to be elected at the upcoming meeting. Eagle shareholders have not yet received this year's proxy statements in the mail.

In any case, the strategy all but col

▶ see Tucker Federal, page 18A

Heart M.D.s keep uniting

By Dean Anason
Staff Writer

Atlanta is emerging as the heart of several national cardiology physician network start-ups.

So far, the National Cardiovascular Network, headed by Dr. William Knopf at Saint Joseph's Hospital of Atlanta, has made the biggest splash, receiving national press attention this past spring. That network has already put together 43 member groups totaling more than 700 physicians nationwide.

But local rivals of Knopf say there is room for alternatives. At least two other networks are being formed. And insurers, health maintenance organizations (HMOs) and other entities that would contract with them say the more the merrier.

"We would like to see several of them out there so there would be more competition," says Steve White,

▶ see Heart network, page 20A

Tech reactor gets boost

Idaho biotech start-up plans nuclear therapy

By Dean Anason
Staff Writer

The Georgia Tech nuclear reactor — which was almost decommissioned in the late 1980s after violations of federal safety regulations — may be making a commercial comeback.

An Idaho-based biotechnology start-up company signed an agreement July 1 with the Georgia Tech Research Corp. (GTRC) to convert part of the reactor for use in

▶ see Reactor, page 27A

*Going nuclear: Neutron's Decker, left, with Tech's Ice and Gary Poehlein

Neutron Technology Inc.

Reactor

continued from page 1A

developing a high-tech cure for a lethal form of brain cancer. Existing educational and commercial uses of the reactor will continue.

But Tech officials say their agreement in principle with Neutron Technology Corp. of Boise, a 2-year-old company led by a former U.S. senatorial candidate, represents a new use for the reactor in cutting-edge research.

"It is a significant thrust," says Ratib Karam, director of the Neely Nuclear Research Center at Tech, who has spent at least five years trying to develop a program centered on research for this particular medical treatment.

$10 million investment

Neutron plans to pour an estimated $10 million over the next seven years into a joint project involving scientists at Tech, Emory University, the University of Georgia, the Medical College of Georgia and possibly others. Additional funding will be sought from other sources, Karam says.

The agreement could make Georgia an international center for the treatment, known as Boron Neutron Capture Therapy (BNCT). It is used to treat a brain cancer known as glioblastoma multiforme.

That deadly disease strikes at least 50,000 people annually worldwide, about a tenth of those in the United States, the company says. The tumor represents about 38 percent of all primary brain tumors, occurring most often in men and women ages 45 to 65, Neutron Technology says.

Ron Twilegar, chairman and CEO of Neutron, says "it is not out of the question" that the company could eventually move its headquarters here. Twilegar, a longtime politician and venture capitalist, lost his 1990 bid for the U.S. Senate.

BNCT, which has been experimented with for decades without clear success, is a two-step treatment. A nontoxic, non-radioactive boron compound is injected into a patient's bloodstream and absorbed by the tumor but not by adjacent healthy tissue.

The tumor is then bombarded by a neutron beam, which causes the boron compound to achieve fission. The resulting radiation is supposed to kill the cancer cells without harming surrounding healthy tissue.

Neutron has performed animal trials already and could continue to do so until the Tech reactor is readied for human clinical trials within a year, says Floyd Decker, vice president of corporate and governmental relations with Neutron Technology.

The company is part of an Investigative New Drug (IND) application to the U.S. Food and Drug Administration and may be filing another IND request in connection with research by Emory's Dr. Jeffrey Olson. Clinical trials could begin here in 1994 or 1995, although FDA approval is at least several years off.

The Tech reactor has been through hard times. In 1987 and 1988, the Nuclear Regulatory Commission cited it for numerous operations and record [...] shut the reactor down for several months while a committee pondered whether it should be decommissioned. There has been little controversy since.

"Georgia Tech's regulatory performance has been acceptable to the NRC since that event in 1987," NRC spokesman Ken Clark says.

Tech's reactor is used for teaching and research as well as for commercial purposes such as testing safety components for nuclear power plants and raising trace elements. But much nuclear research has waned in recent years.

"It's been busy but not that busy," Karam says.

Neutron chose the five-megawatt Georgia Tech reactor because of its strength and design, its comparatively low cost of conversion and its availability, Decker says. And the reactor's 1964 design already includes a treatment room.

As much as $2.8 million could be spent on converting the reactor, which mainly involves attachment of a special biomedical beam port. By comparison, the Power Burst Facility at the Idaho National Engineering Lab would have cost an estimated $60 million to convert, Decker says.

The Tech reactor was one of a few candidates worldwide that met the criteria, Decker says. A Department of Energy study rated Tech's reactor the best in the country for use in the BNCT research, Tech professor Rodney Ice says.

In the 1960s, neutron therapy was being researched in other parts of the country but was abandoned because of its severe damage to the scalp and surrounding healthy tissue. Use of slower neutrons, which the new beam port would capture from the reactor, prevents such side effects, Decker says.

As part of the agreement, if Neutron Technologies eventually receives approval from the FDA for its product, Georgia Tech would grant the company right of first refusal on any discoveries.

1,000 patients a year

If its product is approved, Neutron Technology would want to convert portions of the Tech reactor building into offices and more accommodating patient treatment areas, Decker says. The reactor has the capacity to treat approximately 1,000 patients a year, generating "sizable revenues," a company report says.

Atlanta-based Theragenics Corp., which was founded by a former head of the Tech reactor, researched BNCT until 1982, says Bruce Smith, the company's chief financial officer.

Theragenics abandoned BNCT because of the high cost involved, heavy competition, and relatively longer development time compared to other products, Smith says. But other companies have an opportunity to be successful.

"It holds the promise of being a very outstanding technology if they can just get it to work," Smith says.

Formulating a boron compound that discriminates sufficiently between tumor cells and healthy cells and does not release too wide a radiation field is difficult, Smith says. Also, the limited number of reactors in the country may create marketing and accessibility problems in dealing with doctors and patients.

7-9-93

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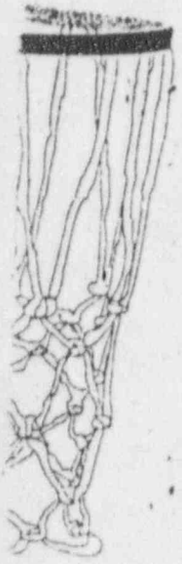

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But Tech officials say their agreement in principle with Neutron Technology Corp. of Boise, a 2-year-old compan, led by a former U.S. senatorial candidate, represents a new use for the reactor in cutting-edge research.

"It is a significant thrust," says Ratib Karam, director of the Neely Nuclear Research Center at Tech, who has spent at least five years trying to develop a program centered on research for this particular medical treatment.

$10 million investment

Neutron plans to pour an estimated $10 million over the next seven years into a joint project involving scientists at Tech, Emory University, the University of Georgia, the Medical College of Georgia and possibly others. Additional funding will be sought from other sources, Karam says.

The agreement could make Georgia an international center for the treatment, known as Boron Neutron Capture Therapy (BNCT). It is used to treat a brain cancer known as glioblastoma multiforme.

That deadly disease strikes at least 50,000 people annually worldwide, about a tenth of those in the United States, the company says. The tumor represents about 38 percent of all primary brain tumors, occurring most often in men and women ages 45 to 65, Neutron Technology says.

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The Tech reactor has been through hard times. In 1987 and 1988, the Nuclear Regulatory Commission cited it for numerous operations and record-keeping violations. Public ire was aroused when it was revealed that a reactor worker rode home on a MARTA bus after being accidentally contaminated with a radioactive material. Tech was fined $3,000 and even spokesman Ken Clark says.

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Neutron was founded in 1991. Its principal investors are Morrison Knudsen Corp. of Boise, an internationally known engineering and construction firm, and Vestar Inc., a San Dimas, Calif.-based pharmaceutical company.

FROM N.I.O.S.H.

Occupational-hazards; Risk-analysis; Worker-health; Sociological-factors; Humans-; Central-nervous-system-disorders

9 of 20

RN: 00183923
TI: Radiation Risk Assessment for Military Space Crews
AU: Wood-DH; Pickering-JE; Yochmowitz-MG; Hardy-KA; Salmon-YL
SO: Military Medicine, Vol. 153, No. 6, pages 298-303, 20 references
PY: 1988
AB: The data from a 20 year investigation of simulated space radiation effects in nonhuman primates was assessed to predict life expectancy loss and cancer risk for space radiation events occurring to military space crews. Proton and electron radiations of different energy and dose and x-rays were given in single total body doses to adolescent rhesus-monkeys that were observed over a 20 year period. Life expectancy loss over the 20 year interval was directly related to proton radiation dose and was highest in the energy midrange of 32 to 55 megaelectron volts (MeV). The low energy/high dose combination (55MeV, 360 to 800 rads) produced a 32 percent life expectancy loss. Cancer and endometriosis accounted for a greater proportion of total deaths for irradiated monkeys. Fatal infections occurred in 28 percent of experimental and 25 percent of control monkeys. A saddle shaped curve was generated for life expectancy loss per unit of radiation versus total body surface dose. Except for endometriosis, the greatest risk for all major causes of death was found with low energy/high dose radiation. Estimated dose to double the risk of fatal cancer was related to energy and dose. Brain tumors (grade IV astrocytoma or glioblastoma multiforme) appeared to be associated with low energy proton radiation. Human risk of brain tumor with solar flare exposure was predicted. Recommended radiation dose limits for males in nonemergency military operations were presented. For central nervous system and blood forming organ exposure, the career limit was 200 rem, lower than the current limit of 400 rem. Endometriosis risk for females was not clear, since there was no reported correlation for radiation exposure in women. However, a conservative approach to limit setting was recommended. A 200 rem career exposure would translate to a life expectancy loss of 1000 to 2000 days, in the range of that for coal mining, being 30 percent overweight, and heart disease, but lower than that of a cigarette smoking male. The authors conclude that these data support more conservative radiation protection standards for nonemergency operations, particularly for females.
DE: MMEDA9-; Military-personnel; Aerospace-workers; Risk-analysis; Radiation-exposure; Ionizing-radiation; Simulation-methods; Laboratory-animals; Dose-response; Exposure-limits

10 of 20

RN: 00182606
TI: Chemically Induced Human Gliomas. Occurrence of Brain Gliomas in Three Matchbox Manufacturers. An Occupational Risk?
AU: Bret-Ph; Pialat-J; Robert-H; Deruty-R; Fischer-G; Kzaiz-M
SO: Brain Oncology, Rennes, France, September 4-5, 1986, M. Chatel, F. Darcel and J. Pecker, Editors; Dordrecht, Martinus Nijhoff Publishers, Boston, Massachusetts, pages 233-235, 10 references
PY: 1987
AB: Case histories were presented for three patients treated for brain glioma; each of the patients was employed at the same matchbox factory. The first case was a 57 year old woman who was employed at the firm for 23 years; she was found to have an isomorphic glioblastoma. The second case was a 37 year old man who had been employed by the firm for 2 nonconsecutive years. He was

Hall of Fame candidate Don Sutton: pitcher of baseballs, carpets and commentary

'LUCKIEST SUCKER AROUND'

Sutton's job really is about as fun as it looks

By Emory Thomas Jr.
Senior Staff Writer

"You get to sleep late. You play golf almost every single day. And your job — your *job* — is to attend Braves games.

Sound good?

It is, says Don Sutton, the tanned and rested Turner Broadcasting System Braves color commentator who actually gets to live this life.

"I'm the luckiest sucker around," he says.

A former Major League pitcher who's almost certainly destined for the Hall of Fame, Sutton is the "star" announcer in one of television's premier sports broadcast teams. His curly locks and sharp baseball insight have become familiar fixtures in the dens of Braves fans. And as the 1993 season swings into gear, tomahawk choppers might as well get used to him. It looks like he'll be staying awhile.

Sutton is in the first year of a five-year

➤ see Sutton, page 16A

The amendment was introduced by Coun. ber Robb Pitts, who himself owns all or part o. least three units at the Landmark Condominium downtown — one of the buildings affected by the ordinance.

The issue is creating a huge stir at City Hall. "We have probably had more letters on that issue than any other," says Council member Mary Davis, who co-sponsored the existing law and says she is hesitant to change it. "It would be hard to live with myself if there were a major fire and I had voted for this change."

Davis says she hopes a compromise policy can be found, particularly since some of the affected condo owners may not be able to afford the improvements. But city fire officials say there is no substitute for a sprinkler system.

An estimated crowd of more than 400 people attended a March 30 hearing on the matter in City Council chambers. At the meeting, city fire officials

➤ see Sprinklers, page 22A

GTRI feeling the pinch of defense cuts

Atlanta Business Chronicle

By Dean Anason
4-9-93 *Staff Writer*

Even for the man who commanded the first night landing of the space shuttle and later rebuilt the space program, retooling the Georgia Tech Research Institute for the 21st century still presents a formidable task.

"I don't want to paint too rosy a picture," says Admiral Richard Truly, who was hired in December as GTRI's director after resigning as head of NASA last year. "We are going to have to live by our wits."

He explains matter-of-factly that the applied research arm of Georgia Tech will have to work hard to wean itself from defense research dollars, which are on the decline.

"We bring in a good bit of business here," he says. "I do not want to turn from a not-for-profit organization into a for-loss organization. And that's what this has the potential of doing."

But Truly believes GTRI can make the transition by maintaining existing government contracts and redirecting expertise in electronics, radar, computing and transportation to commercial use.

Efficiency will be the key, even in words. The new director, who always appears at ease yet answers questions with laserlike precision, plans to write the organization's strategic plan for the next five years on one sheet of paper, front and back.

A 1959 Georgia Tech graduate in aeronautical engineering,

➤ see GTRI, page 19A

Former astronaut Truly: have to 'live by our wits'

Richard Truly

NewsBank, inc. - The Atlanta Journal/Constitution - 1992 - Article with Citation

Headline: TRW's Goldin chosen NASA chief

Date: March 11, 1992
Page: A/02

Section: NATIONAL NEWS
Edition: The Atlanta Journal
Word Count: 313

Index Terms: Space
Government
Leaders
Appointments

Text:
FROM OUR NEWS SERVICES

Washington - President Bush today named TRW executive Daniel Goldin to head troubled NASA and "ensure America's leadership in space as we enter the 21st century."

If confirmed by the Senate, Mr. Goldin, 51, would succeed Richard Truly, who was forced to resign last month.

The president called Mr. Goldin "a leader in America's aerospace industry and a man of extraordinary energy and vitality."

"Working with the vice president as chairman of our Space Council, Dan Goldin will assure America's leadership in space as we enter the 21st Century," Mr. Bush said.

The council's complaints about the direction of the space agency and Mr. Truly's stewardship had led to Mr. Truly's forced resignation last month, sources said.

"We intend to deploy a space station by end of this decade," Mr. Bush said. "We must develop a new launch system that augments the space shuttle and a system that can carry payloads which will give America superiority and flexibility in commercial as well as scientific fields."

Mr. Truly had been a staunch advocate of the space station, which is reaching the hardware-building stage. It is expected to be in orbit by the end of the decade.

In his announcement, made in the White House press room without the presence of Mr. Goldin, the president did not mention a favorite project, establishing a manned base on the moon and sending an astronaut expedition to Mars by the year 2019.

The president said Mr. Truly, who had been administrator since 1989, has provided great leadership. Mr. Truly had been the first astronaut to head the space agency.

Accession Number: 920730307

Richard Truly

Headline: The view from space left Tech research chief full of self-confidence
Retired admiral, ex-head of NASA takes challenge of learning how things get done in a university

Date: February 10, 1994 Section: EXTRA
Page: N/03 Edition: The Atlanta Journal Constitution
Word Count: 927

Author: MALOOF, DENISE N
MI

Text:
By Denise N. Maloof STAFF WRITER

As director of Georgia Tech's Research Institute, Richard Truly roams the same campus he knew as a student. His mission then was to earn an aeronautical engineering degree. His mission now is to nurture one of the country's largest private research centers.

"Many times now when I talk to students, they come up and say, 'You've already done everything we want to do in life,' " said Truly, 57, a diminutive man with an easy smile. "That always takes me somewhat aback."

The restrained tones of his 10th Street office give no hints. Visitors must squint at plaques or ask the source of photographs before they discover a former NASA astronaut and retired Navy vice admiral.

"I've lived my entire adult life in two major cultures," he said. "The university atmosphere is entirely different from either of those, so I've been challenged by what I've known as the proper way to get things done."

GTRI qualifies as a challenge. The Tech-based organization conducts privately sponsored, non-profit research for government and industry and currently requires a full-time staff of more than 1,300. The Department of Defense accounts for 75 percent of its contracts.

Truly inherited a crisis when he became director on Dec. 1, 1992. Defense spending cutbacks ate into GTRI's $100 million-dollar income, which meant forfeiting about 100 jobs. So one of Truly's first projects was a painful downsizing. He spent three months visiting all 18 GTRI labs, then guided a reduction to eight labs. He believes the elimination of understaffed and underfunded labs has made the remaining ones stronger and more efficient.

The fall issue of GTRI's magazine highlights projects in information technology, aircraft, creation of a nuclear-free zone in Northeast Asia, and development of a simulator that train eye surgeons.

"I've never had a job that didn't deal with the future of where this country was going," Truly said. "I've always been involved with research and technology from top to bottom."

Truly spent much of last year leading a strategic planning project. He believes some of its proposals would endow GTRI with younger participants and more viewpoints. He also hopes to generate more collaboration between GTRI research and campus research.

"There's so much more synergy between GTRI and other campus research interests," said Tech Executive Vice President Mike Thomas. "One would never know he's a retired admiral or director of NASA except for some pictures he has on the wall in his office. He's quiet, but

people around here have learned to listen when he says something."

Truly's evolution from Navy ROTC cadet into vice admiral began in 1959 and included early stints as a fighter-pilot and Air Force flight instructor.

After being selected for astronaut training, he transferred to NASA in 1969 and was capsule commander for all Skylab missions in 1973. He performed the same duties during the historic Apollo-Soyuz docking in 1975. Truly served as a space shuttle test pilot during the late 1970s and as pilot on the Columbia mission of Nov. 12-14, 1981. That was the first shuttle craft to return to space. He also served as commander on the Challenger mission of Aug. 30-Sept. 5, 1983, the first night launch and landing mission.

"It was an experience that colored everything I've done since," Truly said of space. "When you take photographs of the entire Himalayan mountain range or you see the Great Barrier reef spread out below or the colors of a sunset, somehow it gives you the confidence to do anything. For instance, I can't stand wasting my time sitting in meetings when we're not making something happen."

A few weeks after the 1986 Challenger accident, Truly was named NASA's associate administrator for space flight. He led the rejuvenation of the shuttle program and was the driving force behind building the Endeavour to replace the Challenger. "Every time a shuttle flight flies today, I feel very proud because of all the work we put into it to make it stronger than it was before the Challenger accident," Truly said.

He went on to serve as NASA's eighth administrator from July 1989 until his March 1992 retirement. Then he retired from the Navy a month later. He and his wife, Cody, decided to take a lengthy hiatus, but Thomas and Tech President Pat Crecine wooed him back to Atlanta with the offer to direct GTRI. Now the Trulys have settled in a North Atlanta home and his commemorative "I love me room," as he jokingly calls it, is his only connection to a memorable former life.

Caption:
Photo: former astronaut Dick Truly his memento-filled room at home / Nick Arroyo / staff
Photo: Dick Truly at the top of a staircase at the Georgia Tech Research Institute / Nick Arroyo / staff
Color photo and teaser box: (appeared on N/01 with reference to this N/03 story) Georgia Tech grad Richard Truly, the former NASA director, heads Tech's Research Institute. / NICK ARROYO / Staff
Color photo and teaser box: (appeared on N/01 with reference to this N/03 story) Truly's reflected image in this liftoff photo also reflects his integral role int he space shuttle program. / NICK ARROYO / Staff

Accession Number: 940420301

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Dec. 10-16, 1993

Army taps Tech as location for institute

By Dean Anason.
Staff Writer

The U.S. Army has chosen Georgia Tech as the site of a small but increasingly important think tank that will guide the Army's environmental policy making.

"This institute should make Georgia one of the focuses of environmental technology and policy in the country," says Louis Circeo, director of Tech's Construction Research Center.

The 3-year-old Army Environmental Policy Institute, located in Champaign, Ill., received about $6.5 million from Congress this year for operations and for studies on how the Army, one of the nation's top polluters, can clean up its act.

"We want to be environmentally sensitive as we make our decisions," says Lewis Walker, deputy assistant secretary of the Army for environment, safety and occupational health. Walker led an Army delegation that met with Georgia Tech officials Monday to hammer out final details. Pending these final negotiations, the Institute plans to relocate next year.

The Institute is zeroing in on four major environmental problem areas facing the Army, the largest being cleanup of contamination from munitions and other wastes at 60 present and former Army sites nationwide, Walker says. The price tag for that project alone is estimated at $12 billion to $14 billion, he says.

The three other top priorities are recommending how the Army can best comply with existing laws and regulations governing hazardous waste, clean air and clean water; improve pollution prevention, such as the use of non-toxic cleaning solvents; and promote conservation at its facilities.

A sizable 2 percent of the Army's budget is spent on environmental matters, Walker explains. However,

Kofi Bota, Clark Atlanta's vice president for research, says Tech's inclusion of Clark Atlanta and the Consortium schools was a major factor in the Army's decision. The Institute's charter mandates minority institution involvement because of concerns about the impact of the environment on minorities and the lack of African-American engineers, Bota and others explain.

The Institute has about 13 employees and 21 graduate students working part time. Around three to five employees plan to relocate. Tech has proposed building the Institute a 30,000-square-foot headquarters at school property on 14th Street. Tech officials say the Institute could have beneficial economic development implications. Although it does not engage in research directly, the Institute will be borrowing from research at Tech and other schools and commissioning studies.

Policy and research drive each other, says O.J. Feerene, director of Tech's Office of Industrial Programs. The Institute's work helps determine policy for the Army, a major environmental business customer, and could have a strong impact on which environmental technologies will predominate, he says. ■

ARMY ENVIRONMENTAL POLICY INSTITUTE

New headquarters: Georgia Tech

Year founded: 1990

Budget: $8.5 million

Employees: 13 staff, 21 graduate students

Responsibilities include:

- ☐ Anticipating environmental trends affecting the Army and study policy options.
- ☐ Studying current and emerging environmental protection technologies.
- ☐ Expanding Army interaction with academia and industry.
- ☐ Involving historically black schools in Army environmental program.

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A sizable 2 percent of the Army's budget is spent on environmental matters, Walker explains. However, much of the money — about $1.5 billion out of nearly $1.6 billion — is spent on compliance and cleaning up old messes vs. more preventive strategies, Walker says.

The Institute hopes eventually to reverse those priorities as well as identify new methods and technologies that will help the Army cut environmental costs, Walker says.

Georgia Tech was one of five finalists selected by the Army for the Institute's permanent location. Tech beat out Pennsylvania State University, the University of North Carolina, the University of Florida and Virginia Polytechnic Institute.

The Army chose Tech because of the school's strengths in environmental engineering, law and policy and its links to other Georgia research universities through the Georgia Research Alliance, Walker says.

Tech, reportedly had the "strong support" of Sen. Sam Nunn, chairman of the Senate Armed Services Committee, and Rep. John Lewis (D-Atlanta).

Another key factor was Tech's "strong working relationship" with Clark Atlanta University, head of the Historically Black Colleges and Universities and Minority Institutions Environmental Technology Consortium, officials say.

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- Involving historically black schools in environmental program.

Dec. 10, 1993 Atlanta Business Chronicle

Health care applications: Tech's Ezquerra, seated, and Mullick

Georgia Tech racing into biotechnology

Proposes Olympic sports science center

By Dean Anason
Staff Writer

As defense research dwindles and economic development officials grow more interested in biotechnology companies, Georgia Tech is diversifying its interests.

Tech wants to be a stronger player in the fields of biomedicine, biotechnology and the life sciences, school officials say. That includes the formation of a new interdisciplinary academic and research program bringing scientists and engineers together as well as a proposed Olympic sports science facility.

"Whereas our industries in the past have been based on physics and chemistry, it is clear that there is going to be a major industrial component that is going to be based on the science of biology," says Robert Nerem, a mechanical engineering professor and co-chair of the school's new health science and technology committee.

Those industries include medical device manufacturing, biotechnology and genetic engineering, many of which are in their infancy, he says.

Crecine

Georgia Tech President Pat Crecine says he highly supports the school's advancement in these areas. "It is clear the health sciences and biological sciences is where a great deal of the action is and will be," Crecine says.

"The best thing about this area is that there are an awful lot of things that are fun and useful and of theoretical importance," he says.

Georgia Tech is also trying to keep up with its competitors. At MIT, 25 percent of research dollars come from the National Institutes of Health, Crecine and Nerem point out. Georgia Tech spent about 12 percent of its academic research dollars, or roughly $6 million to $8 million, in bio-related research last fiscal year.

Impetus for such a program grew out of general strategic planning efforts under way at Georgia Tech for the last two years. Don Giddens, Georgia Tech's director of aerospace engineering who recently departed to become dean of the school of engineering at Johns Hopkins University, is credited with mobilizing the faculty.

Although many details still need to be worked out over the next three months, the school's goal is to create a bio-complex on campus to bring engineering and science together, Nerem says.

Research in areas such as bioengineering and biochemistry are not new to Georgia Tech, but trying to bring them together in an organized fashion is, Nerem says.

"We have some very good things going on on campus, but we are not structured to be a major player in bio-related things," he says.

The organizational details are sensitive. The school is still deciding whether sports medicine or an existing center for rehabilitation technology will be formally connected or simply be affiliated, Nerem says. The committee hopes to make a formal proposal by January.

An interdisciplinary program, which one plan suggests would include about 47 faculty and their graduate students to start, will probably need $3 million to $4 million in facilities renovation to start, he says.

"The intent of all this is really to accelerate Georgia Tech's efforts in bio-related activities," Nerem says. "Most people, when they think of the bio area, they think of Emory or they think of Medical College of Georgia. They don't think of Georgia Tech."

More collaboration

Crecine emphasizes that Tech's efforts should not be seen as a threat to medical schools such as Emory or MCG. The schools are collaborating better than in the past, especially in biologically related areas and even telecommunications projects with health care applications, he says.

One example is professor Norberto Ezquerra, an associate professor in the college of computing. He and colleagues at both MCG and Emory are working on several medical imaging projects.

Ezquerra and fellow researchers are working on numerous projects with health care applications: "transparent" computer models of tissue, visualization of biological processes

▶ see Georgia Tech, Page 18A

Atlanta Business Chronicle 10-9-92

Yasin's, a local chain of fast-food fish restaurants, has launched a national franchising program.

Ken Coggins, president of Crystal Association Unlimited Inc., which owns Yasin's, said the franchise plan was completed in April and that he is very close to making a deal with his first two franchisees. "We are shooting for the first of the year to have our first franchise open in DeKalb," Coggins says.

Coggins says the total cost to open a Yasin's franchise is $170,000, including the franchise fee and remodeling. He says the average store sales for the four current Yasin's locations are between $400,000 and $450,000 a year. He is encouraging franchisees to look in areas that could increase those sales to half a million dollars.

"We are looking for densely populated areas with a mixture of commercial and residential properties on a main thoroughfare," he says.

In the next 12 months, Coggins hopes to open between three and five new franchise restaurants in the Atlanta area. "It's all new to us and I plan to bring on support people as we grow who are specialists in this industry. I just want to make sure I don't overdo it."

> *Yasin's is one of the few nationwide chains owned by African-Americans, but Coggins says he doesn't want to emphasize race.*

Coggins says although he has received inquiries from interested potential franchisees in Canada and Denver, he is looking to first develop within the Atlanta market and then move to regional development within the South.

"Someday we hope to be in Denver, but we just don't think we're ready to go there yet," he says. "We need to get started off on the right foot and continue to do things right by having the proper support system to support the franchises," he explains. "We want to grow on a slow, consistent basis and we believe in having an ongoing, strong relationship with our franchisees."

Coggins says his active interest in franchising began in 1991 when he began looking at different franchising firms. He decided to go with a local firm, National Franchise Associates, because they were convenient and had competitive prices. "They have a lot of experience and were able to pass that experience on to us," Coggins says.

Coggins says he expects to spend about $40,000 to franchise Yasin's, but feels he has gotten a very good deal. "NFA has been a little more economical than other companies and they have given assistance that other consultants charge for."

Yasin's is one of the few nationwide chains owned by African-Americans, but Coggins says he doesn't

Georgia Tech

continued from page 6A

such as blood flow or a beating heart, interactive programs for surgical training and even artificial intelligence that could assist in medical diagnoses, he says.

Despite occasional political friction between the competing universities, researchers see the value of working together, Ezquerra says. Combined efforts give local researchers a better chance in the battle for research dollars vs. schools, such as Stanford University and Johns Hopkins University, that have both medical and engineering schools, he says.

And funding has followed. The Georgia Research Alliance provided $450,000 this year for medical imaging equipment at both Georgia Tech and Emory. Meanwhile, Ezquerra hopes to renew $5 million in funding from the NIH for artificial intelligence research, he says.

In addition, Ezquerra points to peace of mind as another fringe benefit of bio-related research. There are fewer moral quandaries than with defense research, says Ezquerra, who spent six years in radar imaging research at Georgia Tech.

"I made it a conscious effort to get away from that," he says. "It feels a lot better to work on problems that help people."

Sports science center

Meanwhile, Georgia Tech and the U.S. Olympic Committee administrative staff have prepared a plan for a sports science and technology research center for the purpose of improving athletic performance.

That proposal will probably be presented to the USOC executive committee in November, says Jim Reedy, head of Georgia Tech's department of health and performance sciences.

The center could be housed in the Olympic natatorium slated for the Georgia Tech campus if organizers build an enclosed facility, Crecine says.

The proposed U.S. Olympic Science and Technology Research Center would bring together USOC sports scientists with engineering and computer professors at Georgia Tech," he says.

One goal of the proposed center is the clear explanation and broad dissemination of research findings. Telecommunications networks and even satellites could be used to establish a database using text, three-dimensional computer graphics and video to disseminate findings, Reedy says.

The center would conduct both sports-specific research, such as a biomechanical analysis of swimming performance, or more general research, such as studies of friction and lubrication that could be used to make skis and bobsleds move faster.

Georgia Tech and the USOC would split start-up operational costs, which Reedy estimates at around $700,000 in 1993. By 1996, the partners hope to find one or more corporate endowments that would cover operations costs, which by then should be $1.4 million.

Embezzler turns off the Light

By M. Rex Smith
Staff Writer

Larry Neal Patterson, who pleaded guilty to charges he embezzled $214,000 from pension accounts managed by his employer, has been sentenced to 22 months incarceration.

His employer, however, didn't get off so easy. Light & Associates, a 21-year-old locally owned third-party administrator of employee benefits plans, has been mortally wounded.

John E. "Kip" Light III, the firm's president, says "basically, unless my fairy godmother shows up, we're going out of business."

Light says he has laid off about 20 workers, and, after losing most of his accounts simultaneous to Patterson's guilty plea, will have to close the doors for good around the end of the month.

In 1991, says Light, the firm posted $1.2 million in gross income. Now, he says, the firm is broke.

The demise of Light & Associates highlights what can happen when businesses fail to protect themselves against unscrupulous employees.

"It shouldn't be possible for anybody to do something like this," Light says.

According to his indictment, Patterson, then the president of Light & Associates, victimized 10 union funds for sums ranging from $678 to more than $62,000. Hayes Microcomputer Products Inc. and the Atlanta Plumber and Pipefitters Health and Welfare fund were two local companies whose funds were embezzled by Patterson.

Patterson stole roughly 80 claim checks that should have been returned to the firm's health plan accounts.

Instead, argued the government, Patterson deposited the stolen check in secret bank accounts.

His guilty plea spawned a $50,00 lawsuit against Light & Associates.

"I really hate to say it," says Ligh "but what caused us to end up i this situation was trusting somebody somebody's word, somebody that had known for 15 years and ha been almost like an adopted broth er."

Light urges others to keep "you eyes open for the puzzle pieces."

For Light, his immediate concern are his family and finding som income. He's considering going int computer programming and doesn' rule out a return to the third-party administration of employee benefits.

Reflecting on the past year, Ligh says, "I've pretty much accepted tha there's not a whole lot I can do abou it now. It makes me feel kind o empty."

Georgia Tech

Georgia Institute of Technology
Office of Legal Affairs
Atlanta, Georgia 30332-0420 USA

Telephone: 404•894•4812
Fax: 404•894•3120

May 26, 1995

Ms. Pamela Blockey-O'Brien
D23 Golden Valley
Douglasville, Georgia 30134

Re: Your Open Records Request Dated May 3, 1995

Dear Ms. Blockey-O'Brien:

I have identified 42 contract files which may contain the information you have requested in regard to monetary amounts received for the Neely Nuclear Research Reactor. You may contact my office and arrange a mutually convenient time to come and review these files. You may mark pages for copying if there are specific pages you wish to keep. There is a charge of .25 cents per page for any copies made.

I am still working on gathering records (if they exist) with regard to nuclear waste contractors. I will make these files available as soon as possible.

Regarding your request for information on funds spent on doing research on animals at the reactor, the Georgia Institute of Technology has not expended any money acquiring animals for research at the reactor.

Finally, I have been unable to locate any records relating to a "Georgia EPD/DNR/Radiation Surveillance Program".

Because it turned out it's a GTRC/EPD etc. money/contract connection.

Very truly yours,

Pamela P. Rary
Attorney

I guess they got them for nothing to irradiate with Co-60 in the underground waste irradiator called "Cruickshanks Mountain"

PPR/mj

cc: Dr. R. Karam

the culprit in GOP challenge, Murphy says

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Kenneth R. Smith, the owner of a Bremen building supply company, was accompanied by Gingrich as he signed up to become Murphy's first challenger in 10 years and the first ever from the GOP.

Murphy said he believes Gingrich persuaded Smith to run in order to keep the speaker occupied during the fall campaign, in which Gingrich faces likely opposition from Jonesboro lawyer David Worley, a Democrat.

"I think the truth behind the whole thing is that Congressman Gingrich has trouble of his own, and he wants to give me some," said Murphy of Bremen.

But Gingrich said he merely approved of Smith's challenge and denied "that I was somewhat responsible for planting it."

Smith, a former Gingrich campaign aide, said he is running to give the 18th District — Haralson County and parts of Polk and Paulding counties — a choice.

"I feel like, not being so wrapped up in running the state, I'd have more time to devote my efforts to home" than does Murphy.

MURPHY Continued on 7C

5-28-88

lanta Gas Light lists in its filing to justify the reque

"They're al a going to say they need more money," he said. "Everybody says that. The thing to see is what is the underlying reason that's causing their earnings to deteriorate."

None of the five elected commissioners was at the PSC offices when the four-volume request was logged in at the executive director's office. The other three PSC mem-

GAS Continued on 7C

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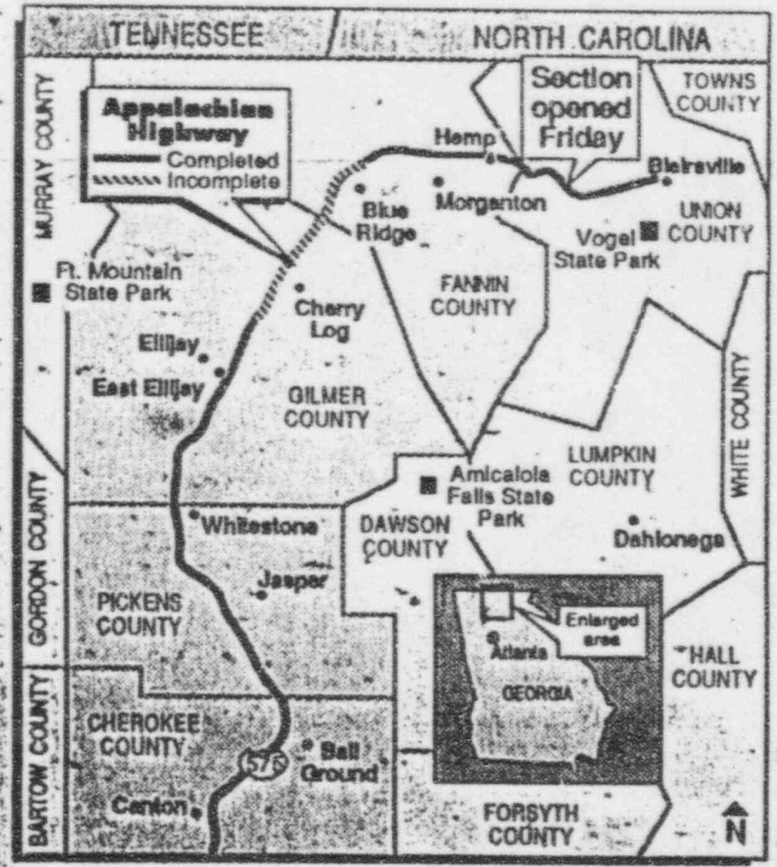


Atlanta to the heart of the state's Blue Ridge Mountains.

The section opened Friday climbs two low mountain gaps, obtaining its highest elevation of 2,200 feet at Queens Gap. A panoramic view of the state's highest peak, 4,784-foot Brasstown Bald, is one of the features of the drive. High ranges in nearby North Carolina and Tennessee also can be

HIGHWAY Continued on 8C

Crecine keeps Stelson at Tech by offering executive VP post

By Ann Hardie
Staff Writer

In the president's box at Bobby Dodd Stadium, John Patrick Crecine scored perhaps the biggest victory of his first year at Georgia Tech.


Stelson

Crecine announced Friday that the university's new executive vice president will be none other than Thomas E. Stelson, the veteran Tech administrator who resigned earlier this year in the heat of the nuclear reactor controversy.

"Over the years I have invested a lot of years at Georgia Tech, and when the new opportunity presented itself I was delighted," Stelson said at a news conference at the stadium. "I *really* was intending to leave."

Despite rumors to the contrary, Crecine and Stelson also expressed their intentions to reopen Tech's nuclear reactor, shut down in February after the Nuclear Regulatory Commission cited safety problems.

"The reactor is not as important a part of our operation as it should be," Stelson said. "It has great potential and it is a problem that needs to be worked on."

In recent weeks, key businessmen and politicians, including former Gov. George Busbee, have staged a major lobbying effort to keep Stelson at Tech. As vice president for research since 1974, Stelson has been credited with transforming the school from a teaching institution to one of the country's leading research universities. Research spending has grown from $8 million to $120 million during Stelson's tenure.

Local leaders had worried that Tech's success as a major research university for industry could weaken without Stelson.

After being overlooked for the Tech presidency, Stelson announced his plans to resign this past February. He had accepted the presidency of the Pacific International Center for High Technology Research in Hawaii when Crecine offered him the job as executive vice president Tuesday.

The new position combines the responsibilities of the vice presi-

STELSON Continued on 7C

Teacher

From Page 1C

Police speculated that much of the evidence at the scene may have been washed away by recent rains.

DeKalb police will be handling the case — assisted by Gwinnett police — unless it is determined the slaying took place outside DeKalb.

"The primary thing is to try and determine who is responsible," Latty said. "If we find that, hopefully all the other things will fall into place." The victim's family is offering a $1,000 reward for information leading to the arrest and conviction of Miss Williamson's killer or killers. Donations to the reward fund may be sent to the Trust Company Bank.

Miss Williamson was last seen by a "male acquaintance" at an Oakbrook Parkway motel in Norcross. The man, an out-of-town construction worker at the Kinder-Care Learning Center where Miss Williamson worked on Norcross-Tucker Road, had known Miss Williamson for about a week, according to her mother

Kimberly Williamson, a preschool teacher, had been missing since last Saturday.

Police have said the man is not a suspect in Miss Williamson's disappearance.

Staff writers Donna Williams Lewis and Adam Gelb contributed to this article.

Gas

From Page 1C

bers could not be reached for comment Friday.

Atlanta Gas Light, the largest distributor of natural gas in the Southeast, predicated the new request for higher rates on "increased capital expenditures to serve the growth in the company's service area," said Ross Willis, public information director.

Willis said Atlanta Gas Light added more than 46,000 customers in its last fiscal year, raising the total to about 1.1 million, for an increase of about 4 percent.

In addition, he said, the PSC had authorized the utility to earn a return of 11.75 percent, but the company has been earning less than 11 percent.

Atlanta Gas Light had not anticipated the need for another rate case, Willis said, when it settled the last request in June 1987, with the slight decrease effective July 1 last year, 11 months ago.

That case was settled without the formal hearing process before the PSC, in part because the commission already was handling the mammoth $735 million Georgia Power request for Unit 1 of the Plant Vogtle nuclear power project.

In the gas company settlement worked out with the PSC staff and the consumer counsel, Atlanta Gas Light agreed to a $4.75 million reduction instead of its requested $9.9 million increase.

Most of the difference was attributed to changes favorable to the utility from the Tax Reform Act of 1988. The change in rates was a 31-cent reduction in monthly rates for residential users of an average of 80 therms per month.

As part of the settlement, the PSC allowed the gas company to establish a separate $15 fee for new gas service and charge $25 if a new meter is required.

Later in the year, the gas company reduced rates another $53 million in a one-time refund on bills, because of changes in fuel costs, which are passed on to consumers through the so-called purchased gas adjustment and are listed separately on customer bills. But that reduction was unrelated to any rate case, Willis said.

Murphy

From Page 1C

said Smith, who owns a building supply company in Bremen.

Murphy, called by Gingrich "the most entrenched politician in the state," has not had an opponent since 1978, when he had a 3-1 primary win, and political observers consider him unbeatable.

The speaker said he welcomes the chance to campaign. "It'll be good for me. It'll be nice to get out and see my old friends. I enjoy it. I have fun at it."

Smith, who acknowledged that he was "running against the system," said he had not raised any money and didn't know how much he would need. "I agree it's going to be quite a challenge," he told reporters.

Meanwhile, in addition to Gingrich, who qualified to run for his U.S. House seat shortly after Smith signed up Friday, three other Georgia congressmen and three challengers filed.

Democrats John Lewis of Atlanta's 5th District and 8th District Congressman J. Roy Rowland both qualified at the Capitol on Friday.

Kenneth R. Smith

7th District Rep. Buddy Darden, a Democrat from Marietta, filed with party headquarters Friday, a day after 1st District Rep. Lindsay Thomas filed his qualifying fee with the Democrats.

Two Republicans qualified to run for the 9th District seat held by Democratic Rep. Ed Jenkins: Joe Hoffman, a Gwinnett County architect; and Julian "Hutch" Hutchins, a physician from Commerce.

The other challenger qualifying Friday was John Christian "Chris" Meredith, of Springfield in Effingham County, a Republican who will seek Thomas' seat.

Stelson

From Page 1C

dents of academic affairs and research. "It [the position] sends a clear message that we are going to do both research and education, and we are going to do both well," Crecine said.

Stelson was apparently as interested in staying at Tech as his boosters were in having him stay. He applied for the position, and accepted it, without knowing what it will pay. His previous position at Tech paid $107,500 a year.

The appointment requires final approval from Georgia's Board of Regents. Stelson has openly criticized the regents for the search process that led to Crecine's selection.

Tensions apparently have been eased between the regents and Stelson because of a new appreciation for Stelson's contributions to Tech, said Sam Ayoub, chairman of China/Tech, a joint trade venture between the United States and China with strong ties to the university.

Staff writer Maria Saporta contributed to this article.

ATLANTA JOURNAL/CONSTITUTION

Tech Foundation wields influence

Georgia Tech Foundation Inc. provides financial support and leadership to the university and includes alumni who are some of Atlanta's most influential business leaders. Among the foundation's 64 board of trustee members trustees are:

JOHN H. WEITNAUER JR.
Retired chairman and CEO, Richway

VIRGIL R. WILLIAMS
Chairman and CEO, Williams Service Group Inc.

CHARLES R. YATES
Retired president, Woodruff Arts Center

JOHN E. ADERHOLD
Co-chair, Corporation for Olympic Development in Atlanta

IVAN ALLEN JR.
Chairman, Ivan Allen Co.

L.L. GELLERSTEDT JR.
Board Chairman, Beers Construction Co.

L. TRAVIS BRANNON JR.
Partner, Jones, Day, Reavis & Pogue

CHARLES R. BROWN
President, Technology Park/Atlanta Inc.

CHARLES K. CROSS SR.
Retired chairman, Barnett Bank, Florida

JOHN C. STATON JR.
Partner, King & Spalding

A. RUSSELL CHANDLER
Chairman and CEO, Whitehall Group

KENNETH G. BYERS JR.
President, Byers Engineering Co.

DONALD L. CHAPMAN
CEO and president, OPTI-WORLD Inc.

ALVIN M. FERST JR.
President, Alvin Ferst Associates Inc.

DAVID C. GARRETT JR.
Executive Committee chairman, Delta Air Lines Inc.

JACK F. GLENN
Retired chairman, Citizens & Southern National Bank

EUGENE C. GWALTNEY JR.
Retired chairman, Russell Corp.

GEORGE H. HIGHTOWER SR.
Retired chairman and CEO, Thomaston Mills

JOHN P. IMLAY JR.
Chairman, Dun & Bradstreet Software

AARON J. LAND JR.
Chairman, Pope & Land Enterprises Inc.

JULIAN LECRAW
President, Julian LeCraw & Co.

FRANK H. MAIER JR.
President, Maier & Berkele Inc.

WADE T. MITCHELL
Executive vice president, Trust Company Bank

JOHN C. PORTMAN JR.
Chairman and CEO, the Portman Cos.

D. RAYMOND RIDDLE
President and CEO, National Service Industries Inc.

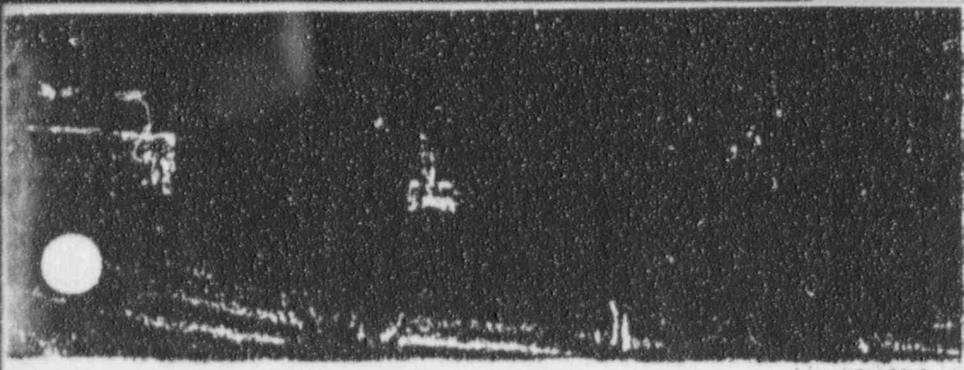
H. HAMMOND STITH JR.
President, Stith Equipment Co. Inc.

FILE

Georgia Tech has been the incubator for some of Atlanta's wealthiest and most influential leaders.

STAFF

↑ NEWT'S "HOUSE GROUP"



J.C. LEE/Staff

on Aruba Circle would have complex almost in the back yard.

"Not many people want to live in this kind of situation," he said, explaining that during rush hour, it takes 15 to 20 minutes to get off Lake Hearn Drive, the only access street, because of congestion created by the new office complexes.

Lake Hearn Drive runs east to west, linking Peachtree-Dunwoody and Ashford-Dunwoody roads.

The purchase of the subdivision by Albritton Development Corp, a Texas-based company that moved into the Atlanta market with luxury townhouses, is contingent upon the tract's being rezoned.

The price that the owners will receive also is based

See SELLS 10D

The Atlanta Constitution 1-16-84 1-D

BILL HOLBROOK/Staff

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6D

MONDAY PROFILE

An engineer in the field of banking

By Peter Mantius
Staff Writer

TECH

To make ends meet as a married engineering student at Georgia Tech, Virgil Williams developed a subdivision.

Since then, Williams, now 44, and his brother Jim, 51, have built a Stone Mountain-based business empire with interests in real estate, engineering, construction, and most recently, banking.

"When we see an opportunity to make money, we follow it," Virgil Williams said in an interview. "We're not a conglomerate for the sake of being a conglomerate."

The Williams companies have made swimming pool equipment, bomb parts and electronic toy cars. They have painted Atlanta-Fulton County Stadium, built the parts for the Scream Machine at Six Flags over Georgia and coated metal in more than a dozen nuclear reactors.

Annual revenues for the companies they control total more than $40 million. The brothers — who split their assets down the middle — own another $30 million in real estate. Jim, also a Georgia Tech engineer, handles manufacturing operations, while Virgil takes responsibility for real estate and banking.

The brothers bought control of the $27 million-asset Gwinnett County Bank in 1980, merged it with Fulton County Bank in 1982 and renamed it Heritage Bank.

More and more of Virgil Williams' time these days is devoted to Heritage, which has taken more initiatives in a year than many banks take in 50.

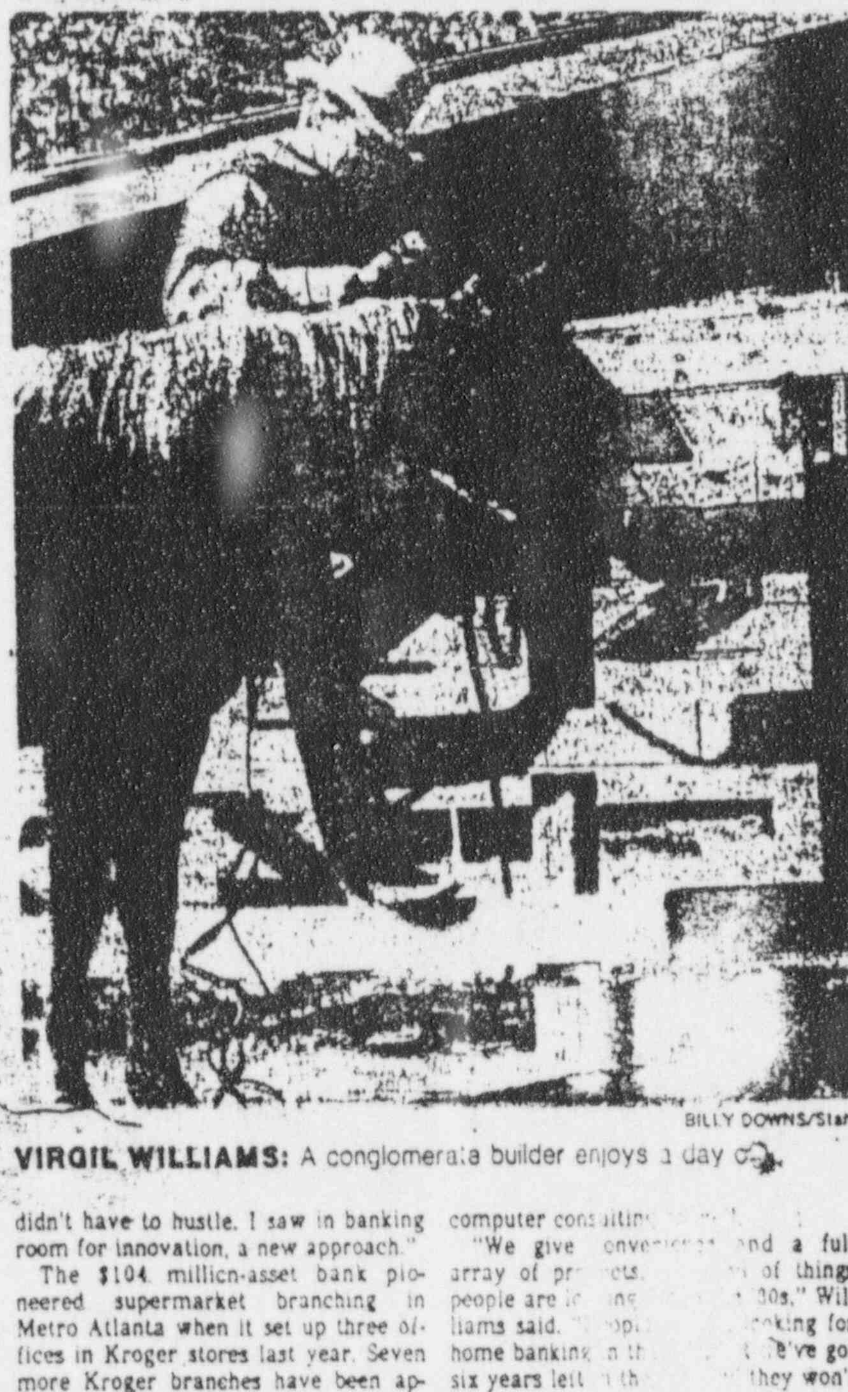
"Bankers are lazy," Williams said. "They are not accustomed to having to hustle. I was never aware that people didn't have to hustle. I saw in banking room for innovation, a new approach."

The $104 million-asset bank pioneered supermarket branching in Metro Atlanta when it set up three offices in Kroger stores last year. Seven more Kroger branches have been approved, and perhaps a dozen others are planned.

Heritage offers insurance and travel services at its main branches, and may soon offer discount brokerage and computer consulting

"We give convenience and a full array of products, of things people are lo ing 30s," Williams said. " ooking for home banking n th e've got six years left n th they won't be doing muc on then."

Heritage a ground in



BILLY DOWNS/Staff

VIRGIL WILLIAMS: A conglomerate builder enjoys a day o

See WILLI 7D

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The most intelligent car ever built

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Financial Consultant

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HORSEMAN: Williams also enjoys quail hunting.

Williams

1-16-84

FROM 1D

the area of home mortgages last fall by promising to approve or disapprove loan applications within five business days, about a quarter of the time the process typically takes. The bank's mortgage loan business has since increased tenfold to about $1 million a week.

"I'd learned about time and motion theory at Georgia Tech," Williams said. "I applied that logic to mortgage closings."

Heritage's rapid growth comes as no surprise to Lt. Gov. Zell Miller. "Virgil is a very innovative guy," Miller said. "He's also got a good deal of common horse sense."

Miller nominated Williams to a committee that helps set salaries for elected state officials. He also is a personal friend who has been invited to hunt quail at the Williams' 7,500-acre plantation near Albany.

Quail hunting has become something of a ritual for the Williams brothers. They bought the South Georgia property to pursue that gentlemanly pastime.

Williams, who is married and has three sons and a daughter, also keeps quarter horses at his 100-acre farm in Gwinnett County. Some of them have been trained to herd cattle. Last year he broke his hip when a quarter horse threw him into a corral gate, but the injury has healed.

A Southern Baptist deacon, he has been heavily involved in Gwinnett civic affairs. He joined the Gwinnett County Hospital Authority in 1980 and "made the conclusion at that time that we had to have a large, full-scale hospital."

As chairman of the authority in 1982, he pushed to find a financing alternative when county voters rejected a proposed bond issue to build a new hospital.

Private financing meant that the bonds were sold at a higher rate, but construction has started and the hospital is scheduled to open in a year.

Williams' business career has gained momentum steadily since he joined his brother in business in 1963.

The brothers — who have 16 first or second cousins in construction and real estate businesses in metro Atlanta — had inherited their father's painting and swimming pool equipment company. The equipment business led to metal fabrication jobs.

"About the time of the Vietnam conflict, we had the opportunity to turn to munitions," Williams said. The company began making rocket and bomb fuses and nose pieces for projectiles. Later, the brothers took advantage of a national fad for model electric cars.

Their primary business of painting and decorating brought jobs at the Atlanta Civic Center, Grady Hospital and Tower Place. "But we surrounded ourselves with Georgia Tech engineers and started getting away from painting to corrosion control."

The company put itself on government bid lists and landed a job coating a Kennedy Center launch pad. The paper and nuclear power industries became their best markets for metal corrosion control.

The corrosion control business has evolved into general maintenance contracts at industrial plants. "As the Nuclear Regulatory Commission has tightened its regulations, we've tightened with them," Williams said.

But Williams' older brother has taken the lead in most engineering and contracting areas, while he has handled administration, real estate and Heritage Bank.

Banking, particularly during its current deregulation phase, offers Williams plenty of opportunity to use his business skills in new areas.

When the state's big banks started a Georgia automated teller machine network in December, they invited their peers to join. Though uninvited, Heritage sought out the network planners and paid $600,000 to become the network's smallest co-founder.

Heritage, the state's 14th-largest bank, recently bought Financial Data Services Inc., which handles data processing for 27 small banks. Williams said that in the future he expects to see a hybrid bank branch that offers advice to support home banking.

Dale Reistag, a widely respected Florida banking consultant, has predicted the same thing, but Williams said he has never heard of Reistag.

"When home banking comes, we'll be there," Williams said.

Call:
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1256-11 Johnson Ferry Road
Marietta (Next to Merchant's Walk)
Hours: Mon.-Sat. 10am-6pm.
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Terry Holman
Financial Consultant

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cordially invites you to a 2½ hour co
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the Atlanta Constitution 11-24-87 F-1

Swiss firm agrees to acquire a 20% stake in Williams Services Group

By Peter Mantius
Staff Writer

A private Swiss investment company, Omni Holding, has agreed to acquire a 20 percent stake in the Williams Services Group Inc. of Stone Mountain through a $20 million investment in equity, debentures and options.

The funds will be used for major expansion of the company, particularly in the businesses of asbestos removal and hazardous waste treatment.

For example, the Williams Group plans to bid for the right to own and operate Georgia's proposed new hazardous treatment plant. Five counties remain in contention for the plant, and a final decision on the location isn't expected until next year at the earliest.

"We don't know of other bidders in the state," said Virgil R. Williams, Williams Group's chairman and chief executive. "But there might be some. We have the equipment and technical skills to do the job."

Last spring, the Williams Group had planned a $20 million public offering before Omni Holding agreed to make the entire investment.

See WILLIAMS, Page 9-F

Williams Group CEO Virgil Williams said there may be other bidders for the plant.

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From Page 1-F

Omni is owned by Werner K. Rey, one of Switzerland's best known entrepreneurs. Earlier this year, it acquired Jean Frey AG, Switzerland's third-largest publishing company for $131 million after a takeover battle. Omni has assets of about one billion Swiss francs, or about $700 million.

Omni owns a variety of service companies in the United States, England, Germany and Switzerland. It employs about 2,500 in the U.S., where 45 percent of its business assets are based, according to Peter Stefanovits, an official with the Swiss holding company.

Rey's involvement in a takeover battle for Beverly Hills Federal Savings and Loan Association in 1984 resulted in his being sued last year by the Federal Savings and Loan Insurance Corp., among others.

Omni also owns 60 percent of Inspectorate International, an international quality control company. The Williams Group investment may create some synergies with those interests, Stefanovits said.

The Williams Group, entirely owned until now by Williams and his brother, James M. Williams, operates 10 subsidiaries with about 2,000 employees and annual revenues of about $70 million. The businesses include pulp and paper, power generation, petrochemicals, petroleum, general manufacturing, contracting and construction.

Thomas Moreland, former Georgia Commissioner of Transportation, serves as the Williams Group's executive vice president and chief operating officer. James Williams is president.

Their company is not affiliated with the Williams Brothers Companies Inc., a local lumber and construction firm recently acquired by London-based Blue Circle PLC. But the former owners of Williams Brothers are related to Virgil Williams and James Williams.

Virgil Williams and James Williams recently became the largest shareholders in Bank South Corp., Georgia's fourth-largest bank, as a result of their sale of Heritage Bancshares Inc. to the Atlanta bank holding company. Heritage had assets of $340 million before it was merged into Bank South.

The brothers also own a real estate development firm that manages one million square feet of office, warehouse and shopping center space and develops about 250,000 square feet of new space annually.

The Williams Service Group at a glance

HEADQUARTERS. Stone Mountain.

BUSINESSES. Pulp and paper, power generation, petrochemicals, petroleum, general manufacturing, general contracting and construction.

COMPANIES. Williams Power Corp., Azcon Inc., Williams Maintenance Services Inc., Shaw Insulation Service Inc., Offshore Painting Contractors Inc., Gulf Tech International Inc., Pulpco, Williams Mechanical Inc., Williams Engineering Corp., Williams Environmental Services Inc.

Chrysler hiking output 1.4%, but shutting 4 plants

The Associated Press

HIGHLAND PARK, Mich. — Chrysler Corp. will raise production 1.4 percent in the first quarter of 1988, but also will shut four plants temporarily and reduce production permanently at three of them, Chrysler Motors Chairman Gerald Greenwald said Monday.

The changes mean Chrysler will lay off 10,200 employees for one to three weeks in January, add 1,300 workers at a plant in Illinois and put 2,900 on indefinite layoff in Michigan, Delaware and Missouri.

Chrysler plans to make fewer cars and more trucks while increasing its overall vehicle output by 1.4 percent to 575,000 from 567,000 in the same period a year earlier.

The company intends to make 300,000 cars, down from 326,000 last year, and 275,000 trucks, up from 241,000 last year.

According to Ward's Automotive Reports, an industry publication, General Motors Corp. and Ford Motor Co. also plan to reduce car production in the first quarter compared with a year ago.

Greenwald predicted Chrysler's car sales would increase during 1988 to reflect the return of the Omni-Horizon subcompact, which went out of production in March and resumed in September, and of the New Yorker and Fifth Avenue luxury cars.

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Building Bombs

Live action. Producers: Mark Mori and Susan Robinson. Copyright 1989. Released 1990. Available from The Video Project. 54 min. Color. $45, home use. $95, public perf.

623.4 Nuclear weapons | Nuclear warfare—Social aspects

AUDIENCE: High School to Adult

AWARDS: San Francisco International Film Festival Best of Category, 1990; Chicago International Film Festival Silver Hugo, 1989; Marjorie Benton National Peace Prize, 1990

Playing with fire is the theme of *Building Bombs*, a chronicle of how the US Department of Energy's (DOE) Savannah River hydrogen bomb plant turned from an atomic dream into a cataclysmic vision of living in the maw of the nuclear beast.

In 1950, with the asssistance of the DOE, the Du Pont Chemical Company implemented the largest construction project in history, leveling small towns in a 300-square-mile area in three South Carolina communities. This action prompted displaced refugees from one city, Ellentown, to erect this hand-painted sign of protest: "It is hard to understan why our town must be destroyed to make bomb that will destroy someone elses town that we love as much as we love ours." When one couple refused to move from their home, they were declared insane and placed in a mental institution. Thus was the cool water of the Savannah, roiled by nuclear wastes, made to seethe—resulting in a shift from fishin' to fission.

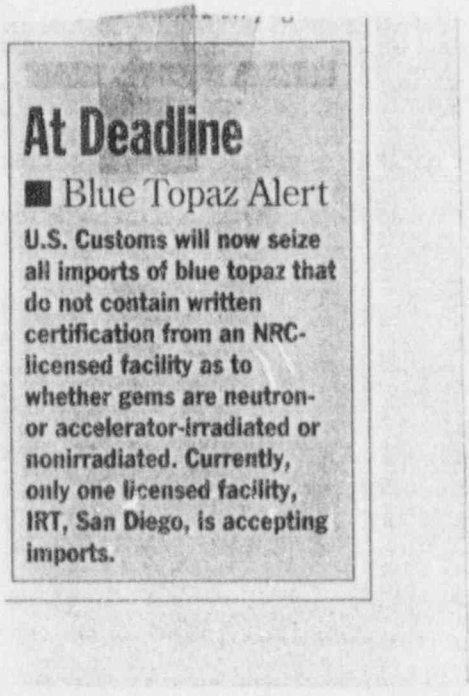
A thoroughly researched script is the linchpin of the skillfully edited production that adroitly mixes black-and-white stills and film clips with compelling interviews and intriguing footage shot at the bomb plant.

Producer-directors Mark Mori and Susan Robinson cleverly intercut inverviews of smugly assured proponents and alarmed opponents. Two former physicists with the DOE are featured, as both begin to work on the project in good faith, only to learn enough on the inside that one resigns to take a teaching position and the other resigns in order to organize antinuclear activities.

Packed with startling information about the dangers of nuclear weapons production and subsequent waste storage, this 54-minute program generates a powerful impact. For example, it is sobering to think that the amount of plutonium on the point of a pencil is enough to kill thousands of people, yet this plant contains over 200,000 pounds of that material; and 35 million gallons of toxic waste is stored underground in cardboard boxes and leaking tanks. But the most shocking revelation in the program is the fact that toxic radioactive materials are seeping into the Tuscaloosa aquifer, which provides water for five Southern states. The program concludes with shot of a road sign that originally read "SAVANNAH RVR PLANT," now altered to read "SAVE OUR PLANET."

While the program takes a clearly antinuclear position, the research provides abundant information to make its case. Recommended for all libraries

—William P. J. Costello



At Deadline

Blue Topaz Alert

U.S. Customs will now seize all imports of blue topaz that do not contain written certification from an NRC-licensed facility as to whether gems are neutron- or accelerator-irradiated or nonirradiated. Currently, only one licensed facility, IRT, San Diego, is accepting imports.

Dear Pamela -
I'll have to send the name & this publication when I get the next issue.
It's good to make contact with people who care enough to WORK on these projects —.
Peggy Ackerly

sue outgoing senators and representatives to see if they will sell their personal cache of presidential letters and autographs. A recent ad in a Capitol Hill newspaper offered $2,000 for handwritten letters from Reagan or Bush with "complete confidentiality assured."

As for the value of Congress members' signatures, Hartunian says they're sold in lots of 100 at auctions. There's so little interest that no one even bothers to check that they're genuine and not done by autopen. "Literally," he says, "you can't give them away."

—Jeryldine Tully

(Jeryldine Tully is a frequent contributor.)

SAY IT WITH DOLLARS

Under the banner of keeping constituents informed, Arizona state legislators have set up special party accounts to fund newsletters that critics say read like campaign literature.

State campaign reform laws that went into effect in 1988 allow state senators and House members to accept no more than $200 from political action committees ($1,000 from so-called super PACs). But since the "constituent communication" accounts are ostensibly for "informational communications relating to [a legislator's] official duties," they are not subject to the same limits or disclosure requirements as campaign contributions. Another difference: Corporations and unions, which are prohibited from contributing to campaign accounts, can donate freely.

Says Rep. John Kromko (D-Tucson), "The [donations] really are campaign contributions," since they pay for newsletters that practically say "vote for me."

Two party-run Democratic committees — one each in the House and Senate — and a special nonprofit entity set up by House Republicans were established in 1989 to fund the newsletters, which make no secret of their partisan nature.

The four-page Democratic mailings are tailored so that residents of a given district get a special page touting the accomplishments of their representative. A summary of legislative highlights reads, "Despite Democrats' urging to take up key issues, . . . no 'take charge' attitude emerged in the GOP ranks. . . ." The newsletter adds, "What was considered . . . and approved by Republicans . . . was a multi-million-dollar tax increase."

The one-page House Republican flyer has a different version of events: "The $3.2 billion budget . . . avoided the need for $120 million in new taxes." Republican appeals for $1,500 and $2,500 contributions have thus far garnered $20,000, about $14,000 from PACs, according to the fund's co-chairman Rep. Bev Hermon (R-Tempe).

The heads of all three accounts (Senate Republicans are in the process of setting one up) deny that the kitties violate the spirit of campaign reform laws. "Our legislature doesn't fund communication with constituents," says Armando Ruiz (D-Phoenix), head of the House Democratic account. "You can choose to keep the public in the dark or you can . . . inform them."

But six state legislators — four Democrats and two Republicans — see problems with how the newsletters are financed, to say nothing of how they increase an incumbent's advantage. In January the six announced they would not participate in the party mailings. Rep. Jack Jewett (R-Tucson) explains, "Constituent communication and campaign documents [are] difficult to distinguish. If I send out a constituent communication mailer, it will be paid for with campaign funds . . . not direct corporate contributions."

—A.Y.

HOT JEWELRY

Enterprising operators of at least one nuclear test reactor began selling a novel service a few years ago — zapping clear topaz stones to turn them a deep blue popular with consumers. The activity, however, has started a regulatory loosening that may soon result in more low-level radioactive products on the market.

The Nuclear Regulatory Commission (NRC), which once snared a "hot" topaz shipment from Brazil, ordered the gem treatments stopped in the mid-1980s pending study of radiation levels. American gem trade groups immediately cried foul, saying the U.S. market would be flooded with stones irradiated overseas, and the U.S. would sacrifice yet another industry — worth several hundred million dollars — to foreign competition. "Our point was you cannot stop this. It's coming in from abroad," says Junaid Razvi, director of General Atomics' test reactor, whose application to treat gems had focused the NRC's attention on the practice.

In 1987 the NRC staff recommended against allowing distribution of the stones, saying, "The gems represent a source of unnecessary, low-level radiation exposure to the public."

The agency's commissioners, rejecting the staff conclusions, ordered a second report, whose contents remain a mystery. The only copy available to the public has been heavily censored. What is known is that, after heavy lobbying by the gem industry, the NRC changed its policy and in late 1988 granted licenses to the University of Missouri and General Atomics to irradiate and distribute topaz. According to the NRC, the gems give off less than one millirem per year if worn constantly. A chest X-ray, by comparison, produces a 25-millirem exposure.

To the distress of consumer and environmental groups, though, the agency's topaz talks helped trigger a more far-reaching proposal that's now in the pipeline to loosen restrictions on other items with low radioactivity. The NRC is also expected to act soon on industry's call to allow disposal of low-level radioactive waste in ordinary landfills. Critics of the schemes cite

over

↑ BEIR V REPORT, NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL

studies like one released last December by a National Research Council panel, which reports that individuals exposed to low-level radiation may stand a much greater chance of developing cancer than previously believed.

There is also concern about the lack of standards abroad. Rarely are imported stones too radioactive, says Richard Cunningham, director of the NRC's Division of Industrial and Medical Nuclear Safety, but "at some point, we will have to attempt to cut off the unauthorized import of irradiated gems." The agency currently has no legal authority to stop or monitor the imports. U.S. reactors also send stones abroad with radiation readings above NRC limits — and there's no way to know if they're reimported. Stones treated at the University of Virginia's test reactor, for example, are exported with five times the radioactivity levels permitted domestically, though they "cool down" somewhat with time.

Meanwhile, jewelry customers in this country are left guessing. While the American Gem Trade Association and other groups advocate disclosure of gem enhancements, not all retailers comply. —*V.N.*

TOXIC ATMOSPHERE

A battle that has been raging for years inside the Environmental Protection Agency's inspector general's office is about to go public.

A struggle between several IG office employees and their superiors escalated early last year when a manager with the IG's office, J. Richard Wagner, and EPA investigator John Chudson sent a memo to the office of EPA head William Reilly attacking "what we consider to be failures of integrity, moral authority and leadership" in the IG's office and asking for an investigation of IG John Martin and his deputy John Barden. The memo charged Martin with directing the hiring of a friend's son who had failed to report an arrest on his government application, tolerating the submission of false documents and travel vouchers, abusing travel and other wrongdoings. Some of the complaints involve amounts of money that may be petty, says Chudson, but they undermine the authority of the IG's office and contribute to bad morale.

Then last May, EPA whistleblowers William Sanjour and Hugh Kaufman asked for an investigation of a March 1989 meeting between EPA Administrator Reilly and officials of Waste Management Inc., the nation's largest waste-processing firm. A few days after the meeting, Reilly angered environmentalists by reopening hearings on whether to challenge a North Carolina law that strictly regulates discharges from waste treatment plants.

When EPA's IG office cleared Reilly of any wrongdoing last summer, several EPA employees complained that EPA regulations governing investigations were not followed. In a 24-page critique, Wagner pointed out that Reilly, Martin and other IG officials met the day after Sanjour and Kaufman filed their complaint, and when investigators officially interviewed Reilly in August, his statements were accepted uncritically. IG Martin calls the Reilly investigation "impartial" and declines to comment further.

There's also controversy over the IG's oversight of how EPA is handling the Superfund hazardous-waste clean-up. Martin told a Senate hearing in October that EPA's multibillion-dollar Superfund program was susceptible to fraud but defended his office's performance. "We have taken the position fairly consistently that we simply can't oversight [sic] that program with the amount of resources we have."

Critics agree that more resources are needed, but say the IG's office, which has achieved only a few Superfund convictions, has devoted time and money instead to conducting "off-the-books" investigations of whistleblowing employees. One EPA inspector says the IG's office ordered investigators to watch her hotel room while she was on official travel. Both Chudson and Wagner have fought demotions with appeals to the Merit Systems Protection Board. And Dr. Rufus Morison, an official with the National Federation of Federal Employees, says he has undergone multiple IG investigations in retaliation for his union activities at EPA and criticisms of the agency.

Now Oversight and Investigations Subcommittee Chairman Rep. John Dingell (D-Mich.) is looking into the numerous accusations. Some Reilly supporters accuse Dingell, who has clashed with EPA over the Clean Air Act, of playing hardball politics, an accusation Dingell staffers deny. When asked about the allegations, Martin says, "It's getting to the point of a harassment type of campaign," adding the charges are old ones that have been "thoroughly investigated and long ago resolved." —*P.M.*

POLITICAL FOOTNOTES

Friends In Need What inspired J.T. Moran employees' sudden enthusiasm for Massachusetts Rep. Joseph Kennedy last year? The New York brokerage firm hosted two fundraisers for the House Banking Committee Democrat on the same day in February 1989 — in fact, last year at least 42 Moran employees contributed some $17,000 to Kennedy's campaign account. In the previous election cycle, only company founder Moran gave to Kennedy.

At the time of the fundraisers, the so-called penny stock firm was amassing a litany of woes, including civil suits and state actions, that eventually forced it into Chapter 11 bankruptcy proceedings this January.

Moran says he has never asked Kennedy for any favors, and Kennedy's office concurs. "If these are difficult times for him, Joe would be concerned on a personal level," says Kennedy spokesman Chuck McDermott. "There's been no professional interaction." Moran says he staged the fundraisers only because "Joe Kennedy is as strong a young leader as I've come across."

Evidently not all J.T. Moran donors shared those sentiments. Former employee Frank Muscarello says he's a Republican, but "they said 'You're having breakfast with him, and oh, by the way, you're giving money.' "

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The Pentagon on Wednesday also announced a list of military units that will be arriving home from the Persian Gulf by this weekend. That list included the 197th Separate Brigade (Mechanized) from Fort Benning, Ga.

CNN

President Bush in a speech Wednesday night before a joint session of Congress described U.S. troops in the Persian Gulf as "the finest fighting force this nation has ever known." During the speech, the president was interrupted by applause and standing ovations more than 20 times.

mir of Israel has adamantly opposed any exchange of "land for peace" and has defiantly proclaimed the occupied lands as "greater Israel."

Please see **BUSH, A10** ▶

the historic events of Desert Storm, from the devastating allied air assault to the incredible ground blitz. The special edition is available for a limited time for $4.95. To place credit card orders call **222-2000**.

Atlanta Constitution 3-7-91 1-A

DeKalb OK'd funds to agency later linked to Hosea Williams

Commissioner denies current involvement

By Douglas A. Blackmon
Staff writer

Hosea Williams Lobbied for $20,000 grant to the Small Business Economic Development Corp.

DeKalb County Commissioner Hosea Williams last week persuaded the county to give $20,000 to a non-profit corporation that he created and whose officers are his chief political associate and his daughter.

Other commissioners said Mr. Williams requested the funding, lobbied them for its approval and voted for it without indicating his connection to the Small Business Economic Development Corp. The commission approved the grant on a 6-1 vote.

"It's something I'm trying to revitalize. ... I don't have any connection to it," Mr. Williams said Wednesday. He said he helped to start the organization but no longer controls it.

DeKalb Chief Executive Officer Manuel J. Maloof and four commissioners said they knew nothing of Mr. Williams's association with the non-profit corporation, and several board members said they would reconsider their vote for the funding.

The vote came as the commission approved a $257 million budget that eliminated 92 county jobs and will require the layoff of at least 30 workers.

"The fact that Hosea is an officer and that other members of his family are, we might even be precluded under the new ethics code from funding it," said Commissioner Annie Collins, who voted for the funding. The DeKalb ethics law prohibits elected officials and their families from profiting from county contracts,

Please see **WILLIAMS, A15** ▶

Mason Whitney has leased a 2-acre lot on Lake Burton from Georgia Power for 30 years. Annual leases on the lakefront lots average $500; the house on this lot is worth $350,000.

William Berry/Staff

Lake homes range from modest to mansion

Ga. Power lakeshores now sought-after, costly refuges

By John Harmon
and David Goldberg
Staff writers

Fresh from the Korean War, Mason Whitney of Atlanta purchased a one-quarter interest in a Lake Burton cabin for $750. Some 30 years later, after two additions, the house overlooking the sparkling lake in North Georgia is worth $350,000.

And he doesn't even own the 2-acre lot on which the one-story cottage sits. It belongs to Georgia Power Co., which owns Burton and 13 other lakes from the mountains to the South Georgia flatlands.

Time was when almost anyone could lease a lot on these lakes, just for the asking and a small rental fee.

But in recent years, as the lakes have become popular refuges for urbanites seeking vacation and retirement homes, lots have become harder to lease — and much more expensive.

▶ Legislator gets last cheap lot **B1**

Please see **LAKES, A15** ▶

Lakes: Demand, scarcity hike value of lot leases

▶ Continued from A1

They will be even more scarce under a new policy announced Tuesday by Georgia Power, which in the future plans to assign leases only to charitable organizations or utility employees.

The new policy was adopted because of concerns over ethics raised by the granting of leases to influential public officials. Felker Ward, a member of the Board of Natural Resources, leased a lot Lake Burton in June. State Rep. John Lupton (D-Atlanta) leased one on the same lake in December.

At Lake Burton, no lots have been available to the general public since the mid-1980s.

In fact, leases are so valuable that the supply of 1940s fishing shacks has been depleted. They bring $150,000 or more just so the new owners can obtain the Georgia Power lease, tear down the shack and build a luxury second home, said Mr. Whitney, a real estate agent on Burton since 1973.

The little undeveloped private property rimming the shores brings a premium price. A 38-acre tract on Rabun was auctioned in 1987 for $6 million.

Despite a 1980s invasion of yuppies, Burton and its sister lakes, Rabun and Seed, retain the unique charm that comes with an old resort community. The reservoirs were created by dams built across the white-water Tallulah River between 1919 and 1926. Many of the cottages are now in the hands of second and third generations of Atlanta families.

At times, your neighbors on Lake Burton could be as famous as now-governor Zell Miller, who has now given up his place. Or they could be as ordinary as Horace Justus, a barber in the county seat of Clayton or retired Atlanta fireman John Howell.

Almost all the lakeshore of Burton and Seed is owned by Georgia Power and is either un-

The sense of community is strong. Homeowners sponsor a Fourth of July fireworks display from an island in Burton. On Rabun each summer, a regatta shows off a collection of old wooden-hull boats. A private security force has been contracted since 1974 to protect the homes that are unoccupied in the winter months.

The Georgia Power lake with the most lots — 1,139 — is Bartletts Ferry, also known as Lake Harding, which was completed in 1926 about 25 miles north of Columbus on the Chattahoochee River. Although Bartletts Ferry is not as densely developed as its northern counterparts, in the past few years, more and more leaseholders have built year-round residences, some valued at as much as $350,000.

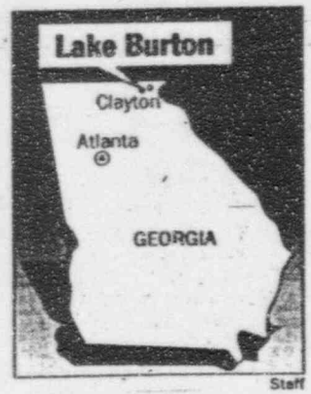
The jagged fingers and jutting promontories that make up the shoreline are a mishmash of tiny wooden cabins, singlewide trailers, modest middle-class homes and palatial residences — often within yards of each other. For years, area banks would not lend money to build on Georgia Power's leased land. A change in that policy apparently helped triggered the boom.

The way leases are awarded has always been something of mystery, lake residents said.

"You have to fight tooth and nail to get lots," said Bill Hudson, vice president of the Lake Harding Association, a group of about 300 leaseholders. "You don't just come and get them. It does help to know somebody."

Doctors, lawyers and other high-salaried Columbus professionals have paid top dollar to induce leaseholders to sell their cabins, and with them their leases, which average about $500 per year. Residents agreed that most lots now are worth $50,000 to $60,000 undeveloped. Georgia Power charges a lease transfer fee of $1,000.

"We had a little 1,600-square-



Staff

replace it with an upscale residence. "What people are really doing is buying the lease."

Although Georgia Power employees have always gotten first dibs on new lots, some residents said they think the new policy is unfair.

At The Store, a convenience-gas-video-delicatessen store that is a gathering place for residents of the remote lake area, the leasing policy was the topic of the day Wednesday for regulars who dropped by.

"They can't take it away from us, can they?" asked Don McCaghren. Once reassured that that wasn't about to happen, the heating and air-conditioning contractor brightened.

"This ought to make our property values go up about 25 percent," he said.

Utility has leased lake lots for 50 years

Q: *How did Georgia Power obtain the land for these lakes?*

A: Georgia Power took control of much of the land when it was chartered in 1926 and formed by several small utilities. The land, mostly in valleys, had been acquired as the state moved toward hydroelectric power as a source of electricity for rural areas. All told, the utility now owns almost 27,500 acres of land around its lakes, Georgia Power spokesman Todd Terrell said. Much of the land is now divided into 3,881 lots that the company leases for recreational use.

Q: *When did Georgia Power begin leasing the property?*

A: The lake-lot leasing program began 50 years ago, but the lots were not in high demand until the 1970s, when North Georgia began its transformation into a popular resort area. Since then, Georgia Power has become more selective in giving out leases on the property.

Q: *How do you get a Georgia Power lake lot?*

A: Until this week, you had to know someone within Georgia Power to recommend you. "We lease[d] to people we are certain will only use the lot for personal or family use, and not for profiteering," spokesman Gordon Van Mol said this week. Public officials who have been allowed to lease lots include Felker Ward, a member of the state Board of Natural Resources, and Rep. John Lupton (R-Atlanta). Because of ethical concerns raised, Georgia Power announced this week that its lots "will be made available only to charitable organizations . . . or to employees of our company," Mr. Van Mol said.

Q: *How valuable are these lots?*

A: The price varies from lake to lake. Demand for the lots is highest in North Georgia. A 38-acre, privately owned plot on Lake Rabun recently sold for $6 million, or $158,000 an acre. Small shacks on leased property have sold for only slightly less, as long as the lease comes with it.

Q: *How much are lease payments?*

A: Renters are required to pay an average of $500 a year, Georgia Power officials report.

Q: *At that rate, what kind of profit does Georgia Power make off these properties?*

A: The lakefront leasing program is only "slightly profitable" to Georgia Power's stockholders, company officials said. A tenant's lease payments cover administrative and maintenance costs and taxes on the land.

Q: *Can you lose the lease?*

A: Generally, no. Georgia Power requires that renters build on the property, and virtually all leases are renewed when their 15 year life expires. Transfers of the lake-lot leases are restricted for the first five years of the lease, officials say. A $1,000 fee is charged on transfers involving non-family members.

Q: *Who has the leases now?*

A: Georgia Power, which is a state-regulated utility, argues that it has never included the costs associated with the lake lots in the bills of its customers. Thus, it says the list of lake-lot holders is private, and not subject to regulation by the state. But Georgia Power has permitted reporters on several occasions to inspect the list.

lakes, Rabun and Seed, retain the unique charm that comes with an old resort community. The reservoirs were created by dams built across the white-water Tallulah River between 1919 and 1926. Many of the cottages are now in the hands of second and third generations of Atlanta families.

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Almost all the lakeshore of Burton and Seed is owned by Georgia Power and is either undeveloped or in lots. About 60 percent of Rabun is owned by the utility. About 80 percent of the houses are second homes.

You have to fight tooth and nail to get lots," said Bill Hudson, vice president of the Lake Harding Association, a group of about 300 leaseholders. "You don't just come and get them. It does help to know somebody."

Doctors, lawyers and other high-salaried Columbus professionals have paid top dollar to induce leaseholders to sell their cabins, and with them their leases, which average about $500 per year. Residents agreed that most lots now are worth $50,000 to $60,000 undeveloped. Georgia Power charges a lease transfer fee of $1,000.

"We had a little 1,600-square-foot cabin that sold for $135,000," one lake resident said. The new owners planned to raze the weekend "shack" and

Williams: Associate, daughter are officers in non-profit firm

▶ Continued from A1

but does not bar commissioners from association with county-funded non-profit groups.

Commissioners said Mr. Williams told them the company advises small minority businesses in south DeKalb and Atlanta on how to obtain government and other assistance.

He made no mention of any personal connection to it, they said.

Mr. Williams incorporated the company in 1978 and is listed in state records as an officer. Its chief financial officer is his top political and business aide, Terrie Randolph, and its secretary is his daughter, Elizabeth Williams-Omilami.

"Maybe I'm still listed [as an officer], but I resigned," said Mr. Williams. "I have no official function or control of the funds."

The only public funding the company has previously received was a $35,000 grant from the city of Atlanta in 1989 while he was a member of the City Council, Mr. Williams said.

He said the city's Ethics Board told him his past association with the organization would not disqualify it from city funding. However, Ethics Board Chairman Randolph Thrower said Wednesday he could not recall the question ever coming up.

The Small Business Economic Development Corp., unlike the 27 other non-profit agencies that submitted 30-page requests for DeKalb County money, never officially applied for funding. Normally, agencies requesting county funds must submit a budget and a lengthy application, which are then reviewed by DeKalb's Human Services Coordinating Board.

The county had no file — or even an address — for the organization.

"That was just something recommended by Hosea Williams toward the end of the budget process. They didn't go through the regular funding process," said Janet Lipscomb, the DeKalb budget analyst in charge of the files.

Mr. Williams denied any impropriety Wednesday.

"I resigned all my affiliations when I got on the [Atlanta City] Council," Mr. Williams said. "I'm not associated with it now. That's what's important."

He said the group is inactive but has an office in his building on Boulevard Drive.

Salaries consumed the bulk of the Atlanta grant. Of the $31,826 in city funds spent by the company in 1989 and 1990, $28,500 was paid in salaries, according to Margaret McClure, vice president of the Atlanta Economic Development Corp., which administered the grant.

Of the salaries, Ms. McClure said, $20,000 was paid to Miriam Petty, one of Mr. Williams's close aides. The rest was divided between two other employees, including his son Andre.

Records show that another $1,550 was paid in rent to Southeastern Chemical Manufacturing & Distribution Corp., which is owned by Mr. Williams's family, for the office on Boulevard Drive.

During the grant period, the company reported that it conducted three seminars and published two small business directories, records show. In addition, Mr. Williams said the organization visited and consulted with many other businesses.

The DeKalb funding was inserted as part of a last-minute budget compromise between Mr. Maloof and the board's Budget Review Committee, of which Mr. Williams was a member. The action came after the commission had concluded its public hearings on the budget.

Commissioner John Fletcher, who voted against the appropriation, said it looked questionable as soon as he saw it.

"The fact that it arose at the last minute, the fact that it arose as a result of some kind of compromise involving the Budget Review Committee and Manuel," Mr. Fletcher said. "It looked awful suspicious."

Atlanta Journal-Constitution — Sunday 5-5-91

Some of the residents at Lake Burton

Neighbors were business, political leaders

For years, Georgia Power has leased lots around power-generating lakes for $500 or less a year. No matter what kind of structure is on the property, the transfer of the lease can add $100,000 to the sale, say tax assessors. The leases may be transferred after five years. So, for $2,500 in lease payments, a Georgia Power lease could return a profit of $97,500.

Some of those who hold or held leases at Lake Burton:

Robert W. Scherer

▸ He was chairman of Georgia Power during the 1980s. Mr. Scherer has a 3,290-square-foot home set back from the water with a long walkway. The house is valued at $142,370, according to county tax records.

Ralph Twiggs

▸ He is a Democratic state representative from Hiawassee. Mr Twiggs has a 2,843-square-foot house built on a steep, wooded slope. The house is valued at $117,520.

Gov. Zell Miller

▸ He built a two-story, 1,687-square-foot stone and wood home when he was lieutenant governor. To avoid accusations of a conflict of interest, he gave the house to Young Harris College at the start of the gubernatorial campaign. The house has been advertised for sale at $332,000.

Source: Staff news reports

Who leases Ga. Power's lots? Not just anyone

LANDING A LAKE SITE: As already reported, Georgia Power's lease policy has changed. But here are new details on who got what.

By Ben Smith III
Staff writer

In 1983, Georgia Power Co. opened a seven-lot subdivision on pristine Lake Burton in North Georgia.

For $350 to $500 a year, the utility leased the lots of an acre or less to the lieutenant governor, a legislator, two Georgia Power executives, two corporate friends, and a couple close to the utility's chief lobbyist.

Three years later, at nearby Lake Seed, Georgia Power established a 16-lot subdivision.

Among new residents there: two legislators, an aide to the governor, and the head of the state highway patrol. The two lawmakers, who headed the House and Senate banking committees, were given lots flanking a top Citizens and Southern banking lobbyist's.

Until this spring, when utility officials announced a halt to the program, Georgia Power told anyone who asked that such low-cost leases on 10 power-generating lakes were available on a first-

Please see LOTS, A14 ▸

LAKESIDE POWER PLAY

Lot leases were awarded while legislation was pushed

By Ben Smith III
Staff writer

Nearly all the state lawmakers known to have received inexpensive lake lot leases from Georgia Power Co. had either applied for or obtained them at a time when the utility was pushing an aggressive agenda at the state Capitol.

Voting records, including the vote on a major pro-Georgia Power bill that was signed into law last month by Gov. Zell Miller, indicate the legislators tended to side with the utility.

At least 12 lawmakers, plus Mr. Miller as lieutenant governor, have been awarded lot leases since 1982. The lots, worth up to $182,000, were made available for $350 to $500 a year.

State Rep. John Lupton III (R-Atlanta) agreed not to vote on Georgia Power Co. legislation as a formal condition of an agreement he signed for a lease for a lot on Lake Burton. He also promised not to take control of the lease until he left the Legislature. He resigned March 31.

From 1980 to 1985, Georgia Power backed four bills to give the utility direct or indirect means to pay for nuclear Plant Vogtle, a huge project with a budget that swelled to nearly $9 billion from less than $1 billion in the 1980s.

Floyd Hudgins
The Democrat from Columbus has had three lots; he has sided with the utility four times.

Only one of the four bills passed. In the 1991 General Assembly, House Bill 280, which will shift some of the financial risk of building power plants from Georgia Power stockholders to ratepayers, passed easily and was signed into law.

State Sen. John C. Foster (D-Cornelia), who has a lot on Lake Burton, voted for all five Georgia Power bills. Former Sen. Floyd Hudgins (D-Columbus), who has had three lots, sided with the utility four times, and former GOP House Minority Leader Johnny Isakson, who was given a Lake Rabun lease in 1982 and ran for governor in 1990, voted on Georgia Power's side three times.

Both Mr. Isakson and Mr. Hudgins had left the Legislature before the 1991 vote. Mr. Isakson and other House members didn't vote on a pro-Georgia Power bill in 1985 because it never made it to the House floor. Mr. Miller gave up his lake lot before he ran for governor last year.

"I believed them to be genuinely right," Mr. Foster said. "I think history will prove down the road that Georgia Power made the right decisions on Plant Vogtle."

Lt. Gov. Pierre Howard was given a Lake Rabun lease but gave it up without building on it. He voted three of four times against Georgia Power when he was in the Senate. His voting record tracks the outcome of the four bills.

Rep. John Godbee (D-Brooklet) and former Rep. Barbara Couch (D-Hapeville), who have Lake Sinclair lots, also sided with the utility on votes for which they were present.

Georgia Power officials have said the leases were not intended to win votes, and the lawmakers, most of whom applied for their lots before 1980, have said neither the application nor the acceptance of these inexpensive leases affected the way they voted.

But critics of the practice of offering leases to politicians said the lawmakers can be swayed unconsciously by such inducements.

How lawmakers with lake lots voted

Legislators with lake lots, and their votes on Georgia Power-related bills. (A blank spot indicates no vote on that bill)*

	HB1252	SB29	SB18	SB111	HB280
John Foster/Burton	Y	Y	Y	Y	Y
Floyd Hudgins/Seed,Harding	Y**	Y	Y	Y	
Johnny Isakson/Rabun	Y	Y	Y		
John Godbee/Sinclair		Y	Y		Y
Barbara Couch/Sinclair		Y	Y		
John Lupton/Burton			Y		A***
Ralph Twiggs/Burton	Y	N	Y		Y
Terry Coleman/Seed	Y	Y****	N		Y
Frank Pinkston/Seed		N*****	Y		Y
Sidney Marcus/Burton	Y	Y	N		
Bill Dover/Burton	Y	N	N		Y
Pierre Howard/Rabun	N	Y	N	N	

▶ HB 1252: To allow Georgia Power to charge customers for power plants as they are built. (Failed in 1980)
▶ SB 29: To allow Georgia Power to use projected costs to calculate rate hike requests. (Passed in 1981)
▶ SB 18: To allow Georgia Power to temporarily raise electric bills prior to PSC approval. (Failed in 1983)
▶ SB 111: To allow Georgia Power to charge customers for Plant Vogtle costs before it was finished. (Failed in 1985)

*Zell Miller gave up his lake lot before he ran for governor. As lieutenant governor, he voted only to break a tie in the Senate.
**Opposed bill on first Senate vote.
***Abstained as part of agreement with Georgia Power to obtain lake lot.
****Voted against bill on first visit to House. Voted for Senate substitute.
*****Voted for bill on first House vote. Opposed Senate substitute.

Lots: Those with clout seemed to fare better than those without

▶ Continued from A1

come, first-served basis.

Preference was given to company employees, the utility said, but otherwise it did not play favorites, so long as the lessor agreed the lot would be for personal or family use.

But as the examples of Lake Burton and Lake Seed show, those with business, personal or political clout seemed to fare better than those without.

After 1982, at least one of every 10 North Georgia lake lots went to state and local officials, The Atlanta Journal-Constitution found in examining the property

"I just wanted to do it that way," Mr. Brown said. Property taxes paid by Georgia Power make up one-fourth of Rabun County's annual budget, and the county participates in the valuation of the utility's land.

After 1982, at least a dozen state legislators received leases on Georgia Power lake lots, including state Rep. Sidney Marcus (D-Atlanta), who received a lease shortly before he died in 1983. State Rep. John Lupton (R-Atlanta) was the last, arranging to receive his lot after his resignation last March.

While utility officials adamantly deny that leases were

of the deal, according to Rabun County Tax Assessor Mike Copeland.

For instance, Zell Miller, now governor, built a $60,000 house on his lake lot in 1985. Before launching his successful bid for governor, he donated both the house and lease to Young Harris College, which this spring advertised the property for $332,000 in The Wall Street Journal.

The highest price fetched for a house and leased North Georgia lake lot was $725,000, but locals say public officials have been given decidedly less appealing property — particularly on Seed, which looks like a wide

Neighborhoods for the select few

Some of the lessors at Lake Seed in North Georgia:

1. State Sen. Floyd Hudgins. Now out of office, Mr. Hudgins was banking committee chairman when he got the lot. Georgia Power asked him to return it in 1989. He has another lot on Lake Harding near Columbus.

2. Bryan Foster, now regional manager for Citizens & Southern Bank in Savannah. When he got his lease, he was a top C&S lobbyist.

3. Lucille Pinkston, wife of Macon state Rep. Frank Pinkston. Mr. Pinkston is chairman of the House Banking Committee.

4. Patricia Chilliviss, wife of Nick Chilliviss, prominent Atlanta attorney. Mr. Chilliviss was state revenue commissioner in the 1970s.

5. Hugh Hardison, former director of

The Atlanta Journal-Constitution found in examining the property records for three Georgia Power lakes in Rabun County — Burton, Seed and Rabun.

In all, the rights to at least 19 lots, worth a total of $2.3 million, went to those with sway over public policy.

Most of the other lots went to utility employees, Georgia Power board members, and corporate and personal friends of the company.

Georgia Power officials declined comment this week when asked if the pattern of including public officials among its leaseholders represented a company policy.

"We felt we responded appropriately by changing the policy some weeks ago," said spokesman Gordon Van Mol. Amid newspaper inquiries in March, Georgia Power announced an end to the practice — dating back 50 years — of leasing lots to the public.

Henceforth, the company said, it would — to avoid any appearance of impropriety — lease lots only to company employees and non-profit organizations.

Georgia Power officials maintain that many of the lots created in the 1980s went to those with no connections to the utility, but they declined to provide names or numbers.

The exact number of such lots and the identities of all those who received them are not known. Many leases are not recorded in the tax records of Rabun County; Georgia Power has repeatedly refused to make its list of leaseholders public.

New lots on three lakes

During the 1980s, tax records show, the utility carved out as many as 110 new lots among three North Georgia lakes: Burton, Seed and Rabun. Dozens more lots were reclaimed by the power company during that time, and recycled to new renters.

Among those who received them were at least one Superior Court judge, a member of the state Board of Natural Resources, and the Rabun county surveyor.

Robert Brown, as Rabun County's former tax assessor, obtained a Lake Burton lot in 1987 while he was in office. The lot is listed in tax records under his wife's name and first initials, with his father's Atlanta address.

While utility officials adamantly deny that leases were awarded with an intent to sway public policy, the leases coincide with Georgia Power's intense pursuit of legislation to offset the cost of Plant Vogtle in Swainsboro.

The nuclear power plant was the biggest construction project of any kind in state history, and its budget swelled to nearly $9 billion from less than $1 billion in the 1980s.

Felker Ward, a member of the state Board of Natural Resources, also has received a low-cost Burton lake lot. So has University of Georgia athletic director Vince Dooley and his wife, Barbara — who is now running for a state House seat.

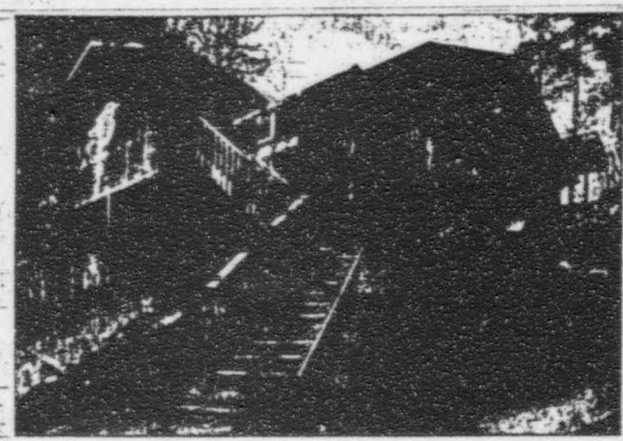
Profit potential

In addition to use of a prime piece of real estate, lake lot leaseholders can profit handsomely if they ever want to get rid of the leases.

Georgia Power retains title to the land itself. County appraisers have put the value of lots on Lake Rabun at $182,000; Lake Burton, $144,000; and Lake Seed, $80,000.

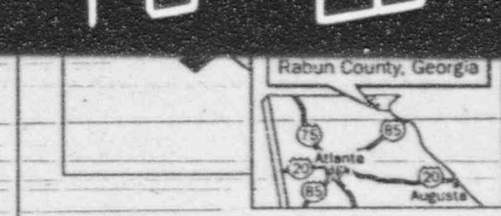
However, leaseholders are required to build on the property — and they own those structures. County tax records indicate that the houses that state lawmakers have constructed on the Georgia Power property range in price from $66,000 to $117,000.

But if those houses are sold, they could fetch at least $100,000 more — if the lease for the land they're on is transferred as part of the deal.



Jean Shifrin/Staff

On Lake Seed, 16 lots were opened in 1986. On one of them is this house, owned by state Rep. Frank Pinkston (D-Macon).



5. **Hugh Hardison**, former director of Georgia State Patrol, got the lease while he held that job.

6. **Michael DeVegter** signed his lease while he was a top aide to Gov. Joe Frank Harris.

Staff

on Seed, which looks like a wide spot in the Tallulah River, which connects Lakes Burton and Rabun.

The leases — generally reviewed every 15 years — can also be used as collateral for loans.

Across the state, Georgia Power says it has leased 3,881 lots around 10 lakes — it owns 14. Utility officials say the company has lost $350,000 in recent years because the rents on the North Georgia lake lots didn't cover taxes on the property.

Prices, policies change

Georgia Power began leasing its lakefront property in the 1940s, soon after it began building hydroelectric dams to provide power for rural Georgia. Before 1970, local residents said, nearly anyone could pick out a parcel of land along the North Georgia lakes if they could build upon it within two years, as the power company insisted.

But when room along Lake Lanier (a U.S. Corp of Engineers lake) became scarce, and freeways added accessibility, the North Georgia real estate market boomed. Those already with low-cost leases from Georgia Power could sell them to the rich and famous in search of vacation spots.

Prince Faisal of Saudi Arabia once sought a house on Lake Burton, but gave it up because he couldn't find a peninsula — he wanted to swim on one side and keep his servants on the other.

U.S. Sen. Sam Nunn and his brother-in-law paid market value for a house on leased property on Lake Burton. Former Minnesota Vikings quarterback Fran Tarkenton owns a lot on the same lake.

As prices became more exclusive, so did Georgia Power policies for doling out remaining unleased properties. "We select people who have been persistent and the people who we think will build an aesthetically pleasing structure," a utility spokesman said in the mid-1980s.

Alan Pruitt, a Clayton craftsman, remembers calling his local Georgia Power office in Lakemont to check out a rumor that new lots would soon open above Jones Bridge on Lake Burton. He was assured that there were no more lots.

Later, Mr. Pruitt said, he felt a little betrayed when he was called to work on a home in a subdivision that wasn't supposed to exist.

"If they had just said, 'Mr. Pruitt, you're not powerful enough, you're not rich enough, you're not influential enough,' I think I could have accepted that,'" Mr. Pruitt said.

'A big headache'

The lots went to then-Lt. Gov. Zell Miller, state Rep. Ralph Twiggs (D-Hiawassee), Georgia Power Chairman R.W. Scherer, and a senior vice president, Jack Causey.

Also leasing property there were Alan Stith, then-owner of a Fairburn construction equipment company that supplied Georgia Power; Charles Fife, a prominent Ellijay developer who had bought large tracts of unused land from the utility; and Norman Arey, then an assistant athletic director for Georgia Tech. His wife was a close friend of the wife of George Edwards, the company's top lobbyist.

Mr. Arey is now a columnist for The Atlanta Journal-Constitution. He sold his lot in 1987 but would not disclose the selling price. It is not listed on deed transfer records.

Persistence rather than clout did pay off for Jim Jackson, an Atlanta real estate broker who said he was responsible for having an eighth lot cut into the subdivision. "I just begged and pleaded and cried, and they finally gave me one," he said.

Mason Whitney, who has been a real estate agent in the area since 1974, said Mr. Miller's subdivision and 10 to 15 other scattered lots on Lake Burton were supposed to be the last offered on the North Georgia lakes.

Mr. Whitney said he had a conversation in 1983 with Georgia Power's land department director, Wade Manning. Mr. Manning, he said, told him he intended to lease all remaining lots so that his successor wouldn't have to deal with the crush of demands.

(Mr. Van Mol, the Georgia Power spokesman, said Mr. Manning's decision was not official company policy.)

Mr. Manning retired in 1984 and died two years later, but his successor, Ron Kester, expressed the same sentiment in 1987. "In the last few years, with more and more people wanting lots, it has become a big headache," he said. Mr. Kester has since left the company.

Still more lots provided

Nonetheless, Georgia Power continued to provide more lots, carving out new parcels by splitting existing tracts and opening lots in areas where the terrain had been thought too steep to build upon.

About 12 lots were opened within 600 feet of Burton Dam, which Mr. Manning had previously forbidden, and nearly all of the leases were given to Georgia Power employees, Mr. Whitney said.

In 1986, records show, Georgia Power opened 16 lots on the remote side of Lake Seed, where a winding dirt road had been cleared. Four of those lots were given to Georgia Power employees.

In the same subdivision, then-Sen. Floyd Hudgins (D-Columbus) and — through his wife, Lucille — state Rep. Frank Pinkston (D-Macon) were leased lots on each side of Bryan Foster, a top lobbyist for C&S bank. Messrs. Hudgins and Pinkston together oversaw banking legislation in the House and Senate.

Lots were given to Michael DeVegter, then a top aide to Gov. Joe Frank Harris, and Hugh Hardison, director of the Georgia State Patrol. One went to Patricia Chiliviss, the wife of prominent Atlanta lawyer Nickolas Chiliviss, who is also a former state revenue commissioner.

Mr. Hudgins last week said he had planned to give up his lot on another Georgia Power lake, Harding, and retire on Lake Seed. However, he said, Georgia Power asked him to return the Seed lot. Mr. Hudgins said he didn't know why — except that newspapers in the state were alleging at the time that he was holding a state job for which he performed no work.

Mr. Van Mol said the utility didn't know how a bank lobbyist and two lawmakers in charge of banking legislation were given adjacent lots.

Mr. Pinkston and Mr. Foster both said none of the three was responsible for helping the others obtain their lots; and that it wasn't significant that the three were neighbors.

"Some people would have to have a dirty mind to think so," Mr. Pinkston said. "You're making suggestions and innuendos that are simply not the case."

Most state lawmakers scoff at the idea that Georgia Power lake lot leases represented an exchange of political favors. State Sen. John Foster (D-Cornelia) cited an example of the utility's impartiality. He said he asked utility officials to lower Lake Burton one foot so he could install boat pilings, but they refused.

"My point is they obviously don't play politics as some people might think they do," he said.

Atlanta Journal - Constitution Mon., 2-22-93 p. B-3

Atlantans figure in controversy at Denver airport

Concessions: Partner in running for retail space at new facility made campaign contributions to city's mayor.

Wellington Webb
Denver mayor's campaign received over $30,000 from investment banker's firm.

By Douglas A. Blackmon
STAFF WRITER

The sparkling new Denver International Airport won't open for nine months, but already it is engulfed in a controversy over alleged favoritism in awarding retail contracts.

And right in the middle of it are two prominent Atlanta connections — Raymond J. McClendon, Mayor Maynard H. Jackson's 1989 campaign treasurer, and the Paradies Shops, a company involved in last year's scandal over payments to former Atlanta Aviation Commissioner Ira Jackson.

Atlanta-based Paradies Shops is a major airport retailer with 200 stores in 40 airports, including a large operation at Hartsfield International. It was the big winner two weeks ago, when Denver officials revealed their recommendations for parceling out retail space at the new airport.

Atlanta-based Paradies Shops was the big winner when recommendations were revealed for retail space at the new Denver airport.

Embarrassing connections

Paradies and its joint-venture partner, Colorado Concessions, a newly formed company controlled by Mr. McClendon, an Atlanta investment banker, were awarded 10 of 16 newsstands and several other gift and sport shops.

But the deal became an embarrassment to Denver Mayor Wellington Webb when the local press reported that Mr. McClendon and the officers of his firm, Pryor, McClendon and Counts, had contributed more than $30,000 to the mayor's campaigns.

The investment company also was a major underwriter for $2.8 billion in construction bonds issued to build the airport, said Gennifer Sussman, the Denver airport financial officer.

At the same time, Mayor Webb was fending off reports that his brother, a lawyer, had represented another winner of an airport bid. Late last week, the mayor, while emphasizing that nothing technically improper had occurred, asked Paradies to drop Mr. McClendon from the partnership and the company complied.

"Colorado Concessions and Raymond McClendon did nothing improper or illegal," Mayor Webb said. "But to avoid the perception of conflict, I feel that I must apply greater judgment than is required by law or ethics code."

Withdrawing from deal

The mayor also disqualified the firm connected to his brother and asked for a sweeping review of political contributions from all airport bidders. None of the contracts in Denver is final yet.

Paradies is the company from which at least $900,000 was paid to Ira Jackson, through a second corporation, Hartsfield Concessions, that he secretly controlled. Mr. Jackson resigned last March after the payments were revealed, and a federal grand jury continues to investigate concession contracts at Hartsfield.

Mr. McClendon is one of the nation's most prominent black bankers. He recently attended two briefings on the economy with President Clinton and is a close friend and supporter of Mayor Jackson. He has been involved in several major bond deals with the city.

Mr. McClendon declined to comment on the situation in Denver, other than to confirm his withdrawal from the Paradies deal. Paradies officials did not return phone calls.

There have been no allegations of impropriety associated with any other airport bidders, but the Denver mayor's review of political contributions by those companies should find the names of two other well-known Atlanta business people with financial ties to the new airport.

Political donations

Concessions International Inc., an Atlanta-based airport food and beverage retailer with operations around the country, was awarded four leases at the Denver airport last week. The company, which holds an interest in the duty-free shops at Hartsfield, is owned by Atlanta construction magnate Herman J. Russell, Atlanta Life Insurance founder Jesse Hill Jr. and local lawyer Felker Ward.

Concessions International was given the go-ahead by the Atlanta City Council last summer to take over much of the food and beverage space at Hartsfield, but the deal was blocked by an ongoing court case.

Both Mr. Hill and Mr. Russell made $500 contributions to Mayor Webb's 1991 election campaign, according to Colorado elections documents, but a company spokesman said the contributions had no connection with the airport contracts.

"[The controversy] has nothing to do with us," said Reginald Washington, a top official at Concessions International. "There was no politics or anything behind anything we did. It was straight, above-board, on a level playing field. We won the contract completely on our merits."

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STAFF
pSummary: 0 Business columnist Ernest Holsendoplh profiles Felker W. Ward Jr., who has created Pinnacle Investment Advisers Inc., an offshoot of Ward & Associates. Ward and his partners seem bent on becoming a full-service company capable of investing and managing pensions and funds for reliable long-term growth.
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established himself in financial underwriting with opportunities at City Hall, has grander dreams of becoming an important player in the management and investment of funds. Both underwriting of bonds and asset management are financial services that have had very few minority professionals until recent years. The increases in black political power in city halls across the country have opened
up various areas of municipal service contracting, including financial services. In Atlanta, Ward, Raymond J. McLendon and others have capitalized on their acquaintance with former Maynard H. Jackson to gain a share of financial services with the city government. Broader constituency While it could be argued that new faces in city halls have led to opening contracting services to a broader constituency, and now include many who were left out, some critics
see new trends as a closing of the process, leading to cronyism. The fact of the matter, of course, is that in processes where no bidding is required, cities and businesses have tended to give business to those they know
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businesses have tended to give business to those they know

and have confidence in - sometimes from the campaign trail, frequently from country club and golfing buddies.
Suffice to say that Ward and his partners seem bent on becoming a full-service company capable of investing and managing pensions and
funds for reliable long-term growth. Toward that end, Ward has created Pinnacle Investment Advisers Inc., an offshoot of Ward & Associates. Pinnacle now has $60 million in its care. It is directed by Marquette Chester, president. Billion-dollar goal Chester, who worked 11 years in North Carolina in financial services with Prudential and North Carolina Mutual, aims to bring $1 billion under Pinnacle management in five years.

Montag & Caldwell, an
established counseling firm chaired by Solon P. Patterson, helped launch Pinnacle and remains an investor. And Loomis, Sayles & Co. is a Pinnacle partner. New minority-owned businesses such as Pinnacle have grown gradually over the past decade by going after government or quasi-government funds, and by bidding for at least portions of corporate funds controlled by managers interested in helping minority

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Sayles & Co. is a Pinnacle partner. New minority-owned businesses such as Pinnacle have grown gradually over the past decade by going after government or quasi-government funds, and by bidding for at least portions of corporate funds controlled by managers interested in helping minority

enterprise. "Most of that effort to help has been aimed
at small minority businesses," said Chester, "but many of us get lost when we outgrow that level and are yet too small to compete with the largest companies." Asked why he was interested in helping a potential competitor, Patterson of Montag & Caldwell smiled and said: "It's an investment by us. We help, but we also benefit from new experience and background, and together we compete for business from socially responsible companies. "They will grow and be
competitive, but the business demand is growing fast enough to accommodate us all." Ernest Holsendolph's column appears every Sunday, Wednesday and Friday.

----3 of 8----------Atlanta Journal/Const.------
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Sayles & Co. is a Pinnacle partner. New minority-owned businesses such as Pinnacle have grown gradually over the past decade by going after government or quasi-government funds, and by bidding for at least portions of corporate funds controlled by managers interested in helping minority

enterprise. "Most of that effort to help has been aimed
at small minority businesses," said Chester, "but many of us get lost when we outgrow that level and are yet too small to compete with the largest companies." Asked why he was interested in helping a potential competitor, Patterson of Montag & Caldwell smiled and said: "It's an investment by us. We help, but we also benefit from new experience and background, and together we compete for business from socially responsible companies. "They will grow and be
competitive, but the business demand is growing fast enough to accommodate us all." Ernest Holsendolph's column appears every Sunday, Wednesday and Friday.

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----3 of 8----------Atlanta Journal/Const.------
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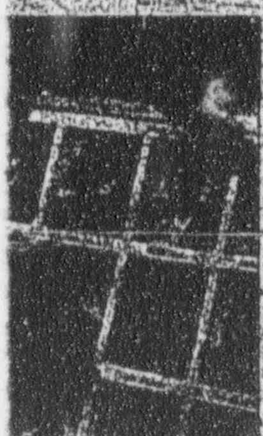
Please see GMC, E4 ▶

WORLD

Photos by MARLENE KARAS / Staff

share a chuckle Wednesday during rehearsal

ams to fit recessionary times



Willard Maxwell signs his picture Wednesday in a friend's yearbook at Tri-Cities High School. More than 18,000 seniors are graduating from metro area schools this month.

N TODAY'S EXTRA EDITIONS

NationsBank is calling Young loan

Lender moves to collect balance of campaign debt

By Jim King
STAFF WRITER

NationsBank is in the midst of collecting the unpaid and overdue balance of a $303,000 gubernatorial campaign loan guaranteed by more than 20 supporters of Andrew Young.

The 12-month loan was due to be repaid last summer, but the bank granted two 90-day extensions. A request for another extension was rejected, and NationsBank then told the loan backers they needed to pay their respective shares of the $183,000 balance by July 1.

"We did not pressure them for another extension," said Mr. Young, who is one of 23 guarantors listed. "I think the bank's decision is probably in the interest of both good business and good government."

NationsBank was formed in December following NCNB Corp.'s acquisition of Atlanta-based C & S/Sovran Corp., which made the original loan.

Andrew Young
"We did not pressure them for another extension," the former mayor says.

Mr. Young is co-chairman of the Atlanta Committee for the Olympic Games. Earlier this year, NationsBank signed on as a $40 million sponsor of the 1996 Games.

But Mr. Young said Wednesday his relationship with the bank was not an issue in the bank's decision to call the loan.

"Doing something with the Olympics is a civic responsibility," he said. "Political campaign loans come under a different category. Politicians and banks ought to do everything they can to keep things aboveboard."

BCCI forgave loan to consulting firm

Mr. Young came under fire last year regarding his relationship with scandal-plagued Bank of Credit and Commerce International that, among other things, forgave a loan to Mr. Young's consulting firm in 1990.

NationsBank officials would not comment on the campaign loan or their decision to deny another extension. However, a NationsBank attorney said that it is illegal for a lender to give special terms to the guarantors of a campaign loan.

Gregory Ellison, treasurer of Mr. Young's campaign, said the campaign attempted to repay the loan itself, but that fund-raising efforts fell short. He said the campaign has suggested two options that could soften the blow to guarantors who have to repay their share of the loan. They can either take a tax write-off or accept a note from the Young campaign that promises repayment if and when the money is raised.

Several prominent Atlanta businessmen are on the list of guarantors, including Jesse Hill, Gregory Baranco, Jim Cumming, Charles Loudermilk, John Portman, Felker Ward and Mack Wilbourn.

Atl. Jour-Constitution Thursday 6-4-92 p. E-1

Friday, Nov. 19, 1993

The Atlanta Journal
The Atlanta Constitution

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Campaign donations boosted by loopholes

Money trail: No single source can give a candidate more than $1,000. But a firm's executives — and spouses — collectively can sweeten the pot much more than that.

By Mark Sherman
STAFF WRITER

The name of the powerful Atlanta development firm Taylor & Mathis is almost impossible to spot on the campaign finance reports filed by this year's candidates for Atlanta municipal office.

But it would be wrong to conclude that Taylor & Mathis simply sat this one out.

A new state campaign finance law limits contributions to a candidate from any single source to $1,000 per election. Yet Taylor & Mathis executives and their families — rarely identified as such in the reports — gave more than $37,000 to eight candidates for mayor, City Council president and the council.

This year's city elections offer the first real test of the comprehensive ethics package enacted by the state Legislature in 1992. The results so far are decidedly mixed.

Big contributors of the past can no longer write a check for $5,000, $10,000 or more. The public should have more of an idea of the source of money now that candidates are required to identify the occupations or places of employment of their contributors, as well as report the total of money received from various industries.

But there is a yawning gap between the requirements of the law and reality. And, according to some state officials, the Legislature needs to close some loopholes and stiffen enforcement.

Apparent violations the norm

Across the board — in elections for mayor, council president, the council and the Atlanta Board of Education — incomplete reports, late filings and apparent violations of the law were more the norm than the exception.

Please see **CAMPAIGN, G4** ▶

Campaign: Limit on contributions 'easy t(

▶ Continued from G1

Campaign giving by Taylor & Mathis executives was not the only example of multiple contributions from people affiliated with a single firm. Executives from other companies and sometimes their spouses also contributed to local candidates in excess of what the company itself could legally give.

Post Properties Inc., Law Engineering and Stephens Inc. are among the other businesses that fall into that category. And because of the candidates' spotty reporting, which in many cases failed to identify the business or place of employment of contributors, it is impossible to know exactly how many additional companies fit the same profile.

The contributions raise questions about campaign finance laws, with some critics charging that the companies are attempting to skirt the new cap on contributions. The problem is familiar to campaign finance reformers.

Josh Goldstein is project director at the Washington, D.C.-based Center for Responsive Politics, which studies campaign financing on the federal level.

"When you look at the pattern of contributions, while there are specific limits, those limits are easy to get around without breaking the law," Goldstein said. "One of those ways is by having groups of executives give to the same candidate. . . . Only if you can show there was reimbursement [to the executives] does it become illegal."

State Rep. Ken Poston (D-Ringgold), a leading advocate of further revisions to the law, conceded it is not easy to strike a balance between the right to contribute to a candidate of one's choice and the state's interest in making sure there is a clear paper trail of political contributions.

"If there is no close nexus from the suspected common source, obviously, we wouldn't want to stop that," Poston said. "But I'd like to see the law where it specifically puts some penalties" for skirting the contribution cap.

The Taylor & Mathis contributions illustrate the difficulty in pinning down the source of campaign money. Fourteen company executives and their wives each contributed $1,000 to mayoral candidate Bill Campbell.

Taylor & Mathis executives and their wives also contributed $4,000 to the campaign of City Council President Marvin Arrington, and they accounted for contributions totaling more than $1,000 to individual candidates in several council races.

Company Chairman Charles M. "Mack" Taylor is a member of Campbell's campaign finance committee. Kevin Ross, Campbell's campaign manager, said the Taylor & Mathis contributions were proper. Taylor & Mathis executives did not return telephone calls for this article.

Some Northside homeowners — who oppose Taylor & Mathis's efforts to win city approval of a proposed $7.3 million extension of the Buckhead Loop road — question the firm's contributions to Campbell and other candidates. Campbell is on record as opposed to the proposed extension of the Buckhead Loop.

"It certainly flies in the face of the intent of the contribution limit and therefore I think is very suspect," said Marie Sims, one of the homeowners fighting the proposed road.

Campbell's runoff opponent, former Fulton County Commission Chairman Michael L. Lomax, also received multiple contributions from employees of one company. Eleven executives of the investment firm Stephens Inc. of Little Rock, Ark., gave Lomax a total of $4,800. In Atlanta, five executives of Law Engineering and their spouses contributed a total of $5,000 to the Lomax campaign.

Stephens is Fulton County's financial adviser. Former Mayor Andrew Young, a Lomax supporter, works for Law Engineering.

In elections for the Board of Education, the political action committee set up by local business leaders spent more than $1,000 in support of each of the candidates it endorsed. The PAC raised more than $70,000 and had spent more than $30,000 two weeks before the election.

But EduPAC officials assert that mailings and advertisements for their slate of candidates are not covered by the campaign finance law.

"Independent expenditures which are made and are not coordinated with a candidate's campaign committee are permissible," said Gerald Bartels, president of the Atlanta Chamber of Commerce.

The state law says little about supporting slates of candidates. It specifically allows political parties to spend without limits on their slates.

Bartels said EduPAC obtained an informal ruling from the State Ethics Commission, but not in writing.

Earlier this year, in a written argument submitted to the state

) get around'

Supreme Court, the commission contended that independent purchases of newspaper ads and other publicity should be reported as contributions.

Poston said he believes independent expenditures should be strictly limited. "I don't see why you wouldn't count an ad as a contribution even if it's for a slate," Poston said.

Campbell, Lomax and vanquished mayoral candidate Myrtle Davis reported only spotty information about their contributors, omitting occupations in many instances and using such non-descriptive terms as business executive in others.

Only Councilwoman Barbara Asher identified some of her Taylor & Mathis money as coming from people who work for the company or who are married to its employees. On some reports, including Council President Arrington's, there is no identifying information at all.

Arrington was one of several citywide candidates who provided only name and address to identify his supporters. The new law, however, requires candidates to list the business, occupation or place of employment of the person making a contribution, or to identify the person's spouse.

Arrington also accepted more than $1,000 from some contributors, saying he believed the limit was $1,000 a year. He has since refunded the excess money.

Four City Council candidates had not even filed contribution reports as of four days before the Nov. 2 election. One, Cleta Winslow, who is in a runoff in Council District 4, filed the day before the election — more than a week late. "I wasn't trying to hide anything. I wanted to be sure it was all correct," said Winslow, who raised $4,000 for the general election.

A number of reports were received by the municipal clerk more than a week after the deadline, but still complied with the law. That's because of a grace period, which requires only that reports be postmarked by five days before the general election and two days before the runoff. In practice, that means campaign financing remains hidden until just days before an election.

Secretary of State Max Cleland, whose task force proposed many of the changes that eventually became law, said ethics statutes can't prevent candidates and contributors from finding loopholes or evading the law altogether.

"The reforms are designed to try and cast some light on what has been a disturbing trend in American politics, the growing influence of money," Cleland said. "What we have is not perfect, but with a $1,000 limit and more information required, I believe we have democratized the process somewhat. That's about as good as it's going to get."

Spreading the wealth

As a corporate giver, Taylor & Mathis could contribute no more than $1,000 per election to any candidate. But company executives and their spouses giving as individuals contributed $37,700 for the general election campaign. Here is a list of Taylor & Mathis executives, their spouses, the candidates they contributed to and the amounts (does not include runoff contributions):

Executive VP	Mayor Campbell	Council President Arrington	Dist. 6 Loftis	Dist. 8 Muller	Dist. 11 Maddox	Dist. 12 Smith	Post 16 Asher	Post 18 Finley
E.H. Avery	$1,000	$500		$1,000	$400		$500	$450
Lisa Avery	$1,000				$500			$450
Executive VP								
Harvey Cheatham	$1,000	$500	$500	$1,000		$1,000	$500	
Anne Cheatham	$1,000							
Controller								
Frank Dolbow	$1,000				$300	$1,000	$500	
Maria Dolbow	$1,000				$300			$300
Executive VP								
James Fluker	$1,000	$500		$500	$1,000	$1,000	$500	$1,000
Dorothy Fluker	$1,000			$500				
Vice President								
Kerry O'Brien	$1,000	$1,000			$500		$500	$500
Carroll O'Brien	$1,000							
Vice President								
Andrew M. Taylor	$1,000	$500					$500	
Gracious Taylor	$1,000							
Chairman								
Charles M. Taylor	$1,000	$1,000	$500	$1,000	$1,000	$1,000	$1,000	
Mary Rose Taylor	$1,000							

Source: Campaign contribution reports

STAFF

Ledbetter is latest of many to leap from government to industry

By Scott Bronstein
Staff writer

7-21-90

J. Leonard Ledbetter, the top state environmental official who resigned Thursday, is one of a long line of leading state and federal environmental officials who have left their jobs and hired on with the fast growing hazardous and solid waste industry — the very industry they had been regulating.

The entrance of these officials into the private sector often draws sharp criticism from environmental and consumer advocates, and even from other state and federal officials, who question the potential conflicts of interest that may result from both before and after the change in employment.

"What you see is officials jumping from their government posts to where the big bucks are," said William Sanjour, a policy analyst in the solid waste division of the Environmental Protection Agency (EPA) in Washington. "And in the last few years, the bucks have been in the hazardous or solid waste arena.

"Is there a nice way to say 'all the pigs are going to the trough?' " he asked. "A lot of government officials, especially in the Southeast, view a government job as a stepping stone to a big money-making career. It's greed, and it has nothing to do with any commitment to the environment."

Leonard Ledbetter
DNR chief has announced he will join a waste consulting firm.

In recent years, the former head of Georgia's Department of Transportation, the state's insurance commissioner, and at least a dozen lower-level state officials have moved over to the industries they were regulating while working for the state.

In addition, the head of the Environmental Protection Agency in Washington, two heads of the Southern Region 4 EPA office, several other lower-level EPA employees, and several appointed members of the governor's hazardous waste authority have all accepted positions in hazardous waste or solid waste firms.

Federal law restricts federal officials from conducting certain types of business with their former agencies for two years after they leave office, but the provision does not include dealings with state government.

At least 27 states have either statutory or administrative regulations providing restraints on the activities of government officials who leave their post, according to the the Council on Governmental Ethics Laws, based in Lexington, Ky. Most of those states adopted the laws

Please see INDUSTRY, B5 ▶

From public service to private companies

Georgia officials who left the government to work for private companies in the industry they had been regulating.

Johnnie Caldwell

Allen Ault

Tom Moreland

■ **J. Leonard Ledbetter** — Georgia's highest environmental official, was head of Environmental Protection Division and the Department of Natural Resources for six years. Leave becomes effective Sept. 30, when he will become president of Law Environmental Services Inc.

■ **Johnnie L. Caldwell** — Georgia's insurance commissioner from 1971 to 1985. Left office to work as an attorney for at least 50 companies seeking insurances licenses to do business in Georgia.

■ **Allen Ault** — Former head of the state's Department of Corrections, from 1974 to 1976. In 1979 he formed Justice Systems Inc., a firm that contracts out to do consulting work on prisons issues for the state.

■ **Tom Moreland** — Former state commissioner of transportation. Left office in 1987 to work for Moreland, Altobelli Associates, a consulting firm that competes for road contracts and does business with DOT as well as several local governments, such as DeKalb County. Mr. Moreland was also an appointed member of the state Hazardous Waste Management Authority.

■ **Don Cargill** — An Atlanta political consultant and appointed member of the Hazardous Waste Management Authority, chaired by Gov. Joe Frank Harris. Left in 1988 to work for Chemical Waste Management, a company that may eventually compete for the state's lucrative hazardous waste facility.

Industry: Conflict issues raised

► Continued from B1

specifically to prevent conflicts of interest.

"Right now, I know of no legal prohibition of any kind on state employees doing this in Georgia," said Attorney General Mike Bowers. "But a measure that makes sure people in our state can't take advantage of what they learned in government would be highly valuable. I think something like this could be done in Georgia, and I'd be in favor of it."

Mr. Bowers, however, is quick to add that such a law would have to be carefully designed so as to prevent potentially harming individuals.

"If someone can't any longer work in government, are you saying they must remain unemployed for some amount of time. That would be undue harm. And those are the issues you must deal with here."

State Sen. Bud Stumbaugh (D-Stone Mountain) proposed a law several years ago, but it never went anywhere. "It's tough to be an arm's length regulator who's totally objective, if in the back of your mind you know you need to be kind or at least buddy-buddy with these folks you're watching," Mr. Stumbaugh said.

A number of state officials, including Mr. Bowers, Secretary of State Max Cleland and members of Gov. Joe Frank Harris's staff, said they do not believe Mr. Ledbetter would use his knowledge or contacts to benefit him or the company he is joining, Law Environmental Services Inc., a subsidiary of Law Companies Group Inc.

"There is no lack of confidence in Leonard Ledbetter's integrity," said Barbara Morgan, the governor's press secretary, who has also said there is no need for such a law.

Mr. Ledbetter could not be reached for comment Friday.

Former Atlanta Mayor Andrew Young has allied himself with R.K. Sehgal, chairman of the Law Companies Group. Now a candidate for governor, Mr. Young has accepted a $50,000 cash campaign contribution and regular consulting fees from the Law Group.

Mr. Young has said that if elected he would not take part in any decision involving a bid by the Law group for any state contract.

Johnnie L. Caldwell, Georgia's insurance commissioner from 1971 to 1985, now works as an attorney for insurance companies seeking licenses to do business in Georgia. As commissioner, Mr. Caldwell granted those licenses. Since 1985, at least 50 companies he has represented have received licenses. In addition, several of Mr. Caldwell's former deputy commissioners also do legal and lobbying work for insurers.

Mr. Caldwell today bristles at the suggestion that he or any other official has acted improperly or created any conflict of interest by moving to private industry.

"I practiced law for 20 years before I went up there, and I do it now," he said. "There's never been any conflict of interest, to my knowledge. We should believe people are honorable, until proven otherwise."

Ledbetter's company one of fastest growing

Earth-sciences field highly competitive

By Shelia M. Poole
Staff writer

7-21-90

When J. Leonard Ledbetter leaves the state Department of Natural Resources, he will assume the presidency of one of Georgia's fastest-growing environmental consulting firms.

Mr. Ledbetter resigned Thursday to become head of Kennesaw-based Law Environmental Services Inc., a subsidiary of Law Companies Group Inc.

He "brings a strong technical background with engineering capabilities, knowledge of environmental issue and regulations and management skills," said Lee M. Thomas, chief executive officer of Law Environmental Services and a former administrator with the U.S. Environmental Protection Agency.

Formed as a division of Law Companies in 1970, Law Environmental Services is a professional engineering and earth-science consulting firm.

In 1989, Law Environmental Services had revenues of $38 million and expects to increase them to $138 million by 1995. About 75 percent of the company's work is on non-government projects. Most of the company's government work has been at federal facilities.

The company, which has 18 offices throughout the continental United States and Puerto Rico, offers services such as site cleanup, occupational safety and environmental testing and air and water pollution control.

Mr. Ledbetter joins the firm at a time when the business is getting more competitive.

"This is a very competitive industry, and it's also a very fast-growing industry as the environmental field continues to expand," said Kristina Garcia, geosciences department manager for Environmental Science and Engineering, a Peoria-based competitor.

In recent years, Law Environmental Services has expanded through internal growth and acquisitions. The most recent was a merger with Sir Alexander Gibb, a London-based engineering firm. Law Environmental Services has 650 workers.

The Atlanta Journal WEEKEND The Atlanta Constitution SATURDAY, JANUARY 23, 1988 ...

Ex-regulatory officials may seek contract

Moreland, Cargill work for firms that might bid on hazardous waste site

By David Beasley
Staff Writer

Two former members of the state authority that will award a lucrative contract for Georgia's first hazardous waste treatment facility are now working for private companies that may compete for the site for the facility, is working for

From Page 1-A

USPCI. Both companies have expressed interest in the hazardous waster incineration project.

The firm that gets the state contract will not necessarily be the lowest bidder. Although Georgia law requires competitive bidding for many state projects, there is no such provision for the Hazardous Waste Management Authority, said state Attorney General Mike Bowers, a panel member.

Members of the authority say the project is so technical it may not be suited for regular bidding procedures. For example, companies may propose different designs and equipment for the facility. The lowest bidder may not have the technology that would most effectively and safely dispose of the waste.

Gov. Joe Frank Harris is chairman of the authority, and administration officials said there will be no political influence in awarding the contract.

"What we're looking for is the best technology, the very best system, that's out there," said Natural Resources Commissioner Leonard Ledbetter, who is overseeing the work of the authority.

But officials of waste management companies say that having somone experienced in state government is useful in pursuing the contract.

"There's a scramble to find talented and knowledgeable people," said Gordon Kenna, community relations manager for Chemical Waste Management Inc. The company hired the political consulting firm of Ginn, Edington, Moore and Wade to assist it and Cargill, a former governmental affairs director with Atlanta Gas Light Co., is a partner in the firm.

"I think anyone in any large company is going to look to cover their bases," said Kenna.

He said his company does not consider hiring Cargill to be a conflict of interest since he is no longer on the hazardous waste authority.

"As long as he's not on the authority now, I don't think there's any conflict anymore than there is with Tom Moreland or Jack Ravan," said Kenna.

Cargill said his consulting firm has been hired by Chemical Waste Management to keep the company up to date on the state process of selecting a builder and operator of a hazardous waste facility.

"Our job is to monitor the situation and find out what's going on," he said. "Any firm that gets the job will have to meet very strict criteria. There's not much room for politics."

Georgia has no law prohibiting former government officials from conducting business with the state.

"On the surface, I know of nothing improper and more importantly, I know of nothing illegal," Bowers said about the former authority members now working for private hazardous waste companies.

Federal law restricts officials from conducting certain types of business with their former agencies for two years after they leave office, but the provision does not include dealings with state government, said James Sargent, Southeast regional counsel with the EPA.

Since the state will license its hazardous waste facilities, he said, Ravan would not necessarily have to deal directly with the EPA in trying to obtain the contract for Rollins Research and Development.

Secretary of State Max Cleland, while declining to directly criticize Moreland or Cargill, said Georgia needs to consider legislation similar to the federal law placing temporary restrictions on officials who leave office.

"I think we should probably have something like that just to avoid the appearance of a conflict of interest," said Cleland, who is a member of the authority.

However, Barbara Morgan, Harris' press secretary, said the governor does not feel there is a need for such a state law.

"He is not aware that it is or has been a problem in the state," she said.

Bowers said legal questions could arise if former authority members used "inside information" gained while in office to help land the waste treatment project.

But authority members say the selection process for the waste incinerator is in such an early stage that former membership will provide little help to someone now in a private company.

So far, the authority's major effort has been to select Taylor County as the site for the facility. The panel has not decided if the state will build a facility and hire a company to operate it, or have a company both build and operate it on state land.

The authority will seek proposals from companies interested in the project later this year. Georgia risks losing up to $5 million in federal funds to assist in cleaning up its hazardous waste dump sites if it remains without a disposal facility. Harris has said he wants an incineration, detoxification and solidification facility in operation before he leaves office in 1991.

"I think there's very little knowledge that any committee members have," said Lt. Gov. Zell Miller, also an authority member. "I haven't missed a single meeting and I can tell you very little about it."

Moreland strongly denied any impropriety, and said politics will play no role in the authority's decisions. Moreland is now vice president and chief operating officer of Williams Service Group of Stone Mountain.

As DOT commissioner, Moreland served on the authority since its beginning in 1982. After retiring from state government in April with an $89,000 per year pension, Moreland was appointed by Miller to the panel as a private citizen in July.

Moreland said he resigned from the authority as soon as his company began to discuss plans to enter the hazarous waste business and before it had developed interest in the Georgia project.

"We were not in the business at the time I resigned," he said. "We held some discussions and said we want to get in to the business of mobile incineration — the movement of incinerators from site to site at the Superfund sites. And I said if we're going to get in any business that has to do with hazardous waste, I'm getting off that authority."

Ravan, who as EPA regional administrator publicly advocated the construction of a hazardous waste incinerator in Georgia, said he hopes his reputation as a national and regional EPA official will help his company obtain the Georgia project.

"I know and understand what it means to protect the environment and that's what I fully intend to do," he said.

Georgia's effort to build a hazardous waste facility also poses a potential conflict of interest for a member of the General Assembly. State Rep. Denny M. Dobbs (D-Covington) is vice president of Haztech, a hazardous waste company owned by Westinghouse Electric. Westinghouse is interested in the Georgia hazardous waste disposal facility, company officials said.

Dobbs said, however, that he will not have any involvement in the Georgia project.

"I'm not on the authority and I haven't talked to anybody on the authority," said Dobbs. "I wouldn't get involved because of the fact that I am in the Legislature."

Other members of the Hazardous Waste Management Authority are State Auditor G.W. Hogan; Agriculture Commissioner Tommy Irvin; Industry and Trade Commissioner George Berry; Human Resources Commissioner James Ledbetter; Transportation Commissioner Hal Rives; M.C. "Pete" Peterson of Gilman Paper Co. in St. Marys; and Jim Groome, an Atlanta public affairs representative.

See WASTE, *Page 22-A*

Chemical Waste Management Inc. Two former federal officials are also working for companies interested in the project.

Jack Ravan, who resigned in August as Southeast regional administrator for the U.S. Environmental Protection Agency (EPA), is president of Rollins Research and Development Inc. Louis Centofanti, regional administrator of the U.S. Department of Energy from 1979 to 1981, is senior vice president of the firm

that project.

Tom Moreland, retired Department of Transportation commissioner, and Don Cargill, an Atlanta political consultant, left the Hazardous Waste Management Authority last year and are working for private companies competing for the state contract estimated to be between $25 million and $50 million. Moreland, who resigned from the authority in August, is employed by Williams Service Group. Cargill, who resigned Dec. 22 after the authority chose Taylor County as

> 'I said if we're going to get in any business that has to do with hazardous waste, I'm getting off that authority.'
>
> — Tom Moreland

The Atlanta Journal
THE ATLANTA CONSTITUTION

Today's editorial page is prepared by the editorial board of The Atlanta Constitution.

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BCCI scandal comes home to roost

Recent revelations about the behavior of the Bank of Credit and Commerce International, which banking authorities around the world shut down last week, suggest that BCCI will turn out to have been the most corrupt, evil bank of all time.

Not only did it manage the funds of the world's most notorious terrorists. Not only did it specialize in laundering drug money and helping dictators loot the wealth of their countries. Not only did it bilk its depositors of billions of dollars in what amounted to a giant Ponzi scheme.

But it also, according to Time Magazine, maintained a "black" network of 1,500 employees who specialized in bribery, extortion, kidnapping and, quite probably, murder.

All this was done under the guise of being an instrument and friend of the "Third World." Among those drawn into BCCI's net were the Third World's two most prominent friends in Georgia, Jimmy Carter and Andrew Young.

BCCI contributed millions of dollars to Mr. Carter's Global 2000 program, which conducts health and agriculture projects in Africa and Asia. The bank's founder, Pakistani-born Agha Hasan Abedi, served as co-chairman of Global 2000 and frequently accompanied Mr. Carter on Global 2000 trips aboard BCCI aircraft.

BCCI paid Mr. Young's consulting firm an annual $50,000 retainer as a way of securing introductions to Third World leaders. "I saw them as a Third World bank," Mr. Young has said. "They were very free-market oriented, but non-European. Consequently, they had the trust of a lot of people who saw themselves as socialists or as victims of neocolonialist exploitation."

It's clear that Messrs. Carter and Young were being used to help build that trust. They fondly imagined that Mr. Abedi, who has been called "the Rasputin of the Middle East," shared their good intentions.

It's easy to sympathize with their failure to consider just what their good offices might be doing for BCCI, but not everyone who claims to speak for the Third World has the Third World's interests at heart. That is a bitter lesson, now earned at some pain and embarrassment to Mr. Carter and Mr. Young.

Less sympathy is in order for the U.S. Justice Department, which has dragged its feet in the BCCI investigation. Not that the reasons are hard to fathom.

BCCI was an equal-opportunity rogue. It did covert business for the CIA (as in the Manuel Noriega account) and other Western intelligence agencies. It apparently played a role in the Iran-contra arms dealing. In short, there may be stuff in its books that could prove embarrassing to the Bush administration.

Meanwhile, other investigations proceed apace. Congress has scheduled hearings. BCCI is front-page news, here and around the world. The British government is in trouble over its own BCCI involvements.

Feeling the sting of criticism, the Justice Department has announced that its fraud section is hard at work coordinating the BCCI investigations of federal prosecutors in Atlanta, Miami, Tampa, Fla., and Washington. It will take more than announcements to demonstrate that it is really on the case.

Close Links Existed Between BCCI, BNL

Scandal-Plagued Banks' Ties Involve Both Finances And Their Management

By PETER TRUELL
Staff Reporter of THE WALL STREET JOURNAL

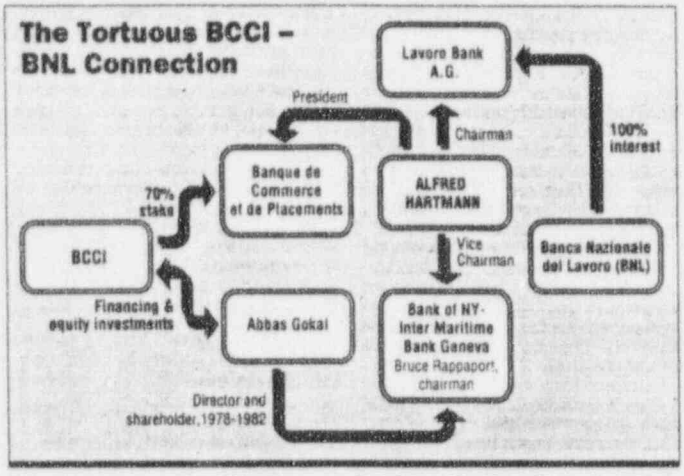
WASHINGTON – Close financial and management ties existed between Bank of Credit & Commerce International and the scandal-plagued **Banca Nazionale del Lavoro**, adding a new dimension to the BCCI affair.

BCCI's links with the Italian government-controlled bank include the movement of funds for the government of Iraq, according to an internal Federal Reserve report. The association of the two banks also raises intriguing new questions about the possible role of intelligence figures in the BCCI affair.

At the very least, the connections join to a degree previously unknown two of the biggest banking scandals of recent years: the BCCI affair, with its allegations of money laundering, arms trafficking and secret ownership of U.S. financial institutions; and the BNL scandal, involving fraud in U.S. government financing programs and billions of dollars in excessive lending to help finance Saddam Hussein's war machine.

"The existence of another foreign bank entity engaged in criminal activity comes as no great surprise," said Rep. Henry Gonzalez (D., Texas) Wednesday at a hearing on BCCI. BNL, he said, "became Baghdad's banker in the U.S. before our regulatory cops at the Federal Reserve could locate Iraq on the map."

The most prominent link between the two banks involves Alfred Hartmann, a successful Swiss banker and businessman, who until recently was a BCCI director and the chairman of its Swiss unit, Banque de Commerce et Placements S.A., or BCP.



Following the seizure of BCCI by Western regulators on July 5, Mr. Hartmann resigned from BCP, which has been sold to a Turkish group.

In addition to serving BCCI in those capacities, Mr. Hartmann also serves as the chairman of BNL's unit in Zurich, known as Lavoro Bank AG.

Finally, Mr. Hartmann is vice chairman of a small, joint-venture institution in Geneva called Bank of New York-Inter Maritime Bank. A predecessor bank counted among its owners and investors Abbas Gokal, one of the brothers whose shipping empire not only invested in BCCI but is recorded as borrowing – and defaulting on – some $700 million of BCCI loans.

Mr. Hartmann's links to the these institutions were established by P. Network, a research service based in Geneva.

Mr. Hartmann didn't return telephone calls to his various offices in Switzerland or answer a letter transmitted to him earlier this month, but employees at his various offices confirmed his roles at BNL and BCCI's Swiss units and at Bank of New York-Inter Maritime Bank. A spokeswoman at the New York headquarters of **Bank of New York** Co., an investor in the venture, also confirmed Mr. Hartmann's role at the Geneva bank.

The involvment of the BCCI-BNL banker in the Bank of New York-Inter Maritime Bank is particularly intriguing. The chairman of that bank is Bruce Rappaport, an international oilman who has been thought for years to have close ties to the U.S. and Israeli intelligence communities. Mr. Rappaport, 68 years old, has owned as much as 8.4% of Bank of New York.

According to published profiles, Mr. Rappaport was a friend and golfing companion of William Casey, the late director of the Central Intelligence Agency.

He also employed E. Robert Wallach, an old friend of former Attorney General Edwin Meese, as his lawyer for a massive but ill-fated Iraqi oil pipeline project. Mr. Meese, as attorney general, was investigated by a special prosecutor for allegedly trying improperly to aid that pipeline project, but no charges were made. Mr. Rappaport wasn't available for comment yesterday, according to his secretary at Bank of New York-Inter Maritime.

BNL was far and away Iraq's largest source of foreign credit. Its Atlanta branch loaned or pledged more than $4 billion to Iraq between 1985 and the summer of 1989, about $2 billion of which went for farm goods. That branch was raided by the Federal Bureau of Investigation and the Federal Reserve in August 1989.

Investigators also are discovering that BCCI and BNL maintained close financial links outside of Switzerland. On June 5, 1989, for example, BCCI made a deposit of $30 million in overnight funds in BNL's Atlanta office, with Bank of America's New York office acting as intermediary. On June 30 of that year, BCCI placed an additional $42 million with BNL using the **BankAmerica** Corp. unit as intermediary.

"The program appears to be an overnight federal funds purchase to support Central Bank of Iraq transactions," according to a Federal Reserve Bank of Atlanta memo dated April 5, 1991. That memo details another wire transfer between the two banks totaling $200,000 dated July 31, 1989.

Other ledgers show 18 purchases of short-term deposits from one another totaling $450 million during 1988 and 1989, mostly through London.

There was also some interbank deposit business between BNL and units of First American Bankshares Inc., in which BCCI has been found to have held a secret 60% interest. Bank records show deposits totaling more than $20 million passing between BNL and First American in November 1988; Federal Reserve banks in Richmond, Va., and Baltimore acted as intermediaries in those transactions.

Links between BCCI and BNL also seem to have reached down to a lower level. A 1988 memo by Romit Basu, an official in BCCI's Miami office, refers to a particular banker in Atlanta at an unrelated institution. This banker, the memo says, "used to be with Banca Nazionale del Lavoro – Miami. He is aware of the BCCI group and is 'a friend' who could be very instrumental in creating a relationship between our two institutions."

GEORGE BUSH INVOLVED
IN B.N.L. SAGA
IN OTHER NEWS REPORTS.

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF ADMINISTRATIVE SERVICES

CONTRACT ROUTING FORM

FY 87

REQUIREMENTS:

1. Do Not Sign The Contract! (Only the Commissioner is Authorized to sign contracts).
2. Get authorized vendor signature on original and all copies of the contract. (See Checklist in Purchasing Notebook.)
3. Fill in all blanks:

SECTION I (To Be Completed By Contract Administrator.)

1. Contractor's Name Georgia Tech Research Corporation
   Address Georgia Institute of Technology - Atlanta, Georgia 30332-0420
2. Total amount of Contract: $ 96,000
3. Fiscal Year contract applicable to: FY-1988
4. Term of contract: From 1 July, 1987 To 30 June, 1988
5. Special items:
   a. For change orders include Original Contract Number
   b. For construction contracts include Architect's Contract Number
   c. Give any special mailing or handling instructions Funding is as follows:
   7-1-1-1/8-1 : $50,000; 7-1-1-2/8-982-7 : $16,000; 7-6-1-1/8-976-7 : $30,000

DNR BUDGET REVIEW
Reviewed By BLT
7/7
Date 7/7/87

ORGANIZATION NO.	PROJECT NO.	OBJECT CODE	SS or FED. ID #
See 5.c	See 5.c	653.1	

CONTRACT ADMINISTRATOR: (This is person responsible for budget in the originating unit.)

James C. Hardeman — Name
(404) 656-6905 — Phone No.
James C. Hardeman, Jr. — Signature
23 June, 1987 — Date

SECTION II (To Be Completed By Division Director.)

6. Is Contractor a non-profit entity as defined in Ga. Code Ann. Sec. 89-964? _____
   If yes, are requirements contained therein complied with? _____
8. Have the General items and content of this contract been discussed with the Commissioner and does it have his prior approval? _____

~~As~~ DIVISION DIRECTOR:

X Harold J. Abels — Signature
6/25/87 — Date

FOR ACCOUNTING AND BUDGET OFFICE USE ONLY

Terminal Entry (Entered by: _____)

TRANS. CODE	REFERENCE NO.	ORDER NO.	EFFECTIVE DATE	TYPE	DISCOUNT	ORGANIZATION NUMBER	CLASS
102	799-890008		07-01-87	1		VARIOUS	4

PROJECT NO.	FY	PCOA	WORK ORDER	FUNCTION	FUND SOURCE	LIABILITY COA
VARIOUS						

CASH COA	BANK	P.O./AUTH. NO.	VENDOR CODE	INVOICE NO.	PAY DATE	OVERRIDE

ITEM CODE	DESCRIPTION 25 CHARACTER MAX.	EXPENSE ACCT.	QUANTITY	AMOUNT
1	Radiological Analysis	653.1		96,000.00

DNR-OAS FORM 11

Georgia Department of Natural Resources
205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
404/656-3500

July 16, 1987

Dr. Bernd Kahn
Environmental Resources Center
Office of Interdisciplinary Programs
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Dr. Kahn:

Attached is a fully executed copy of the Contract between the Environmental Protection Division of the Georgia Department of Natural Resources and the Georgia Tech Research Corporation for Analytical Services Related to Environmental Radiological Surveillance and Radiological Assessment of Community Water Supplies. This contract covers the period July 1, 1987 through June 30, 1988.

We appreciate the fine work performed by you and your staff in providing data in support of our Environmental Radiation and Community Safe Drinking Water Programs. I am pleased to provide you this Contract for Fiscal Year 1988.

Sincerely,

Leonard

J. Leonard Ledbetter
Commissioner

JLL/jhs

Enclosure

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division
(404) 656-4713

MEMORANDUM

TO: Commissioner Ledbetter

THRU: Harold Reheis

THRU: Jim Setser

FROM: Jim Hardeman JCH

SUBJECT: Georgia Tech Contract for Radiochemical Analysis

Attached are four (4) copies of the proposed contract between EPD and Georgia Tech Research Corporation for FY-88. The scope of work is essentially identical to that in the FY-87 contract. Total funding for this contract is $96,000.

I recommend your approval of this contract. If you concur, please sign and have notarized each of the four (4) attached copies and return them to me.

JCH/cms

GEORGIA TECH RESEARCH CORPORATION

GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332-0420

Telex: 542507 GTRCOCAATL
Fax: (404) 894-3120

Phone: (404) 894-4817

Refer to: RDS/03.300.031.87.008

10 June 1987

JUN 15 1987

Georgia Department of Natural Resources
Environmental Protection Division
205 Butler Street, S.E.
Floyd Towers East
Atlanta, GA 30334

Attention: James Hardeman, Program Manager
Environmental Radiation Program

Subject: Contract for Project Entitled, "Analytical Services Related to Environmental Radiological Monitoring"

Dear Mr. Hardeman:

In accordance with the instructions contained therein, we have executed and are returning herewith four (4) copies of the subject contract. We have retained one (1) copy pending receipt of a fully executed copy.

Thank you for your continued interest in Georgia Tech.

Sincerely,

for Robert D. Apel

Lynn Boyd
Contracting Officer

LB/sdm

Enclosure: As stated

C O N T R A C T

with

The Georgia Tech Research Corporation

for

Analytical Services Related to Environmental Radiological Monitoring and Radiological Assessment of Community Water Supplies

THIS CONTRACT, entered into as of this 1st day of July, 1987, by and between the Environmental Protection Division of the Georgia Department of Natural Resources, (hereinafter called the "Division"), and the Georgia Tech Research Corporation (hereinafter called the "Contractor").

W I T N E S S E T H:

WHEREAS, the Division desires to engage the Contractor on a renewable agreement basis to render certain technical professional services hereafter described:

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. Employment of Contractor. The Division hereby agrees to engage the Contractor and the Contractor hereby agrees to perform personally the services hereafter set forth in connection with the projects of the Division.

2. Scope of Service. The Contractor shall do, perform and carry out personally the following services to the satisfaction of the Division:

   Task #1 - As part of the Division's Environmental Radiation Program, the Contractor shall provide the following services:

   a) Maintain laboratory facilities for conducting analytical work in support of the Environmental Radiation Program.

   b) Provide the professional direction of Dr. Bernd Kahn for laboratory operations.

   c) Analyze routine and special environmental samples collected as part of the Environmental Radiation Program, and report the analytical results to the Division as provided in Paragraph 5 hereof.

   d) Provide services related to the Division's thermoluminescent dosimeter (TLD) networks at fixed nuclear facilities. These services include preparing fresh TLD's for field distribution, analyzing TLD's returned to the laboratory, and providing analytical results to the Division as provided in Paragraph 5 hereof.

e) Provide weekly summaries of analytical results for specially designated projects.

f) Provide assistance in preparation of the Division's Environmental Radiation Surveillance Report by providing to the Division environmental surveillance data by facility, environmental media and date of collection.

g) Provide laboratory facilities or coordination of such facilities for emergency analyses.

h) Provide assistance in the development of utility analytical procedures for emergency work in both fixed and mobile laboratories.

i) Provide assistance in calibration, equipment testing and maintenance, and standards maintenance for the mobile laboratory.

j) Provide continuous reports of analytical results as they become available during emergency situations.

Task #2 - As part of the Division's Safe Drinking Water Program, the Contractor shall provide the following services.

a) Evaluate alternative methods of determining gross alpha, gross beta, tritium, radium-226, radium-228, strontium-89, strontium-90, iodine-131, and photon emitting activity in drinking water.

b) Analyze water samples for radionuclide content and provide the results of these analyses to the Division as provided in Paragraph 5 hereof. These samples will be of the following categories:

(1) New source screens

(2) 4-year grab samples of existing water supplies with radionuclide content less than 50 percent of the standard.

(3) Quarterly composites of water samples from water supplies with radionuclide content greater than 50 percent of the standard.

(4) Special samples (compliance monitoring, problem definition).

c) Submit analytical results of new source screens to the Division no later than two (2) weeks from receipt of the sample by the laboratory.

Task #3 - As part of the NRC Independent Measurements Program for environmental monitoring about fixed nuclear facilities, the Contractor shall, perform the following services:

a) Analyze samples from the Hatch Nuclear Plant and the Vogtle Electric Generating Plant as described below, and provide analytical results to the Division as provided in Paragraph 5 hereof.

Sample Type	Frequency	Type of Analysis
Air	monthly	Gross beta, iodine
Air	quarterly	Gamma isotopic
Surface Water	monthly	Gamma isotopic, tritium
Milk	monthly	Gamma isotopic, iodine
Fish	yearly	Gamma isotopic*, strontium
Grass	monthly	Gamma isotopic*
Food Products	yearly, at harvest	Gamma isotopic, iodine
Sediment	yearly	Gamma isotopic

*Vogtle samples will also be analyzed for tritium

3. Data to be Furnished to Contractor. All information, data, reports, maps as are existing, available, and necessary for the performance of the work shall be furnished to the Contractor without charges by the Division, and the Division shall cooperate with the Contractor in every way possible in the performance of planning work.

4. Personnel.

(a) The Contractor represents that he has, or will secure at his own expense, all personnel required in performing the services as outlined under this Contract. Such employees shall not be employees or have any contractual relationship with the Division or any State agency other than the Georgia Institute of Technology.

(b) None of the work or services covered by this Contract shall be subcontracted without the prior written approval of the Division.

5. Reports. The Contractor shall provide to the Manager of the Division's Environmental Radiation Program on a monthly basis detailed reports of all analytical results obtained pursuant to this Contract. These reports may be transmitted on computer media in a format compatible with the Division's Environmental Radiation Data Management System (ERDMS), thus satisfying both the requirements of this Paragraph and

Paragraph 6. Monthly reports shall be submitted to the Division no later than fifteen (15) days following the close of the month for which data is reported. On a quarterly basis, the Contractor shall provide the Division a summary of the number of samples analyzed during the quarter, by medium and type of analysis. This quarterly report shall accompany the Contractor's invoice for payment, as specified in Paragraph 11.

6. Data Management. On at least a monthly basis, the Contractor shall enter analytical results obtained pursuant to this Contract into the Division's Environmental Radiation Data Management System (ERDMS).

7. Quality Assurance. The Contractor shall participate in the EPA-sponsored Environmental Radioactivity Laboratory Intercomparison Studies Program to insure the reliable analyses of environmental samples, and to determine the level of accuracy and precision of these analyses. The Contractor shall also participate in a program to insure the reliability of thermo-luminescent dosimeter analyses. Data obtained pursuant to these quality assurance programs shall be provided to the Division on at least an annual basis. The Contractor shall implement, maintain, and update as necessary procedures to insure the reliability of analytical results obtained pursuant to this Contract.

8. Disclosure of Data. The Contractor acknowledges that serious and irreparable harm can result from the unauthorized release of data and information obtained pursuant to this Contract. The Contractor covenants that neither Contractor, nor any employee, agent, or representative of Contractor shall release or cause to be disclosed any data or information obtained pursuant to this Contract without the express written permission of the Division or a lawful order of a court of competent jurisdiction.

The Division acknowledge one of the primary purposes of the Contractor is that of creating, preserving and disseminating knowledge, and hereby agrees to review written requests by Contractor to release data or information obtained pursuant to this Contract, in which the Contractor proposes to catalog and place such data or information in the Georgia Tech Library for reference purposes, or to include such data or information in proposed publications in the scientific literature. The Division agrees to respond in writing to such requests within sixty (60) days of their receipt of the Division. If approval of such requests

is withheld, the Division will state the reason for which approval is withheld. To the extent said publication can be modified so as to avoid the concerns of the Division, permission to catalog and place in the library or publish data or information obtained pursuant to this Contract will not be unreasonably withheld. N.B.

9. Time of Performance. The services of the Contractor are to commence as of July 1, 1987 and shall be carried out by June 30, 1988.

10. Compensation. The Division agrees to pay the Contractor the following sum:

Task #1 ---------- $50,000.00
Task #2 ---------- $30,000.00
Task #3 ---------- $16,000.00

11. Method of Payment. The Division will pay to the Contractor the amount set forth in Paragraph 10, which shall constitute full and complete compensation for the Contractor's services herein. At the end of each quarter (September 30, 1987; December 31, 1987; March 31, 1988, and June 30, 1988), the Division will, subject to receipt of a requisition or invoice for payment specifying that the Contractor has performed the work and is entitled to the amount requisitioned, pay the Contractor the following sum:

Task #1 ---------- $12,500.00
Task #2 ---------- $ 7,500.00
Task #3 ---------- $ 4,000.00

All invoices for payment shall be accompanied by quarterly summary reports as specified in Paragraph 5.

12. Termination of Contract for Cause. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Division shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Contractor shall, at the option of the Division, become the property of the Division and the Contractor shall be entitled to receive just

and equitable compensation for any satisfactory work completed on such documents and other materials.

13. Termination for Convenience of Division. The Division may terminate this Contract at any time by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least 15 days before the effective date of such termination. In that event, all finished or unfinished documents and other materials as described in Paragraph 12 above shall, at the option of the Division, become its property. If the Contract is terminated by the Division as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor covered by this Contract, less payments of compensation previously made: Provided, however, that if less than 60 percent of the services covered by this Contract have been performed upon the effective date of such termination, the Contractor shall be reimbursed, in addition to the above payment, for that portion of the actual out-of-pocket expenses, not otherwise reimbursed under this Contract, incurred by the Contractor during the Contract period which are directly attributable to the uncompleted portion of the services covered by this Contract. If this Contract is terminated due to the fault of the Contractor, Paragraph 12 hereof relative to termination shall apply.

14. Changes. The Division may, from time to time, require changes in the scope of services of the Contractor to be performed herein. Such changes, including any increases or decreases in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Division and the Contractor, shall be incorporated in written amendments to this Contract.

15. Assignability. The Contractor shall not assign any interest in this Contract, and shall not transfer any interest in the same, whether by assignment or novation, without the prior written consent of the Division thereto, provided, however, that claims for money due or to become due to the Contractor from the Division under this Contract may be assigned to a bank, trust company, or other financial institution without such approval. Written notice of any such assignment or transfer shall be furnished promptly to the Division.

16. Interest of Contractor. The Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance required under this Agreement. The Contractor further covenants that in the performance of this Agreement, no person having any such interest shall be employed or contracted with.

MONITORS IT'S OWN BACKYARD

17. Copyright. No reports, maps or other documents produced in whole or in part under this Contract shall be the subject of an application for copyright by or on behalf of the Contractor.

18. Progress Reports. The Contractor shall submit a brief progress report to the Division at the end of each month. Such report shall include, but not be limited to the identification of any delaying factors, and a brief statement of activities to the date of reporting and interim recommendations, if any, based thereon.

19. Conflicts of Interest. The parties to this Agreement certify that the provisions of law prohibiting full and part-time appointive officials and employees of the State from engaging in certain transactions affecting the State contained in O.C.G.A. Sections 45-10-20 through 45-10-28 have not and will not be violated in any respect in regard to this Agreement.

20. Applicable Law. This Agreement and all rights, privileges and responsibilities shall be interpreted and construed according to the laws of the State of Georgia.

21. Amendments. This Contract represents the sole and complete understanding of the terms of this Agreement between the parties hereto and may be amended, changed or modified only by a written document signed by the parties hereto.

ATTEST:

Sandra E Hasser

SANDRA E HASSER
Notary Public, Georgia, State At Large
My Commission Expires May 23, 1988

ATTEST:

Doris E Shultz

6/11/87

Notary Public, Fulton County, Georgia
My Commission Expires May 21, 1991

Environmental Protection Division
Department of Natural Resources

By: Leonard Ledbetter

Georgia Tech Research Corporation

By: Lynn Boyd, Asst. to VP/General Manager

By: T E Stelson
Dr. T.E. Stelson, Asst. Secretary

N.B. *

OFFICE OF ADMINISTRATIVE SERVICES

CONTRACT ROUTING FORM

REQUIREMENTS:

1. Do Not Sign The Contract! (Only the Commissioner is Authorized to sign contracts.)
2. Get authorized vendor signature on original and all copies of the contract. (See Checklist in Purchasing Notebook.)
3. Fill in all blanks:

DNR General Services Budget Unit

SECTION I (To Be Completed By Contract Administrator.)

1. Contractor's Name Georgia Tech Research Corporation
   Address Georgia Institute of Technology, Atlanta, GA 30332
2. Total amount of Contract: $ 92,000
3. Fiscal Year contract applicable to: 1987
4. Term of contract: From 1 July, 1986 To 30 June, 1987
5. Special items:
   a. For change orders include Original Contract Number
   b. For construction contracts include Architect's Contract Number
   c. Give any special mailing or handling instructions Billing: 7-1-1-1/8+1 : $50,000, 7-6-1-1/8-976-6: $28,500 7-1-4-2/8-782-6: $13,500

DNR BUDGET REVIEW
Reviewed By
Date 8/1/86

ORGANIZATION NO.	PROJECT NO.	OBJECT CODE	SS or FED. ID #
See 5.c.	See 5.c	653.1	

CONTRACT ADMINISTRATOR: (This is person responsible for budget in the originating unit.)

James C. Hardeman, Jr. — Name
(404) 656-6905 — Phone No.
James C. Hardeman, Jr. — Signature
COMMISSIONER'S ~~OFFICE~~ DEPT. OF NATURAL RESOURCES
7/28/86 — Date

SECTION II (To Be Completed By Division Director.)

AUG 5 1986

6. Is Contractor a non-profit entity as defined in Ga. Code Ann. Sec. 89-964?
   If yes, are requirements contained therein complied with?
8. Have the General items and content of this contract been discussed with the Commissioner and does it have his prior approval?

DIVISION DIRECTOR:

Signature
7/29/86 — Date

FOR ACCOUNTING AND BUDGET OFFICE USE ONLY

Terminal Entry (Entered by:)

TRANS. CODE	REFERENCE NO.	ORDER NO.	EFFECTIVE DATE	TYPE	DISCOUNT	ORGANIZATION NUMBER	CLASS
102	799-790039		07-01-86	1		Various	4

PROJECT NO.	PT	PCOA	WORK ORDER	FUNCTION	FUND SOURCE	LIABILITY COA
Various						

CASH COA	BANK	P.O./AUTH. NO.	VENDOR CODE	INVOICE NO.	PAY DATE	OVERRIDE

ITEM CODE	DESCRIPTION 23 CHARACTER MAX.	EXPENSE ACCT.	QUANTITY	AMOUNT
1	Ga. Tech Prof Serv	653.1		$92,000.00

DNR-OAS FORM 16

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division
(404) 656-4713

July 28, 1986

MEMORANDUM

TO: Commissioner Ledbetter

THRU: Harold Reheis

THRU: Jim Setser

FROM: Jim Hardeman

SUBJECT: Georgia Tech Contract for Radiochemical Analysis

Attached are four (4) copies of the proposed contract between EPD and Georgia Tech Research Corporation for FY-87. The scope of work is essentially identical to that in the FY-86 contract. Total funding for this contract is $92,000.

I recommend your approval of this contract. If you concur, please sign and have notarized each of the four (4) attached copies and return them to me.

JCH/cm

GEORGIA TECH RESEARCH CORPORATION

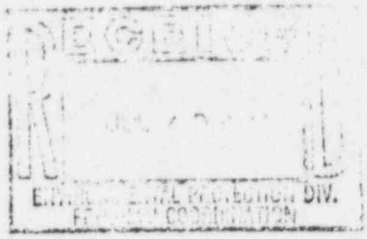
GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332-0420

Telex: 542507 GTRCOCAATL
Fax: (404) 894-3120

Phone: (404) 894-4817

Refer to: LB/03.300.000.87.001

22 July 1986



James Hardeman, Program Manager
Environmental Radiation Program
Environmental Protection Division
Georgia Department of Natural Resources
Floyd Tower East
205 Butler Street
Atlanta, Georgia 30334

Subject: Contract for Project Entitled, "Analytical Services Related to Environmental Radiological Surveillance and Radiological Assessment of Community Water Supplies"

Dear Mr. Hardeman:

Thank you for the signed agreement papers received under the subject project. We have completed their execution on behalf of the GEORGIA TECH RESEARCH CORPORATION and return four copies herewith. We have retained one (1) copy pending receipt of a fully executed copy from your office.

We look forward to continuing our work with you on this project.

Sincerely,

Lynn Boyd

Lynn Boyd
Contracting Officer

LB/cfd

Enclosure: As stated

205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
404/656-3500

August 11, 1986

Dr. Bernd Kahn
Environmental Resources Center
Office of Interdisciplinary Programs
Georgia Institute of Technology
Atlanta, Georgia 30332

Dear Dr. Kahn:

Attached is a fully executed copy of the Contract between the Environmental Protection Division of the Georgia Department of Natural Resources and the Georgia Tech Research Corporation for Analytical Services Related to Environmental Radiological Surveillance and Radiological Assessment of Community Water Supplies. This contract covers the period July 1, 1986 through June 30, 1987.

We appreciate the fine work performed by you and your staff in providing data in support of our Environmental Radiation and Community Safe Drinking Water Programs. I am pleased to provide you this Contract for Fiscal Year 1987.

Sincerely,

Leonard

J. Leonard Ledbetter
Commissioner

JLL/jhm

Enclosure

CONTRACT

with

The Georgia Tech Research Corporation

for

Analytical Services Related to Environmental Radiological Surveillance and Radiological Assessment of Community Water Supplies

THIS CONTRACT, entered into as of this 1st day of July, 1986, by and between the Environmental Protection Division of the Georgia Department of Natural Resources, (hereinafter called the "Division"), and the Georgia Tech Research Corporation (hereinafter called the "Contractor").

WITNESSETH:

WHEREAS, the Division desires to engage the Contractor on a renewable agreement basis to render certain technical professional services hereafter described:

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. Employment of Contractor. The Division hereby agrees to engage the Contractor and the Contractor hereby agrees to perform personally the services hereafter set forth in connection with the projects of the Division.

2. Scope of Service. The Contractor shall do, perform and carry out personally the following services to the satisfaction of the Division:

   Task #1 - As part of the Division's Environmental Radiation Surveillance Program, the Contractor shall provide the following services:

   a) Maintain laboratory facilities for conducting analytical work in support of the Environmental Radiation Surveillance Program.

   b) Provide the professional direction of Dr. Bernd Kahn for laboratory operations.

   c) Analyze routine and special environmental samples collected as part of the Environmental Radiation Surveillance Program, and report the analytical results to the Division as provided in Paragraph 5 hereof.

   d) Provide services related to the Division's thermoluminescent dosimeter (TLD) networks at fixed nuclear facilities. These services include preparing fresh TLD's for field distribution, analyzing TLD's returned to the laboratory, and providing analytical results to the Division as provided in Paragraph 5 hereof.

e) Provide weekly summaries of analytical results for specially designated projects.

f) Provide assistance in preparation of the Division's annual Environmental Radiation Surveillance Report by providing to the Division environmental surveillance data by facility, environmental media and date of collection.

g) Provide laboratory facilities or coordination of such facilities for emergency analyses.

h) Provide assistance in the development of utility analytical procedures for emergency work in both fixed and mobile laboratories.

i) Provide assistance in calibration, equipment testing and maintenance, and standards maintenance for the mobile laboratory.

j) Provide continuous reports of analytical results as they become available during emergency situations.

Task #2 - As part of the Division's Safe Drinking Water Program, the Contractor shall provide the following services.

a) Evaluate alternative methods of determining gross alpha, gross beta, tritium, radium-226, radium-228, strontium-89, strontium-90, iodine-131, and photon emitting activity in drinking water.

b) Analyze water samples for radionuclide content and provide the results of these analyses to the Division as provided in Paragraph 5 hereof. These samples will be of the following categories:

(1) New source screens

(2) 4-year grab samples of existing water supplies with radionuclide content less than 50 percent of the standard.

(3) Quarterly composites of water samples from water supplies with radionuclide content greater than 50 percent of the standard.

(4) Special samples (compliance monitoring, problem definition).

c) Submit analytical results of new source screens to the Division no later than two (2) weeks from receipt of the sample by the laboratory.

Task #3 - As part of the NRC Independent Measurements Program for environmental monitoring about fixed nuclear facilities, the Contractor shall, perform the following services:

a) Analyze samples from the Hatch Nuclear Plant and the Vogtle Electric Generating Plant as described below, and provide analytical results to the Division as provided in Paragraph 5 hereof.

Sample Type	Frequency	Type of Analysis
Air	monthly	Gross beta, iodine
Air	quarterly	Gamma isotopic
Surface Water	monthly	Gamma isotopic, tritium
Milk	monthly	Gamma isotopic, iodine
Fish	yearly	Gamma isotopic*, strontium
Grass	monthly	Gamma isotopic*
Food Products	yearly, at harvest	Gamma isotopic, iodine
Sediment	yearly	Gamma isotopic

*Vogtle samples will also be analyzed for tritium

3. Data to be Furnished to Contractor. All information, data, reports, maps as are existing, available, and necessary for the carrying out of the work shall be furnished to the Contractor without charges by the Division, and the Division shall cooperate with the Contractor in every way possible in the carrying out of the planning work.

4. Personnel.

(a) The Contractor represents that he has, or will secure at his own expense, all personnel required in performing the services as outlined under this Contract. Such employees shall not be employees or have any contractual relationship with the Division or any State agency other than the Georgia Institute of Technology.

(b) None of the work or services covered by this Contract shall be subcontracted without the prior written approval of the Division.

5. Reports. The Contractor shall provide to the Manager of the Division's Environmental Radiation Program detailed monthly reports of all analytical results obtained pursuant to this Contract. Included in each report shall be a summary of the number of samples analyzed during the month by medium and type of analysis, and a summary of the types of samples

analyzed during the month. Monthly reports shall be submitted to the Division no later than fifteen (15) days following the close of the month for which data is reported.

6. Data Management. On at least a monthly basis, the Contractor shall enter analytical results obtained pursuant to this Contract into the computer data management system(s) developed by the Division.

7. Quality Assurance. The Contractor shall participate in the EPA-sponsored Environmental Radioactivity Laboratory Intercomparison Studies Program to insure the reliable analyses of environmental samples, and to determine the level of accuracy and precision of these analyses. The Contractor shall also participate in a program to insure the reliability of thermo-luminescent dosimeter analyses. Data obtained pursuant to these quality assurance programs shall be provided to the Division on at least an annual basis. The Contractor shall implement, maintain, and update as necessary procedures to insure the reliability of analytical results obtained pursuant to this Contract.

8. Disclosure of Data. Acknowledging one of the purposes of the Contractor to be that of creating, preserving, and disseminating knowledge, the Division hereby agrees to review upon request by the Contractor the reports of this project which the Contractor proposes to catalog and place in the Georgia Tech Library for research and reference purposes or proposed publications in the scientific literature. The Division agrees to respond within ninety (90) days to such requests. If approval is withheld, the Division will state the reason for same. To the extent said publication can be modified so as to avoid the concerns of the Division, permission to place in the library or publish will not be unreasonably withheld.

N.B. *

9. Time of Performance. The services of the Contractor are to commence as of July 1, 1986 and shall be carried out by June 30, 1987.

10. Compensation. The Division agrees to pay the Contractor the following sum:

Task #1 ---------- $50,000.00
Task #2 ---------- $28,500.00
Task #3 ---------- $13,500.00

11. Method of Payment. The Division will pay to the Contractor the amount set forth in Paragraph 10, which shall constitute full and complete compensation for the Contractor's services herein. At the end of each

quarter (September 30, 1986; December 31, 1986; March 31, 1987, and June 30, 1987), the Division will, subject to receipt of a requisition or invoice for payment specifying that the Contractor has performed the work and is entitled to the amount requisitioned, pay the Contractor the following sum:

Task #1 ---------- $12,500.00
Task #2 ---------- $ 7,125.00
Task #3 ---------- $ 3,375.00

12. Termination of Contract for Cause. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Division shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Contractor shall, at the option of the Division, become the property of the Division and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

13. Termination for Convenience of Division. The Division may terminate this Contract at any time by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least 15 days before the effective date of such termination. In that event, all finished or unfinished documents and other materials as described in Paragraph 12 above shall, at the option of the Division, become its property. If the Contract is terminated by the Division as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor covered by this Contract, less payments of compensation previously made: Provided, however, that if less than 60 percent of the services covered by this Contract have been performed upon the effective date of such termination, the Contractor shall be reimbursed, in addition to the above payment, for that portion of the actual out-of-pocket expenses, not otherwise reimbursed under this Contract, incurred by the Contractor during the Contract period

which are directly attributable to the uncompleted portion of the services covered by this Contract. If this Contract is terminated due to the fault of the Contractor, Paragraph 12 hereof relative to termination shall apply.

14. Changes. The Division may, from time to time, require changes in the scope of services of the Contractor to be performed herein. Such changes, including any increases or decreases in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Division and the Contractor, shall be incorporated in written amendments to this Contract.

15. Assignability. The Contractor shall not assign any interest in this Contract, and shall not transfer any interest in the same, whether by assignment or novation, without the prior written consent of the Division thereto, provided, however, that claims for money due or to become due to the Contractor from the Division under this Contract may be assigned to a bank, trust company, or other financial institution without such approval. Written notice of any such assignment or transfer shall be furnished promptly to the Division.

16. Interest of Contractor. The Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance required under this Agreement. The Contractor further covenants that in the performance of this Agreement, no person having any such interest shall be employed or contracted with.

MONITORS IT'S OWN BACKYARD

*!

17. Copyright. No reports, maps or other documents produced in whole or in part under this Contract shall be the subject of an application for copyright by or on behalf of the Contractor.

18. Progress Reports. The Contractor shall submit a brief progress report to the Division at the end of each month. Such report shall include, but not be limited to the identification of any delaying factors, and a brief statement of activities to the date of reporting and interim recommendations, if any, based thereon.

19. Conflicts of Interest. The parties to this Agreement certify that the provisions of law prohibiting full and part-time appointive officials and employees of the State from engaging in certain transactions affecting the State contained in O.C.G.A. Sections 45-10-20 through 45-10-28 have not and will not be violated in any respect in regard to this Agreement.

20. Applicable Law. This Agreement and all rights, privileges and responsibilities shall be interpreted and construed according to the laws of the State of Georgia.

21. Amendments. This Contract represents the sole and complete understanding of the terms of this Agreement between the parties hereto and may be amended, changed or modified only by a written document signed by the parties hereto.

ATTEST:

Sandra E Hasser
Notary Public

SANDRA E HASSER
Notary Public, Georgia, State At Large
My Commission Expires May 23, 1988

Environmental Protection Division
Department of Natural Resources

By: J. Leonard Ledbetter
J. Leonard Ledbetter, Director

ATTEST:

Notary Public

Notary Public, Georgia State at Large
My Commission Expires May 22, 1987

Georgia Tech Research Corporation

By: Lynn Boyd
Lynn Boyd, Asst to VP/Gen Mgr

By: J. W. Dees
J. W. Dees, Assistant Secretary

From: Jim Hardeman
To: Bruce Boughton [NEST]
Date: 3/19/96 8:17
Subject: URGENT Request

Bruce -- as you will recall from our discussions after Mirrored Image, the timeframe for analysis of the Georgia Tech situation would depend on when somebody started yelling for it. Well, guess what? Apparently the Chief of Staff of the State Olympic Law Enforcement Command (SOLEC) is yelling for it. The following is from an exchange between Dave Moffet (Georgia Emergency Management Agency) and his management:

>>> Dave Moffet 03/18/96 13:09 >>>

All highly enrich uranium (HEU) has been removed from the Tech reactor and moved to the Savannah River Site for storage. Remaining within the building is approximately 200,000 curies of cobalt 60 which is in the storage pool. The potential here is for terrorist activity directed at dispersing the cobalt within or beyond the reactor building. Currently the DOD Nuclear Emergency Search Team (NEST) is conducting a study to determine the consequences in the event this material should be dispersed. When this study is complete, we will have a fairly good picture of area/areas tjat could be threatend in or beyond the reactor building. I will keep you informed when this information is available.

The reply to the above message was as follows:

Please determine when study will be complete. I need something this morning. Sounds like big threat is in terms of terrorists breaking into building, stealing material then using for criminal purposes. What are effects of using such an amount of material for terrorist activities?

Please give Dave Moffet a telephone call as soon as possible. Dave's number is (404) 635-7231. You can also talk with his receptionist at X-7230. I will be out of pocket until Friday, so please work directly with Dave.

Thanks for your help.

VERY IMPORTANT

WRONG - AMOUNT IS HIGHER

From: Jim Hardeman
To: Bruce Boughton [NEST]
Date: 3/19/96 8:23
Subject: CORRECTION

Correction on previous message -- Dave just called an told me the request is coming from the GOVERNOR'S office, not SOLEC. That brings it into a whole new realm of urgency.

BECAUSE OF ME,
Pamela

VERY IMPORTANT

GEORGIA TECH RESEARCH CORPORATION

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
PROGRAM INITIATION DIVISION
ATLANTA, GEORGIA 30332-0420
USA

Telex: 542507 GTRC OCA ATL
Fax: (404) 894-6956

Phone: (404) 894-4817

Refer to: Refer to: DBB/03.200.221.93.006

5 November 1992

Education Research and Development
Association of Georgia Universities
900 Atlantic Drive
Atlanta, Georgia 30332-0425

PLUTONIUM!!

Attention: Dr. Ratib A. Karam

Subject: Research Proposal Entitled, "International Seminar on Using Nuclear Stockpiles for Public Benefit"

Reference: Westinghouse Savannah River Company Subcontract No. AA46420T

Ladies and Gentlemen:

The GEORGIA TECH RESEARCH CORPORATION desires to submit for your consideration the subject proposal prepared by Dr. R. A. Karam, Neely Nuclear Research Center, Georgia Institute of Technology.

A description of the research program, the time required and program cost are included in the proposal. Should additional information be desired, please do not hesitate to contact Dr. Karam at 404/894-3620 regarding technical matters or the undersigned at 404/894-4817 for administrative concerns.

In the event of an award, we propose that the work be authorized by either a grant or a cost-reimbursable (no-fee) type contract drawn in the name of the GEORGIA TECH RESEARCH CORPORATION.

We appreciate the opportunity of submitting this proposal and look forward to working with you on this project.

Sincerely,

David B. Bridges

David B. Bridges
Contracting Officer

DBB/bb

Addressee: Three copies
Enclosure: Proposal - Three copies

Hamilton Holmes
(1941-1995)

The man whose determined walk through the gates of the University of Georgia in 1961 was the turning point for integration of Georgia schools died Thursday in Atlanta.

LOCAL NEWS, C1

OBITUARIES

The Atlanta Journal / The Atlanta Constitution

C10 Saturday, October 28, 1995 *****

Dr. Hamilton Holmes
Physician

The funeral for Dr. Hamilton E. Holmes of Atlanta, a physician and Emory School of Medicine professor, will be at 11 a.m. Tuesday at the Martin Luther King Jr. International Chapel at Morehouse College.

Dr. Holmes, 54, died Thursday at home.

Surviving are his wife, Marilyn V. Holmes, his mother, Isabella C. Holmes of Atlanta; two children, Alison Holmes and Hamilton Holmes Jr., both of Atlanta; and four siblings, Emma Lauren Holmes and Michael B. Holmes of New York, and A. Herbert Holmes and Gary M. Holmes of Atlanta.

■

Hamilton Holmes *broke new ground for blacks at UGA* **C1**

Georgia Tech

Georgia Institute of Technology
Office of Legal Affairs
Atlanta, Georgia 30332-0420 USA

Telephone: 404•894•4812
Fax: 404•894•3120

June 9, 1995

Ms. Pamela Blockey-O'Brien
D23 Golden Valley
Douglasville, Georgia 30134

Re: Open Records Request

Dear Ms. Blockey-O'Brien:

This letter supplements my previous letter of May 26, 1995. I have received the information you requested with regard to the contractors who have disposed of nuclear waste from the reactor from 1964 to the present. The contractors are as follows:

Chem-Nuclear, Columbia, SC
Bionomics, Kingston, TN and Santa Fe, NM
ADCO Services, Inc., Tinley Park, IL
Quadrex Corp., Gainesville, FL
Diversified Scientific Services, Kingston, TN

The Georgia Institute of Technology does not have records containing contract files with the vendors. The work they performed was pursuant to a request for quotation and a purchase order issued. The Georgia Institute of Technology maintains purchase order records for a three year period. You may contact my office and arrange a mutually convenient time to come and review the available records.

2 BIG FOLDERS

Very truly yours,

Pamela P. Rary
Attorney

PPR/mj

cc: Dr. R. Karam

CEMENT & AGGREGATE KILNS THAT BURN HAZARDOUS WASTE FOR FUEL:

LONE STAR INDUSTRIES, INC. Greencastle, INDIANA	Cement Kiln EPA 5	"Failed to provide complete info on types of fuels it burned, performed inadequate testing of kiln dust to determine if haz.waste, and did not adequately monitor and control the feed of fuel into its kiln."	$ 3,822,056
RIVER CEMENT CO. Festus, MISSOURI	Cement Kiln EPA 7	"Inadequate Certificate of Compliance, failure to continuously monitor metal feed rates, no functional auto feed cutoff, and illegal hazardous waste storage units."	$3,364,388
ASH GROVE CEMENT CO. Louisville, NEBRASKA	Cement Kiln EPA 7	"Failure to maintain operating records, analyze waste derived fuel prior to burning, illegal storage of hazardous waste in rail cars, and no operating automatic waste feed cutoff."	$1,274,900
LAFARGE CORPORATION Fredonia, KANSAS	Cement Kiln EPA 7	"Inadequate Waste Analysis Plan, failure to monitor hazardous constituent metal feeds."	$1,200,474
LAFARGE CORP. Paulding, OHIO	Cement Kiln EPA 5	"Waste analysis and determination violations, failure to record feed rates of metals, chloride, and chlorine, and failure to meet performance specifications."	$ 619,800
LAFARGE CORPORATION Demopolis ALABAMA	Cement Kiln EPA 4	"Inadequate waste analysis, incomplete operating record, failure to make hazardous waste/Bevill determinations... failure to continuously monitor & record solid feed" to kiln.	$ 594,000
Southwestern Portland Cement (SOUTHDOWN) Fairborn, OHIO	Cement Kiln EPA 5	"Exceeded feed rates for total hazardous waste and stored hazardous cement kiln dust without a permit."	$1,064,765
HOLNAM, INC. Holly Hill, SOUTH CAROLINA	Cement Kiln EPA 4	"Failure to make hazardous waste determination of cement kiln dust, develop adequate Waste Analysis Plan, submittal of inaccurate/incomplete Certificate of Compliance, and failure to comply with air emission standards."	$ 838,850
HOLNAM INC. Clarksville, MISSOURI	Cement Kiln EPA 7	"Failure to perform detailed waste analyses, inadequate secondary tank containment, failure to use proper waste determination methods, and inadequate Waste Analysis Plan."	$ 309,055
KENTUCKY SOLITE CORP. Brooks, KENTUCKY	Aggregate Kiln EPA 4	"Failure to perform leak detection monitoring on hazardous waste equipment, failure to make a hazardous waste/Bevill determination...failure to monitor hydrocarbon emissions."	$ 485,350
KOSMOS CEMENT Louisville, KENTUCKY	Cement Kiln EPA 4	"Inadequate Waste Analysis Plan for waste feed to cement kiln, failure to monitor equipment attached to [kiln] for leaks."	$ 18,700

BOILERS & INDUSTRIAL FURNACES THAT BURN HAZARDOUS WASTE:

COMPANY	LOCATION	EPA REGION		Proposed Penalty
S.C. JOHNSON & SONS	Sturtevant, WISCONSIN	EPA 5	Boiler	$ 1,466,475
RHONE-POULENC	Institute, WEST VIRGINIA	EPA 3	Boiler	$ 915,125
Rhone-Poulenc Basic Chemical Co.	Hammond, INDIANA	EPA 5	Sulfuric Acid Furnace	$ 37,350
THE MAYLINE CO.	Sheboygan, WISCONSIN	EPA 5	Boiler	$ 649,000
DOW CHEMICAL CO.	Midland, MICHIGAN	EPA 5	Boiler	$ 599,974
DOW CHEMICAL U.S.A.	Joliet, ILLINOIS	EPA 5	Boiler	$ 110,000
DOW CHEMICAL	Plaquemine, LOUISIANA	EPA 6	Boiler	$ 48,500
BEAUMONT Methanol Corp.	Beaumont, TEXAS	EPA 6	Boiler	$ 583,950
ETHYL CORPORATION	Magnolia, ARKANSAS	EPA 6	Industrial Furnace	$ 544,245
ARIZONA CHEMICAL	Panama City, FLORIDA	EPA 4	Boiler	$ 334,600
Malinckrodt Speciality Chemicals	Raleigh, NORTH CAROLINA	EPA 4	Boiler	$ 329,500
Parke-Davis Division Warner Lambert Co.	Holland, MICHIGAN	EPA 5	Boiler	$ 267,925
ETHYL CORPORATION	Orangeburg, SOUTH CAROLINA	EPA 4	Boiler	$ 151,450
International Specialty Products	Calvert City, KENTUCKY	EPA 4	Boiler	$ 129,350
DSM CHEMICALS, North America	Augusta, GEORGIA	EPA 4	Boiler	$ 121,750
ICI ACRYLICS, INC.	Olive Branch, MISSOURI	EPA 4	Boiler	$ 101,000
Tenn. Eastman Co.	Kingsport, TENNESSEE	EPA 4	Boiler	$ 98,000
The NutraSweet Co.	Augusta, GEORGIA	EPA 4	Boiler	$ 80,000
Diversified Scientific Services	Kingston, TENNESSEE	EPA 4	Boiler	$ 64,000
Diversified Scientific Services	Kingston, TENNESSEE	EPA 4	Boiler	$ 23,000
VANDERBILT CHEMICAL	Murray, KENTUCKY	EPA 4	Boiler	$ 7,500

WASTE NOT # 248. *A publication of Work on Waste USA, published 48 times a year. Annual rates are: Groups & Non-Profits $50; Students & Seniors $35; Individual $40; Consultants & For-Profits $125; Canadian $US50; Overseas $65. Editors: Ellen & Paul Connett, 82 Judson Street, Canton, NY 13617. Tel: 315-379-9200. Fax: 315-379-0448.*

Printed on recycled paper, naturally

Waste Not

The Weekly Reporter for rational resource management

248

A publication of *Work On Waste USA, Inc.*, 82 Judson, Canton, NY 13617 315-379-9200 SEPTEMBER 1993

The U.S. Federal EPA's "New Enforcement Actions" Against Hazardous Waste Burners.

On September 28 an EPA Enforcement Initiative Fact Sheet was released which stated: Today "EPA Headquarters (OSWER and OE), together with the Regions and the state of Illinois, announced a cluster filing of enforcement actions against violators of hazardous waste combustion regulations. The actions seek over $22 million in civil penalties and, where violations are ongoing, to compel the facilities to return to compliance. A total of 30 federal administrative complaints, 1 state complaint, and 7 federal administrative consent agreements were filed. Most of the actions target boilers and industrial furnaces (BIFs) for failing to comply with EPA's Burning of Hazardous Waste in Boilers and Industrial Furnaces (BIF) rule, codified at 40 CFR Part 266, Subpart H. There are also 3 actions, including a $3.1 million state action [against **Chemical Waste Management's** hazardous waste incinerator in Sauget, Illinois. See also *.] alleging violations by incinerators of permit requirements under the nation's hazardous waste management law, the Resource Conservation and Recovery Act (RCRA)...There are 159 BIFs operating presently in the United States. Approximately 925 boilers were burning hazardous waste prior to the BIF rule. As a result of the BIF rule, approximately 175 of those boilers stopped burning hazardous waste. Roughly 600 of the remaining BIFS qualify for a 'small quantity burner exemption' in the BIF rule (these units, together, burn less than 1% of the total hazardous waste burned in BIFs). **EPA has identified 190 facilities with one or more regulated hazardous waste incinerators. Of these 190 facilities, 27 are operating as commercial hazardous waste incinerators."** EPA defines BOILER as "an enclosed device which burns hazardous waste/fuel mixtures to produce steam or hot water for on-site use. In the process, the hazardous waste is destroyed." EPA defines INDUSTRIAL FURNACE as "an enclosed device which is integral component of a manufacturing process and uses thermal treatment to recover materials and/or energy, while destroying the hazardous waste. There are twelve types of industrial furnaces. These include cement kilns, aggregate kilns, and halogen acid furnaces."

* **Note from *Waste Not*::** In 1992 the State of Illinois also fined **Chemical Waste Management a $3 million fine** for falsifying inventory records that led to an explosion in 1991 at its Chicago, Illinois, hazardous waste incinerator - see *W.N.# 203.*

U.S. EPA'S PROPOSED PENALTIES:

HAZARDOUS WASTE INCINERATORS	$ 3,197,250
CEMENT & AGGREGATE KILNS	$13,592,338
BOILERS & INDUSTRIAL FURNACES	$ 6,662,694

Note from *Waste Not:*
The professionals do a bad job, but the amateurs (cement kilns) do even worse.

U.S. EPA'S New Enforcement Actions, dated September 27, 1993:

FACILITY/LOCATION	Type of Unit/ EPA REGION	MAJOR VIOLATIONS	PROPOSED PENALTY
HAZARDOUS WASTE INCINERATORS:			
CHEMICAL WASTE MANAGEMENT, INC. Sauget, ILLINOIS	Incinerator EPA 5	"Allowed release of fugitive emissions from partially and completely burned hazardous waste."	$3,100,000 (State Fine)
LAIDLAW ENV. SERVICES Roebuck, SOUTH CAROLINA	Incinerator EPA 4	"Failure to set correct CO emission parameter and cease hazardous waste feed when monitoring equipment inoperable."	$ 61,500
CHEMICAL WASTE MANAGEMENT, INC. Port Arthur, TEXAS	Incinerator EPA 6	"Waste analysis and determination violations, hazardous waste manifest violations."	$ 18,750
STERLING PHARMACEUTICALS Barceloneta, PUERTO RICO	Incinerator EPA 2	"Violated permit operating conditions by exceeding specified waste feed limits for spent solvent toluene."	$ 17,000

EXCERPTS

GEORGIA INSTITUTE OF TECHNOLOGY

ENVIRONMENTAL RESOURCES CENTER
205 OLD CIVIL ENGINEERING BLDG
ATLANTA, GEORGIA 30332

(404) 894-3776

DATE : April 15, 1994

TO : James Hardeman, Program Manager
Environmental Radiation Program
Environmental Protection Division, DNR

FROM : Bernd Kahn, Director Bernd Kahn
Environmental Resources Center

FROM : Monthly Report of Activities for the State by the Environmental Radiation Laboratory for March 1994.

The results of radionuclide analyses are reported for the following samples types that were processed this month:

Environmental radionuclide monitoring at nuclear facilities by DNR staff	Table 1-17
Monitoring by DNR staff of community water systems	Table 18
Monitoring environmental radiation levels by DNR staff	Table 19

Of the samples collected in the environment at nuclear facilities, the following contained radioactivity that may be attributed to the facility:

Tables 14, 15 and 17: H-3 milk, water, and aquatic samples at the Savannah River Plant.

All other radionclides in Table 1-17 are attributed to fallout or the natural radiation background. All samples collected for the NRC project are indicated by asterisks in the appropriate tables.

Radioactivity results for community water supplies, compiled in Table 18, are complete data for samples WS 10,669 - 10,749.

TABLE 8

RADIOACTIVITY LEVELS IN VEGETATION SAMPLES FROM
GEORGIA TECH RESEARCH REACTOR
(picoCuries per dry kilogram)

SAMP	STA	COLLECT	AGY	D/W	CS-137	BE-7	
339	2	03/17/94	EPD	0.36	<70	500	
340	7	03/17/94	EPD	0.34	<70	1030	
341	8	03/17/94	EPD	0.41	<40	4400	
342	11	03/17/94	EPD	0.33	<110	4900	*

TABLE 11

RADIOACTIVITY LEVELS IN SOIL SAMPLES FROM
NAVAL SUBMARINE BASE, KINGS BAY
(picoCuries per dry kilogram)

SAMP	STA	COLLECT	AGY	D/W	CS-137	K-40	RA-226	RA-228
695	5	03/03/94	EPD	0.82	46	3200	800	1000
696	8	03/03/94	EPD	0.86	<10	2200	500	600
697	23	03/03/94	EPD	0.91	<10	1700	900	200

TABLE 12

RADIOACTIVITY LEVELS IN SURFACE WATER SAMPLES FROM
NAVAL SUBMARINE BASE, KINGS BAY
(picoCuries per liter)

SAMP	STA	BEGIN	COLLECT	AGY	ALPHA	BETA	H-3	CS-137
698	320	03/03/94	03/03/94	EPD	<10	260	<100	<15
699	350	03/03/94	03/03/94	EPD	<10	250	<100	<15
700	370	03/03/94	03/03/94	EPD	<20	240	<100	<15
701	400	03/03/94	03/03/94	EPD	<10	60	<100	<15
702	430	03/03/94	03/03/94	EPD	<10	200	<100	<15
703	8	03/03/94	03/03/94	EPD	<2	3	<100	<15

NOTE : The gross beta activity in samples is elevated because of K-40 in sea water; " less than " gross alpha activities are high because only small sample volumes could be used due to salt content.

OF COURSE.

THESE BETA LEVELS ARE CONSIDERED HIGH BUT THE FAR HIGHER LEVELS OFTEN NOTED IN WATERS DUMPED TO SEWERS AT TECH ON PRINTOUTS ETC, ARE CONSIDERED O.K.!! OUTRAGEOUS!

TABLE 13

RADIOACTIVITY LEVELS IN GROUND WATER SAMPLES FROM
NAVAL SUBMARINE BASE, KINGS BAY
(picoCuries per liter)

SAMP	STA	COLLECT	AGY	ALPHA	BETA	H-3
704	8	03/03/94	EPD	<1	3	<100

Table 19

GA. ENVIRONMENTAL RADIATION LAB : TLD REPORT ... REPORT DATE: 03-21-1994

GA.TECH

FIELD DATES = 931221 TO 940317 (86 DAYS IN FIELD) LAB READ 940308

TLD #	mR	+- STD	uR/hr	+- STD	mR/YR	+- STD
1	22.4	3.3	10.9	1.6	95.1	14.2
2	17.7	4.2	8.6	2.0	75.2	17.9
3	23.9	4.6	11.6	2.2	101.4	19.4
4	18.4	4.2	8.9	2.1	77.9	18.0
5	15.1	3.7	7.3	1.8	64.0	15.6
6	13.3	1.7	6.4	0.8	56.5	7.4
7	15.3	1.7	7.4	0.8	64.8	7.4
8	16.0	3.1	7.8	1.5	68.1	13.3
9	22.6	3.7	11.0	1.8	96.1	15.6
10	13.9	3.3	6.7	1.6	59.0	13.9
11	18.7	2.3	9.0	1.1	79.2	9.7
12	17.4	2.0	8.4	1.0	73.7	8.4
13	16.4	1.8	7.9	0.9	69.5	7.6
14	18.7	3.4	9.1	1.7	79.4	14.6

?
WHY SUDDENLY SO HOW!!!
BUT STILL FAR HIGHER MR/YR & MR/hr THAN KINGS BAY (TRIDENT NUCLEAR SUB. BASE) MAYBE REACTOR DIDN'T RUN MUCH?

NEXT PAGE

GA. ENVIRONMENTAL RADIATION LAB : TLD REPORT ... REPORT DATE: 03-14-1994

KINGS BAY

FIELD DATES = 931216 TO 940303 (77 DAYS IN FIELD) LAB READ 940308

TLD #	mR	+- STD	uR/hr	+- STD	mR/YR	+- STD
1	7.9	1.0	4.2	0.6	37.2	4.9
2	7.7	2.6	4.1	1.4	36.3	12.2
3	7.4	2.2	4.0	1.2	34.9	10.7
4	7.8	1.7	4.2	0.9	36.8	8.1
5	10.1	1.5	5.5	0.8	47.9	7.3
6	9.1	1.7	4.9	0.9	43.0	7.9
7	8.0	2.8	4.3	1.5	37.9	13.4
8	7.2	3.0	3.9	1.6	34.0	14.0
9	7.5	1.2	4.1	0.7	35.7	5.8
10	8.0	1.1	4.3	0.6	37.9	5.4
11	9.4	1.2	5.1	0.6	44.5	5.6
12	10.6	1.3	5.7	0.7	50.1	6.1
16	8.8	2.4	4.7	1.3	41.5	11.1
17	9.3	1.4	5.0	0.8	44.0	6.6
18	9.1	1.6	4.9	0.9	43.2	7.8
21	9.2	2.6	5.0	1.4	43.4	12.4
23	8.6	1.3	4.6	0.7	40.7	6.1
25	11.7	3.1	6.3	1.7	55.6	14.5
26	10.1	1.8	5.5	1.0	47.8	8.4
123*	8.0	3.2	4.4	1.7	38.1	15.1
124*	9.4	1.2	5.1	0.7	44.4	5.8
125*	8.3	1.2	4.5	0.7	39.1	5.9
126*	8.1	1.1	4.4	0.6	38.3	5.2
127*	6.9	1.5	3.7	0.8	32.7	6.9
128*	8.5	1.1	4.6	0.6	40.1	5.3

* STATE BACKGROUND TLDS

TLD MISSING #22.

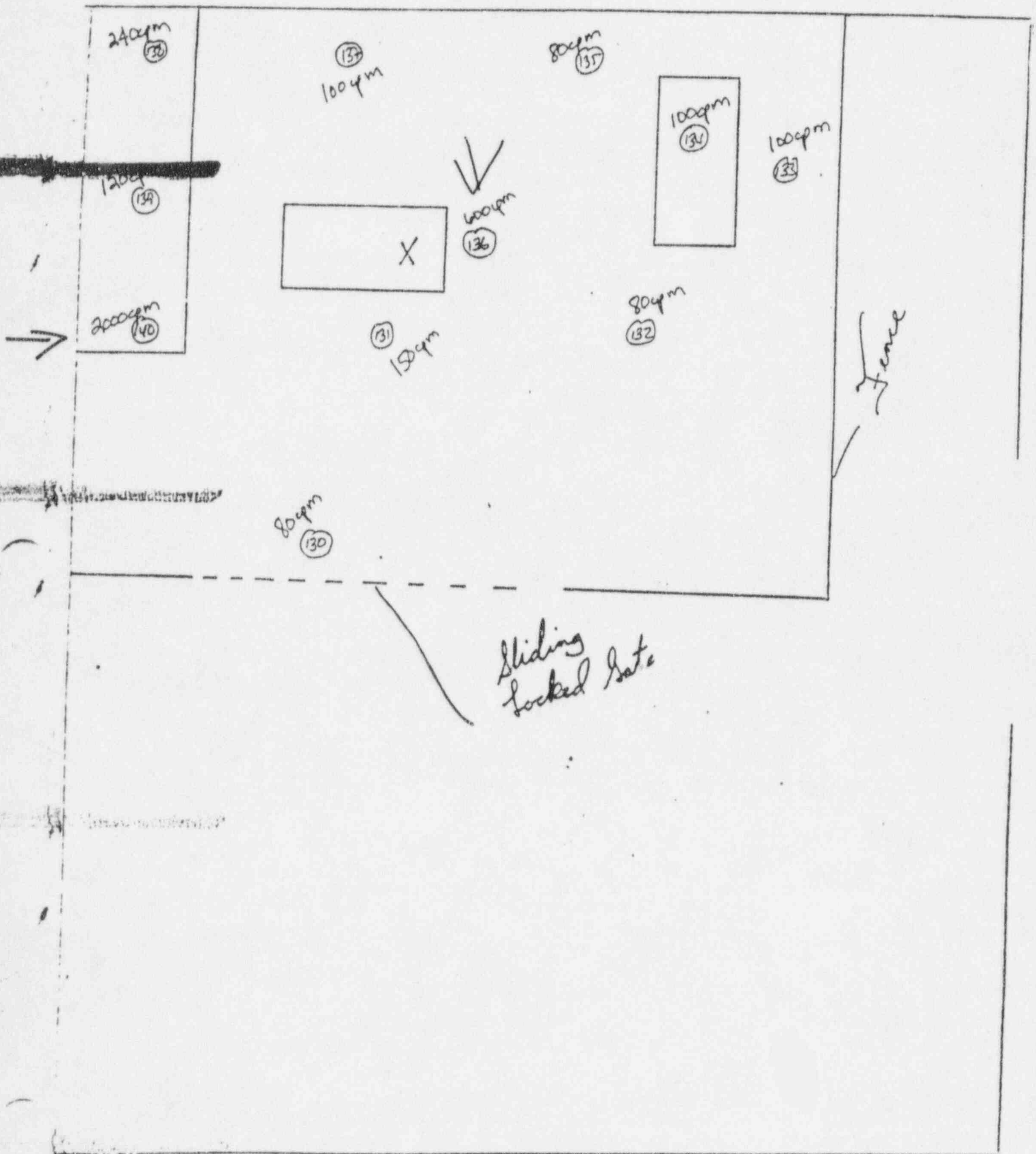
TLDS NOT EXCHANGED: #13,14,15,19,20, AND 24.

Bldg: Bunger / Henry

Rm. No: 4K Fire Cage

Date: 2-22-90

Time: 1310



RS-35
(4-89)

SURVEY DATA SHEET

Job Description Campus Survey — Power Level ~~Boggs~~ MOB B-B1, 1-39, 1A1, 2-10, 3-67

Date 2-26-90 — Time 1000

Counter Used 0022920 — Alpha Efficiency 0.1815 — Bkg

Cal Due Date 5-10-90 — Beta Efficiency 0.3069 — Bkg

Survey Inst. Model E-120 — Serial # 10230 — Cal Due Date 7-

Background 40 - 400 cpm ← ?

Location	dpm/100 cm²		Resmear dpm/100 cm²		
	alpha	beta/gamma	alpha	beta/gamma	cpm
36	0	<LLD			80
37	0	26			120
38	0	46			220
39	11	10			100
40	11	59			100
41	0	173			140
42	0	228			260
43	0	13			100
44	28	59			220
45	0	7			180
46	0	<LLD			140
47	6	3			60
48	6	0			60
49	0	7			80
50	0	<LLD			60
51	0	0			60
52	5	<LLD			60
53	5	49			80
54	5	13			80
55	0	10			60
56	5	7			60
57	0	<LLD			60
58	0	0			40
59	5	3			40
60	0	0			60
61	0	10			60
62	0	<LLD			60
63	5	3			60
64	0	3			40
65	0	3			60
					40

Comments:

Performed by: MOB / FAT — Date: 2-26-90

Reviewed by: BK Rawlin — Date: 3/5/90

RS-35
(4-89)

SURVEY DATA SHEET

Job Description Campus Survey ~~Power Level~~ MOB Boggs

Date 2-26-90 Time 1000 *

Counter Used 0022920 Alpha Efficiency 0.1815 Bkg 0 cpm

Cal Due Date 5-10-90 Beta Efficiency 0.3069 Bkg 6 cpm

Survey Inst. Model E-120 Serial # 10230 Cal Due Date 7-8-90

Background 40-400 cpm ?

Location	dpm/100 cm²		Resmear dpm/100 cm²		cpm
	alpha	beta/gamma	alpha	beta/gamma	
66	0	LLD			50
67	0	26			50
68	5	3			50
69	0	0			40
70	0	13			60
71	0	13			80
72	11	23			60
73	0	10			60
74	0	3			80
75	44	7			100
76	0	0			120
77	0	3			400
78	0	10			60
79	0	26			80
80	0	13			60
81	0	3			40
82	0	LLD			60
83	0	16			40
84	0	0			60
85	17	0			80
86	0	LLD			60
87	0	LLD			80
88	0	23			80
89	17	LLD			140
90	0	LLD			60
91	0	20			60
92	0	13			60
93	0	88			50
94	0	68			40
95	11	94			60

Comments:

Performed by: MOB / EJS Date: 2-26-90

Reviewed by: BkRevzin Date: 3/5/90

RS-35
(4-89)

SURVEY DATA SHEET

Job Description Campus Survey ~~Power~~ MOB Level Boggs

Date 2-26-90 Time 1000
Counter Used 0022920 Alpha Efficiency 0.1815 Bkg 0cpm
Cal Due Date 5-10-90 Beta Efficiency 0.3069 Bkg 6cpm
Survey Inst. Model E-120 Serial # 10230 Cal Due Date 7-8-90
Background 40-400cpm

Location	dpm/100 cm²		Resmear dpm/100 cm²		cpm
	alpha	beta/gamma	alpha	beta/gamma	
96	0	101			80
97	5	81			40
98	5	108			60
99	5	94			60
100	0	75			50
101	0	75			60
102	0	111			40

Comments:

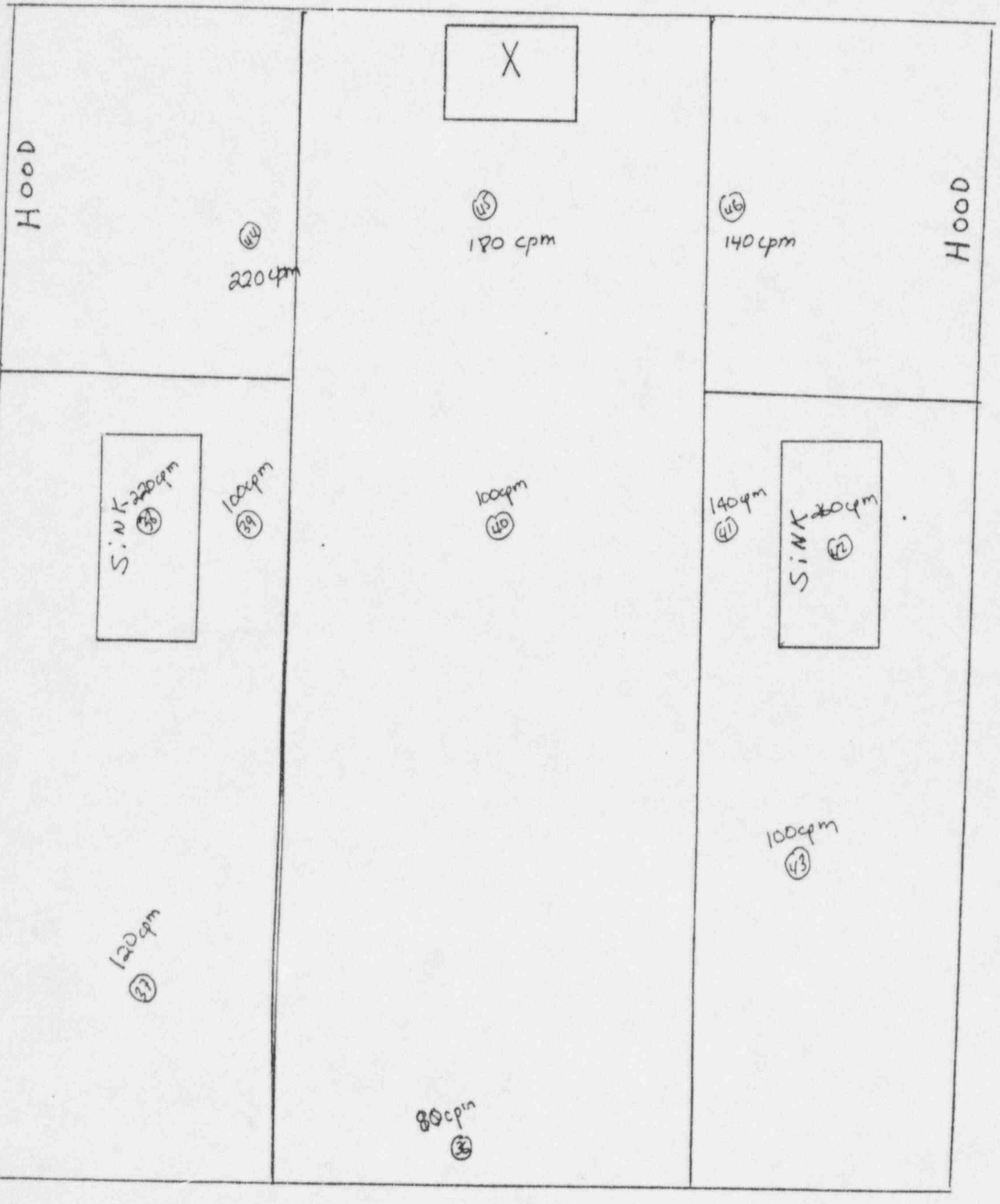
Performed by: MOB / EAT Date: 2-26-90
Reviewed by: BKRevsin Date: 3/5/90

Bldg: BOGG

Rm. No: B-81

Date: 2-22-90

Time: 1210



CAMPUS SURVEY CHECKLI

1. Room posted correctly? Y

2. Materials labled correctly?

3. Survey instrument in calibration?

Battery check o.k?

4. Radwaste ready to be taken?

Paperwork prepared? N/A

liances: None

CAMPUS SURVEY CHECKLIST

1. Room posted correctly? Yes

2. Materials labled correctly? Yes

3. Survey instrument in calibration? Yes

   Battery check o.k? Yes

4. Radwaste ready to be taken? NO

   Paperwork prepared? N/A

5. Noncompliances: None

6. Comments: None

Prepared by: MCB / EDJ Date: 2-22-90

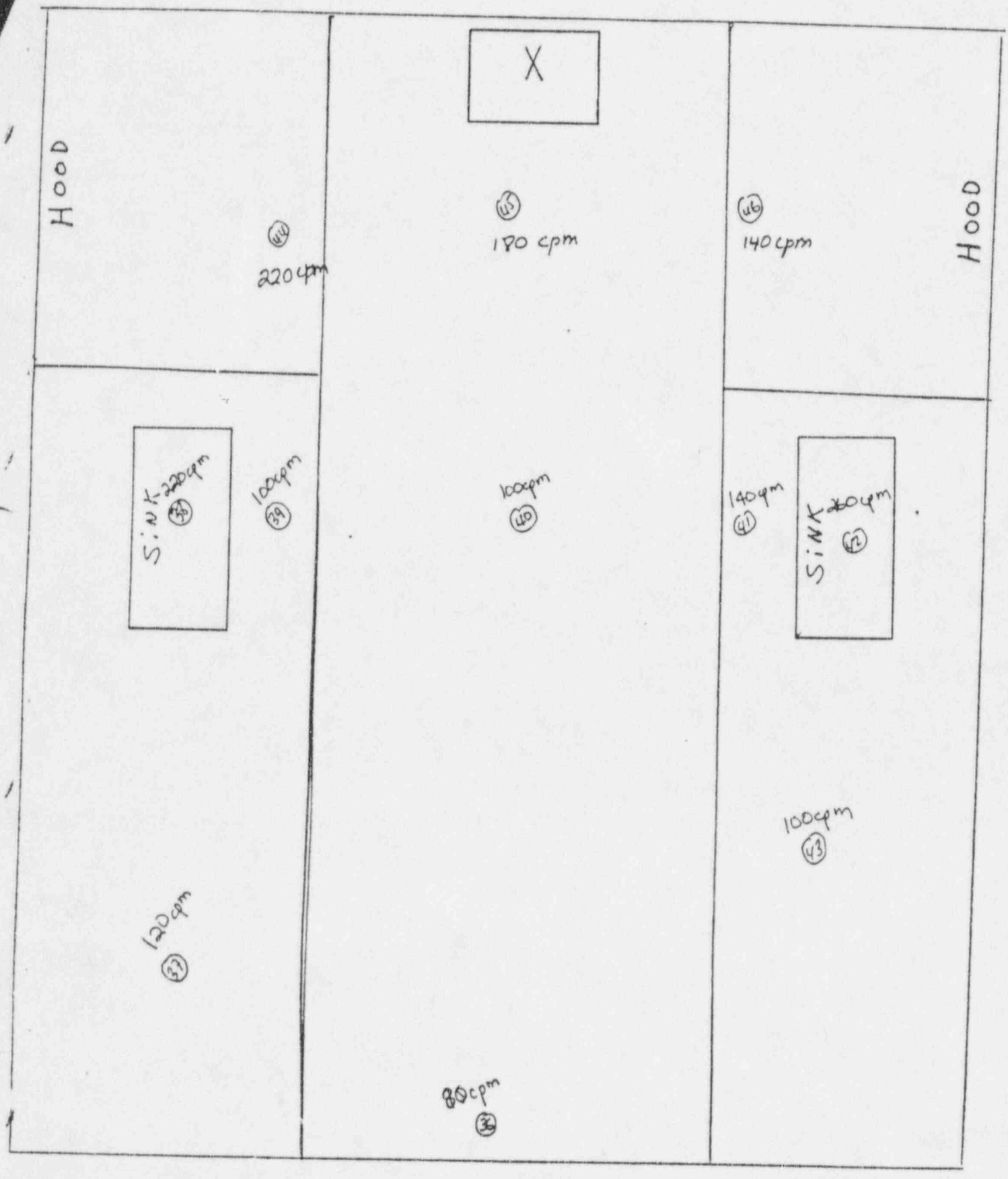
Reviewed by: BK Rubin Date: 3/5/90

Bldg: BOGG.

Rm. No: B-81

Date: 2-22-90

Time: 1210

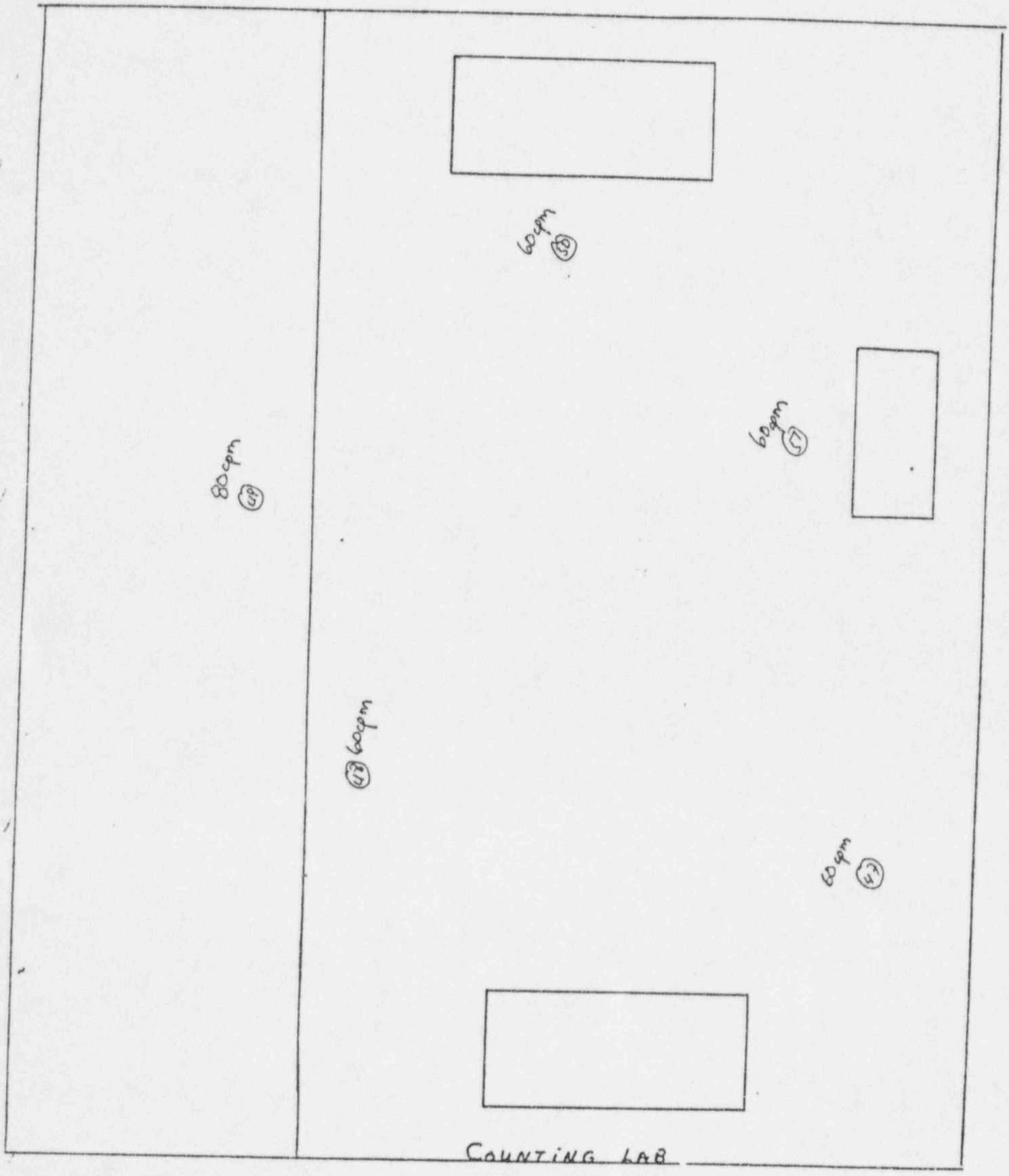


Bldg: BOGGS

Rm. No: 1-39

Date: 2-22-90

Time: 1215



CAMPUS SURVEY CHECKLIST

1. Room posted correctly? Yes

2. Materials labled correctly? Yes

3. Survey instrument in calibration? N/A

   Battery check o.k? N/A

4. Radwaste ready to be taken? N/A

   Paperwork prepared? N/A

5. Noncompliances: None

6. Comments: None

Prepared by: MAB / EAT Date: 2-22-90

Reviewed by: BK Purvis Date: 3/5/90

CAMPUS SURVEY CHECKLIST

1. Room posted correctly? Yes

2. Materials labled correctly? Yes

3. Survey instrument in calibration? N/A

   Battery check o.k? N/A

4. Radwaste ready to be taken? N/A

   Paperwork prepared? N/A

5. Noncompliances: None

6. Comments: None

Prepared by: MBB / EDS Date: 2-22-90

Reviewed by: BK Perrin Date: 3/5/90

CAMPUS SURVEY CHECKLIST

1. Room posted correctly? Yes

2. Materials labled correctly? Yes

3. Survey instrument in calibration? Yes

   Battery check o.k? Yes

4. Radwaste ready to be taken? No

   Paperwork prepared? N/A

5. Noncompliances: None

6. Comments: None

Prepared by: MKB / EDI Date: 2-22-90

Reviewed by: BK Rewin Date: 3/5/90

GEORGIA INSTITUTE OF TECHNOLOGY
Nuclear Research Center

Office of Radiological Safety

Atlanta, Georgia 30332
(404) 894-3605

March 2, 1983

Ms. Carol Connell
Radiological Health Unit
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Dear Carol:

Please find for your files the attached information concerning high level cobalt-60 sealed sources at Georgia Tech. All of these sources are stored in the Nuclear Research Center at 900 Atlantic Drive storage pool and routinely used in our hot cell.

NOTE X

I think it is a good idea as we discussed to have this information in more than one place.

If you have any questions about these sources please call me.

Sincerely,

Robert M. Boyd

Robert M. Boyd
Radiological Safety Officer

RMB:dwa

Attachments

RECEIVED
MAR 7 1983
RADIOLOGICAL
HEALTH UNIT

PRINCIPAL INVESTIGATOR

RS-1 (10-65)

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF RADIOLOGICAL SAFETY
INVENTORY OF RADIOISOTOPES

SEALED SOURCES

(5)

PRINCIPAL INVESTIGATOR DR JOHN RUSSELL RADIOISOTOPE Co-60

QUANTITY 99,450 Curies DATE RECEIVED 2 July 73 DATE ASSAYED 28 JUN 73

SUPPLIER BROOKHAVEN NAT. LAB (old AEC) HALF LIFE 5.27 YEARS

(FR DR. M.U. DAVIS INVENTORY) GA 147-1

	QUANTITY	DATE	LOCATION, RECEIVER AND REMARKS	REMOVED FROM ORS CONTROL
ORIGINAL BALANCE	99,450 C.	8/19/80	NRC, Fuel Storage Pool & Hot Cell	
TRANSFERRED				
NEW BALANCE				
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RADIOISOTOPES

Am 241, Sb 124, Sb 125, Ba 133, Ba 140, Bi 207, Ca 45, C 14, Ce 144, Cs 134, Cs 137, Cl 36, Co 57, Co 60, Eu 152, Eu 154, Hf 181, I 125, I 128, I 131, Fe 55, Fe 59, Kr 85, Pb 210, Hg 203, MFP, Nd 147, Np 237, Nb 95, P 32, Pu 239, Po 210, Pm 147, Ra 226, Ru 106, Sc 46, Ag 110, Na 22, Sr 89, Sr 90, Tl 204, Th 229, Tm 170, Sn 113, H 3, U Dep

R39 … R1, Zr 95, Zn 65, Y 91, Y 90, U 238, U 235, U Nat

LOCATIONS

RBC L1, CIVIL ENG. L2, PHYSICS L3, CHEMISTRY L4, RADIO-ISOTOPES L5, MECH. ENG L6, CERAMIC ENG L7, CHEM ENG L8, NINMAN RES L9, ELECTRONICS L10, AEROSPACE L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37

PRINCIPAL INVESTIGATOR

P35 P34 P33 P32 P31 P30 P29 P28 P27 P26 P25 P24 P23 P22 P21 P20 P19 P18 P17 P16 P15 P14 P13 P12 P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1

RS 2 (10-65)

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF RADIOLOGICAL SAFETY
INVENTORY OF RADIOISOTOPES

(1)

PRINCIPAL INVESTIGATOR Dr. Russell RADIOISOTOPE 60 Co

QUANTITY ~~56,500~~ Curies 73,500 DATE RECEIVED 7/19/82 DATE ASSAYED 7/1/82

SUPPLIER Argon National Lab. HALF LIFE 5.3 yr

	QUANTITY	DATE	LOCATION, RECEIVER AND REMARKS	REMOVED FROM ORS CONTROL
ORIGINAL BALANCE	~~56,500~~ 58,500 Ci	7/19/82	GaTech Nuc. Res. Center Reactor Pool	
TRANSFERRED	15,000 Ci	3/16/83	in house Correction Ruth	
NEW BALANCE	73,500 Ci	3/16/83	Ruth	
TRANSFERRED				
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RADIOISOTOPES

Am 241, Sb 124, 133, Ba 140, Bi 207, Ca 45, C 14, Ce 144, Cs 134, Cs 137, Cl 36, Co 57, Co 60, Eu 152, Eu 154, Hf 181, I 125, I 128, I 131, Fe 55, Fe 59, Kr 85, Pm, MFP, Nd 147, Np 237, Nb 95, P 32, Pu 239, Po 210, Pm 147, Ra 226, Ru 106, Sc 46, Ag 110, Na 22, Sr 89, Sr 90, Tl 204, Th 232, Tm 170, Sn 113, H 3

R39 R38 R37 R36 R35 R34 R33 R32 R31 R30 R29 R28 R27 R26 R25 R24 R23 R22 R21 R20 R19 R18 R17 R16 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1, Zr 95, Zn 65, Y 91, Y 90, U 238, U 235, U Nat

LOCATIONS

NRC L1, CIVIL ENG L2, PHYSICS L3, CHEMISTRY L4, RADIO-ISOTOPES L5, MECH ENG L6, CERAMIC ENG L7, CHEM ENG L8, HINMAN RES L9, ELECTRONICS L10, AEROSPACE L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37

7/19/82 Cask was smeared
<100 d/m/100 cm²
3 mrem/hr at 6"

There are 5 sealed
sources:

3 smaller source { Source 8 — 13,500 Ci
" 9 — 16,000 Ci fuel
" 10 — 10,000 Ci
(SIZE 1½" x 11") }

DOUBLY [illegible] SS WITH A STEEL JACKET [illegible]

2 larger source { total Ci — 17,000 Ci
2 sources — 17,000 Ci CORRECTION 3/10/83 [illegible]
(SIZE 2½" x 17") }

[illegible] fuel — DOUBLY [illegible] WITH STEEL JACKET — 56,500 Ci
fuel 17,000 CORRECTION +
File 1/82 — 73,500 Ci total

ARGON NAT LAB CONTACT · JIM McCREADY
312-972-3575
JOHN VANLOAN 312 972 3700

(Rev. 10-65)

RADIOISOTOPES AUTHORIZATION FORM B
Georgia Institute of Technology

Date 25 June 73

1. Name of experimenter M V DAVIS

2. Radioisotope ^{60}Co Amount 100 kCi

3. Type of experiment RADIATION EFFECTS TO MATERIALS

4. Department NUCLEAR ENGR

Building where material will be used NRC - STORAGE POOL & HOT CELL

Room No.

5. AEC license number which must appear on order GA 147-1

6. Project No. ON AEC LOAN TO GA. TECH

7. Purchase order must show the following delivery instructions:

If order is from Engineering Experiment Station:

Radiological Safety Officer
c/o James R. Parker, Receiving Department
Georgia Institute of Technology
Corner 6th and Atlantic Drive, N.W.
Atlanta, Georgia 30332

If order is from an academic department:

Radiological Safety Officer
Nuclear Research Center
Georgia Institute of Technology
900 Atlantic Drive, N.W.
Atlanta, Georgia 30332

Approved:

Robert M Boyd

Robert L. Zimmerman
For Radiological Safety Officer

BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC., UPTON, L.I., N.Y. 11973

TELEPHONE: (516) 345-4533

July 2, 1973

WHO GETS COPIES OF MY 2.206 (NOTED ON THE 600 ODD PAGES NRC DID NOT SEND ME UNTIL I FOUND OUT ABOUT THEM

Mr. Robert L. Zimmerman
Radiological Safety Officer
Nuclear Research Center
Georgia Institute of Technology
900 Atlantic Drive N. W.
Atlanta, Ga. 30332

Dear Mr. Zimmerman:

Enclosed is the list of 65 Co-60 sources we shipped to you on June 30th via Tri-State.

The curriage should be good to 5%± and the counts/min. can be converted by using the factor 2200 counts/min. equals .005 microcuries.

If you need any further information call me.

Sincerely yours,

Julius S. Milau
High Intensity Radiation
Development Laboratory

JSM/lk
enc.

cc: Monte V. Davis, Dir.
Neely Nuclear Reactor Center
Georgia Institute of Technology

PRINCIPAL INVESTIGATOR

RS-2 (10-65)

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF RADIOLOGICAL SAFETY
INVENTORY OF RADIOISOTOPES

SEALED SOURCE (2)

PRINCIPAL INVESTIGATOR Dr. Harmer RADIOISOTOPE Co-60
QUANTITY 1614.66 Ci DATE RECEIVED 4/5/73 DATE ASSAYED 10/10/72
SUPPLIER Gamma Ind. (Free Gift) (over) HALF LIFE 5.54r
GA. 147-1

	QUANTITY	DATE	LOCATION, RECEIVER AND REMARKS	REMOVED FROM ORS CONTROL
ORIGINAL BALANCE	1614.66 Ci	4/5/73	NRC Storage Pool	
TRANSFERRED	----------	----------	----------	
NEW BALANCE	1614.66Ci	16Jul73	NRC, Fuel Storage Pool	
TRANSFERRED	(See back)		Up-dated per Conversation With Maryland Hofs	
NEW BALANCE	880 Ci	3-15-77	N.R.C. fuel Storage pool	
TRANSFERRED				
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NEW BALANCE				
TRANSFERRED				

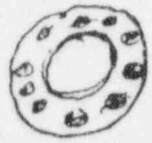
RADIOISOTOPES

LOCATIONS

NRC L1, CIVIL ENG L2, PHYSICS L3, CHEMISTRY L4, RADIO-ISOTOPES L5, MECH. ENG. L6, CERAMIC ENG L7, CHEM ENG L8, HINMAN RES L9, ELECTRONICS L10, AEROSPACE L11, L12–L37

5/4/73 This is a sealed ^{60}Co Source once used at the Univ. of Maryland. Gamma Ind made them another Source and had this one sent here 10/23/72. Then Gamma Ind. gave this Source to Dr. Hamner at his request.

THERE ARE 10 Smaller Sources in a Circle making a total of 1614.66 Ci Co-60



Leak Tested on: See leak test log book.

per Bob Boyd Conversation With University of Maryland H.P.

1962 = 5,500 Curies

1977 = 880 "

3/15/77

7/19/82 Cask was smeared

<100 d/m/100 cm²

3 mrem/hr at 6"

There are 5 sealed

sources:

3 smaller sources { Source 8 — 13,500 Ci
  " 9 — 16,000 Ci [illegible]
  " 10 — 10,000 Ci
  (SIZE 1½" × 11") }

DOUBLY IN S.S. WITH A STEEL JACKET [illegible]

2 larger sources { total in 2 sources — 17,000 Ci
  (SIZE 2½" × 17") }

~~[illegible]~~ [illegible] DOUBLY IN AL WITH STEEL JACKET [illegible]

~~56,500 Ci~~

3/18/83 GA. TECH NOTIFIED US THAT IT SH[OULD] B[E] 17,000 Ci/S[OURCE] THUS

73,500 Ci

[illegible]

File 1/82

ARGON NAT LAB CONTACT: JIM McCREERY 312-972-3575

JOHN VANLOAN 312 972 3700

PRINCIPAL INVESTIGATOR

P35 P34 P33 P32 P31 P30 P29 P28 P27 P26 P25 P24 P23 P22 P21 P20 P19 P18 P17 P16 P15 P14 P13 P12 P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1

RS-2 (10-65)

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF RADIOLOGICAL SAFETY
INVENTORY OF RADIOISOTOPES

(1)

PRINCIPAL INVESTIGATOR Dr. Russell RADIOISOTOPE ^{60}Co

QUANTITY ~56,500 Curies DATE RECEIVED 7/19/82 DATE ASSAYED 11/1/82

SUPPLIER Argon National Lab. HALF LIFE 5.3 yr

	QUANTITY	DATE	LOCATION, RECEIVER AND REMARKS	REMOVED FROM ORS CONTROL
ORIGINAL BALANCE	56,500 Ci	7/19/82	GaTech Nuc. Res. Center Reactor Pool	
TRANSFERRED				
NEW BALANCE				
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RADIOISOTOPES

Am 241, Sb 124, I 133, Ba 140, Bi 207, Ca 45, C 14, Ce 144, Cs 134, Cs 137, Cl 36, Co 57, Co 60, Eu 152, Eu 154, Hf 181, I 125, I 128, I 131, Fe 55, Fe 59, Kr 85, Pu, MFP, Nd 147, Np 237, Nb 95, P 32, Pu 239, Po 210, Pm 147, Ra 226, Ru 106, Sc 46, Ag 110, Na 22, Sr 89, Sr 90, Tl 204, Th 229, Tm 170, Sn 113, H

R39 R38 R37 R36 R35 R34 R33 R32 R31 R30 R29 R28 R27 R26 R25 R24 R23 R22 R21 R20 R19 R18 R17 R16 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1, Zr 95, Zn 65, Y 91, Y 90, U 238, U 235, U Nat

LOCATIONS

NRC L1, CIVIL ENG L2, PHYSICS L3, CHEMISTRY L4, RADIO-ISOTOPES L5, MECH ENG L6, CERAMIC ENG L7, CHEM ENG L8, NINMAN RES L9, ELECTRONICS L10, AEROSPACE L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37

PURCHASE REQUEST

MAKE ALL SPECIFICATIONS CLEAR, COMPLETE AND DETAILED

June 20, 1973

REQUISITION NUMBER E26-200-3-74-62720

CLASSIFICATION: Freight
(Supplies, Capital Outlay or Equipment)

TO: PROCUREMENT OFFICE

FROM: Nuclear Engineering

Please make all arrangements for the purchase of the items listed below:

REQUESTED DELIVERY DATE: June 27 or 28

DELIVER TO: Nuclear Research Center

ITEM NO.	QUANTITY	UNIT		SPECIFICATIONS (If Model No. is shown, also give mfg's. Name)
				Shipment of 6 ton Radiation Cast from Brookhaven National Laboratory, Upton, Long Island, to Georgia Tech Nuclear Research Center.

RECOMMENDED SOURCE OR SOURCES:

NAME: Tri-State Trucking, New York

ADDRESS

TELEPHONE NUMBER

ESTIMATED COST: NOT TO EXCEED $ 968

REMARKS:

APPROVED FOR DEPARTMENT HEAD

PAGE 1 OF 1 PAGES

SEND ORIGINAL ONLY TO PROCUREMENT OFFICE

REQUISITION NUMBER, DELIVERY POINT, SPECIFICATIONS AND DEPARTMENT HEAD APPROVAL SPACES MUST BE COMPLETED

June 28, 1973

Georgia Tech Sources

Source Number	Curies as of 6/73	Smears (counts/min)
N-6	1974	132
N-9	1230	31
N-23	1981	106
N-36	1986	52
N-37	1987	146
N-57	1314	60
N-64	1299	70

7 sources N series, totalling 11,771 curies.

O-15	1995	170
O-67	1991	444

2 sources O series, totalling 3,986 curies.

June 28, 1973

Georgia Tech Sources

Source No.	Curies as of 6/73	Smears (counts/min)
K-2	1331	34
K-3	1563	194
K-4	1601	250
K-5	1322	30
K-6	1361	36
K-8	1568	356
K-12	1316	40
K-13	1447	162
K-14	1418	202
K-22	1425	52
K-23	1596	126
K-26	1237	50
K-32	1651	102
K-33	1373	29
K-37	1322	38
K-40	1425	120
K-41	1596	96
K-43	1693	104
K-49	1353	148

19 sources K series, totalling 27,598 curies.

Georgia Tech Sources (continued)

Source No.	Curies as of 5/73	Smears (counts/min)
J-78	1210	282
J-79	1688	120
J-81	1375	222
J-84	1640	480
J-85	1381	150
J-89	1399	324
J-90	1379	102
J-96	1361	1373
J-98	1607	52
J-99	1798	300

37 Sources J series, totalling 56,138 curies.

June 28, 1973

Georgia Tech Sources

Source No.	Curies as of 6/73	[illegible]
J-9	1816	42
J-10	1790	[illegible]
J-11	1379	960
J-17	1418	[illegible]
J-19	1375	[illegible]
J-20	1383	[illegible]
J-23	1383	[illegible]
J-24	1366	404
J-27	1407	[illegible]
J-28	1366	[illegible]
J-29	1794	[illegible]
J-30	1370	[illegible]
J-34	1660	[illegible]
J-37	1370	[illegible]
J-40	1635	[illegible]
J-41	1392	[illegible]
J-42	1421	82
J-44	1796	[illegible]
J-47	1618	[illegible]
J-49	1592	31
J-53	1406	[illegible]
J-54	1788	[illegible]
J-59	1627	[illegible]
J-66	1785	[illegible]
J-67	1375	48
J-71	1576	[illegible]
J-74	1412	[illegible]

continued:

GEORGIA INSTITUTE OF TECHNOLOGY
Nuclear Research Center

Office of Radiological Safety

Atlanta, Georgia 30332
(404) 894-3605

RADIATION PROTECTION COMMITTEE MINUTES

MARCH 4, 1987

MEMBERS PRESENT:

Dr. J. N. Davidson, Acting Chairman
Dr. J. M. Wampler
Dr. W. H. Cross
Dr. J. N. Gordon
Mr. G. L. Petherick
Mr. R. M. Boyd, Radiological Safety Officer

MEMBERS ABSENT:

Dr. M. W. Carter*
Dr. J. A. Mahaffey*

A special meeting of the Radiation Protection Committee was called to order by the Acting Chairman, Dr. J. N. Davidson, at 9:00 A.M. on March 4, 1987 at the Neely Nuclear Research Center (NNRC). Dr. Davidson stated that the sole reason for this meeting was to receive the recommendation of the Ad Hoc Committee, which was appoointed by Dr. Carter to review the NNRC Hot Cell Operations. The Ad Hoc Committee has met twice and has reviewed in detail the procedures used for safely operating the hot cell pool complex.

The Committee was given a copy of a Memorandum dated March 4, 1987 to Dr. M. W. Carter, Chairman From Dr. J. N. Davidson, Chairman of Ad Hoc Committee, recommending changes in operational procedures and other recommendations. (See attached memo). After some discussion a motion was made by Mr. G. L. Petherick and seconded by Dr. J. N. Gordon to adopt these recommendations as submitted. Mr. Boyd said that his office will print up new forms and make notes on how the new procedures are working, then come back to the Committee at a later date with proposed refinements as needed.

Dr. Davidson said that he will write a letter to Dr. R. A. Karam stating the Committee's actions. Mr. Boyd asked when the cell could operate again. Dr. Davidson said as soon as Dr. Karam has his letter in hand.

Each member was given an opportunity by the Acting Chairman to make final remarks. Dr. Cross reminded the Radiological Safety Officer that he wants the Committee informed if and when the cell radiation monitor fails again. The meeting was adjourned at 9:35 A.M.

Attachments (2)

Memo To: Dr. M. W. Carter
Letter To: Dr. R. A. Karam

*Out of town

TECHNICAL REPORT NO. GT-NE-7

NUCLEAR ENGINEERING SERIES

Safety Analysis Report for the 5 Mw Georgia Tech Research Reactor

Editors: W. W. Graham, III and D. M. Walker

Contributors: F. C. Apple, J. Bosher, R. M. Boyd, J. Caudell, J. D. Clement, W. E. Cline, D. S. Harmer, R. J. Johnson, R. S. Kirkland, M. E. McLain, R. E. Meek, C. J. Roberts, A. S. Shenoy, J. J. Seidler, J. R. Williams, and R. L. Zimmerman

NOW WITH NRC

GETS MY 2.206 !!

Consultants: T. E. Cole, Oak Ridge National Laboratory and Southern Nuclear Engineering Corporation Dunedin, Florida

December 1967

Probe finds no health problems from Tech spill

But radioactive leak indicates safety still problem

By Charles Seabrook
Environment Writer

State health officials, investigating a radioactive spill at Georgia Tech's nuclear reactor building, said Friday they had found no health problems as a result of the accident.

But the mishap, which involved two commercial workers last week at Tech's Neely Nuclear Research Center, indicates that safety problems continue to plague nuclear research programs on the Tech campus. All operations of Tech's nuclear reactor were halted last month because of numerous safety problems.

The incident came to light Friday, the same day that Environmental Protection Agency officials disclosed they have assessed a $33,000 fine against Tech for improper storage and record keeping of PCBs, a highly toxic substance used as conducting material in electrical transformers.

Bob Stryker of the pesticides and toxic substances branch at the EPA's regional office in Atlanta said the agency "is negotiating with Tech" on a final settlement.

Stryker also said that in a separate matter, EPA is investigating a small spill of toxic PCBs — apparently from a leaking transformer — on the Tech campus. Stryker said additional penalties could be lodged against Tech because of the spill.

Tech officials announced on Friday that William Burg, the campus's laboratory safety officer who oversaw the use of chemicals in Tech laboratories, resigned on Thursday. Burg had held the job for less than six months.

Last week's mishap in the reactor building occurred in the offices of Theragenics, a radio-pharmaceutical firm that rents space on the ground floor of the Neely Center.

John Carden, the firm's vice president for research and development, said fragments of radioactive palladium spilled when pellets containing the material were accidentally broken. Palladium is a light silvery metallic element used in scientific instruments.

The pellets, shipped to Theragenics from Oak Ridge, Tenn., are being used to develop treatments for liver cancer.

Building employees were tested but no health problems were found. Two workers, however, were found to have slight radioactive contamination on the bottoms of their shoes.

Poly CHLORINATED Biphenyls = PCB's

no date on article

4/5/88 Journal + Constitution

That topaz on your finger may owe its hue to radiation

By Charles Seabrook
Environment Writer

Until now, it was just an inside trick of the jeweler's trade.

Gem dealers routinely irradiated worthless, colorless topaz gemstones by the ton in nuclear reactors to add a deep bluish color to the stones and increase the price they would bring from jewelry customers.

But now the Nuclear Regulatory Commission (NRC) and the gem trade industry say the selling of irradiated topaz to unsuspecting customers may be unethical, and in some cases, unsafe and illegal.

NRC is drafting new regulations that would require gem dealers to get licenses before they can distribute irradiated gemstones. And the American Gem Trade Association is urging the nation's some 34,000 jewelry stores to tell customers that certain kinds of topaz gems have been treated in a nuclear reactor.

Millions of dollars worth of the so-called "London blue" gemstones already have been imported and sold in the United States.

"The risk to the public from irradiated gemstones probably is extremely small, but it is an unknown risk, and that is why we must do something to get better control of it," says Michael Lamastra an NRC official who is helping to draft the new regulations.

Lamastra says NRC "did not know this sort of thing was going on until about two years ago." The commission has been actively investigating it ever since.

Jewelry industry experts say most of the tens of thousands of Americans whose fingers and necks are adorned with topaz probably were never told that their jewelry was irradiated.

"The jewelry industry has violated its public trust by failing to disclose that blue topaz is irradiated," says David Federman, executive editor of Modern Jeweler magazine. "If smoke detectors and microwave ovens carry radiation warnings, the public is at least entitled to know that the blue topaz it has been buying by the ton has been irradiated, too."

Federman says nearly all of the London blue topaz sold in the United States "was irradiated in an atomic reactor."

He and oth[illegible]

London blue gems sold in the United States are imported, mainly from Brazil and Europe, because NRC prohibits reactor operators in this country from distributing irradiated gemstones.

NRC officials say they were unaware of the practice until 1986, when they discovered that operators of the 10-megawatt reactor at the University of Missouri at Columbia were distributing irradiated gemstones. The commission ordered a halt to the practice.

In January, NRC announced that gemstone irradiation served a "useful" purpose and began drafting regulations to license reactors and importers that distribute irra-

See **TOPAZ**, *Page 27A*

From Page 26A

Topaz

[illegible]ated gemstones in this country. The agency may begin issuing the licenses by the end of this year.

So far, operators of the reactor at the University of Missouri and the reactor at General Atomics in San Diego have applied for licenses.

But most topaz when it comes out of the ground is a colorless crystal that is virtually worthless on the market.

In the late 1960s, however, gem experts found that bombarding the gemstones with gamma radiation in a linear accelerator would impart a shimmering blue color to the stones. Gem dealers called the color "sky blue," and inexpensive blue topaz quickly became a cornerstone of the jewelry industry.

Because gamma radiation does not cause any residual radiation, nuclear experts say the safety of "sky blue" gems has not been questioned. Gamma-irradiated gemstones, however, have some drawbacks, including the fact that their color might fade over time.

For Tech, the practice has proved costly. Last August, an operator at Tech's reactor accidentally contaminated himself with radiation when he opened a canister containing irradiated topaz.

In recent years, experts found that bombarding topaz with neutrons in reactors gives the gemstones a deep hue called London blue. The color holds fast, and London blue has become a best seller.

NRC officials, however, are concerned that some neutron-irradiated topaz may contain unacceptable radiation levels, and, without controls, they cannot guarantee that all gems are safe.

Industry officials say they welcome NRC's efforts.

"The NRC's decision is as much a victory for consumers as it is for dealers," says Federman.

For Tech, a costly practice

Operators at some other reactors, including the one at Georgia Tech in Atlanta, also have been irradiating topaz on a trial basis.

For Tech, however, the practice has proved costly. Last August, an operator at Tech's reactor accidentally contaminated himself with radiation when he opened a canister containing irradiated topaz.

NRC says the mishap indicated that safety procedures at the reactor were lax. All operations of the reactor were halted until the safety problems can be resolved. Now, Tech officials say there is a "strong possibility" the reactor will be shut down permanently because it is not being used enough for scientific research.

Nationwide, NRC officials say that until they are ready to license topaz distributors, customs officials should make sure no more irradiated topaz enters the country.

Earlier this year, news that the commission planned a recall of London blue topaz sent a ripple of fear through the jewelry industry. The recall was never carried out.

"We believed that recall would have been more trouble than it was worth," says Lamastra. "Most of the stock had been sitting around for a year and had probably lost any residual radiation it might have had."

Most topaz a colorless crystal

Topaz, November's birthstone, is a compound of aluminum, silica and fluorine. Some gems have been valued at tens of thousands of dollars. Precious topaz gems range in color from rich yellow to light brown or pinkish red.

GEORGIA INSTITUTE OF TECHNOLOGY
Nuclear Research Center

Office of Radiological Safety

Atlanta, Georgia 30332

MINUTES OF RADIATION PROTECTION COMMITTEE MEETING

January 27, 1975

MEMBERS PRESENT:

Dr. H. M. Neumann
Dr. J. A. Knight
Dr. C. J. Roberts
Dr. R. H. Fetner
Dr. K. Z. Morgan
Dr. J. A. Wilhelm
Mr. M. W. Bennett
Dr. R. A. Young
Dr. D. A. McClure
Mr. R. M. Boyd

MEMBERS ABSENT:

Dr. S. S. Spooner

VISITORS:

Dr. M. V. Davis
Dr. J. W. Crenshaw

WHO CONTAMINATED HIS LAB

A meeting of the Radiation Protection Committee was held at the Nuclear Research Center, to further review the problem of water leaking into the tube nest of the 12,000 curie Cesium-137 irradiator; to review proposals by Dr. M. V. Davis for some specific uses of 100,000 curies of cobalt-60 in the pool and hot cell; and to review for Dr. J. D. Crenshaw a proposal to construct on campus a 450 curie cobalt-60 irradiation facility.

The meeting was called to order by Dr. Neumann at 1500 by summarizing the results of the recent state inspection. Dr. Knight was asked to report on the status of the 12,000 curie Cesium-137 irradiator after the source ports had been evaluated further for water leakage. He reported that water was found in 8 of 12 source ports. Mr. Boyd said that Cesium-137 was detected on swabs taken in each of these ports, the highest activity being 0.002 microc ies per swab. He said that because the activity was small that it was his opinion that there was no leak from inside the encapsulated source, but rather original contamination on the surface of the sources had dissolved in the water. However, he could not be sure that this was the case.

Dr. Knight requested an extension on the deadline for removing the source pins until April 15, 1975, because of a research project in progress. Mr. Boyd reported that we can't remove the pins until we can get the special cask from Oak Ridge and that his efforts toward getting this cask have been slow because Oak Ridge has some other source stored in it now. As soon as he is informed by Oak Ridge personnel that the cask is available he will take the necessary actions at once to have it transferred to Georgia Tech. After a brief discussion it was agreed that the following change in the plan of action be taken:

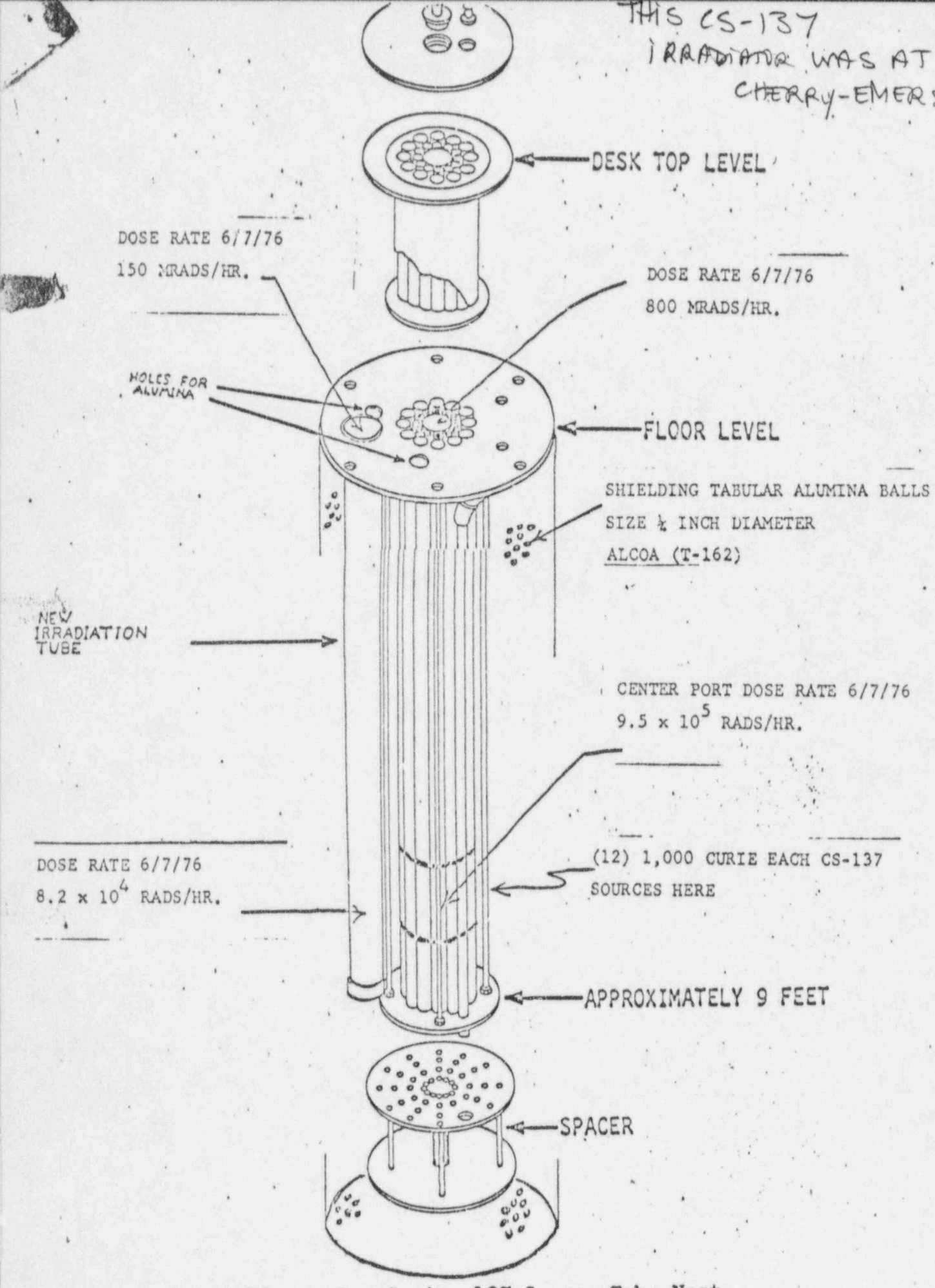


Figure 3. Cesium-137 Source Tube Nest.

LB5100-W Low Background Counting System -- Smear Analysis

Date: 9/1/95
Counting Unit Id: 1
Data file name: C:\LB\D\UNIT1\V2\851A018.XLD
Batch Ended: 9/1/95 11:38
Crosstalk Correction: Not Applied *

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 100.00
Certainty level for MDA and flags: 95.00%
High Voltage Setting: 1470

Application Revision: 8
Application Version: Standard

Alpha efficiency log file: TH230AB
Alpha Efficiency: 28.60%
Alpha to Beta Crosstalk: 28.48%
Alpha Background (CPM): 0.166666667
Alpha Correction Factor: 1.000
Beta efficiency log file: SR90AB
Beta Efficiency: 42.47%
Beta into Alpha Crosstalk: 0.61%
Beta Background (CPM): 1.5
Beta Correction Factor: 1.000

Batch ID: EMERSON 101 AREA SMEARS

Carrier	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Alpha Activity MDA	Beta Activity DPM	Beta Activity σ	Beta Activity flags	Beta Activity MDA	Count time (min)	Alpha CPM	Beta CPM	Completion Date - Time
1	9.942	9.09	<AL	14.29	10.60	6.80	<AL	16.02	1.00	2.999	4.50	9/1/95 11:13
2	2.924	8.52	<AL	14.29	12.95	6.89	<AL	16.02	1.00	0.999	5.50	9/1/95 11:14
3	-0.585	8.52	<MDA	14.29	1.18	6.87	<MDA	16.02	1.00	-0.167	0.50	9/1/95 11:16
4	-0.585	8.52	<MDA	[illegible]	-1.18	2.41	<MDA	16.02	1.00	-0.167	-0.50	9/1/95 11:17
5	6.433	4.87	<AL	14.29	1.18	8.87	<MDA	16.02	1.00	1.999	0.50	9/1/95 11:18
6	2.924	8.52	<AL	14.29	8.24	6.80	<AL	16.02	1.00	0.999	3.50	9/1/95 11:20
7	2.924	8.52	<AL	14.29	8.24	6.80	<AL	16.02	1.00	0.999	3.50	9/1/95 11:21
8	2.924	8.52	<AL	14.29	5.88	4.74	<AL	16.02	1.00	0.999	2.50	9/1/95 11:23
9	-0.585	8.52	<MDA	14.29	5.88	4.74	<AL	16.02	1.00	-0.167	2.50	9/1/95 11:24
10	-0.585	8.52	<MDA	14.29	5.88	4.74	<AL	16.02	1.00	-0.167	2.50	9/1/95 11:26
11	6.433	4.87	<AL	14.29	3.53	4.11	<MDA	16.02	1.00	1.999	1.50	9/1/95 11:27
12	-0.585	8.52	<MDA	14.29	-3.53	2.41	<MDA	16.02	1.00	-0.167	-1.50	9/1/95 11:28
13	-0.585	8.52	<MDA	14.29	1.18	8.87	<MDA	16.02	1.00	-0.167	0.50	9/1/95 11:30
14	-0.585	8.52	<MDA	14.29	-1.18	2.41	<MDA	16.02	1.00	-0.167	-0.50	9/1/95 11:32
14	-0.585	8.52	<MDA	14.29	5.88	4.74	<AL	16.02	1.00	-0.167	2.50	9/1/95 11:33
14	-0.585	8.52	<MDA	14.29	8.24	6.80	<AL	16.02	1.00	-0.167	3.50	9/1/95 11:35
14	-0.585	8.52	<MDA	14.29	5.88	4.74	<AL	16.02	1.00	-0.167	2.50	9/1/95 11:36
14	2.924	8.52	<AL	14.29	1.18	8.87	<MDA	16.02	1.00	0.999	0.50	9/1/95 11:38

Smears from Emerson-101 to ensure no contamination after completion of RWP 95-53.

Smears were taken on each of twelve Cs-137 sources by removing the 7 foot plugs, taping a smear on a rod, and lowering the rod on top of the source.

NB * Smears were first counted on LB5100 to get an estimate of any leakage. This detector does not have an efficiency calibration for Cs-137, so all smears were recounted on GeLi gamma spectrometer. *

In addition, a smear of the plug from source #11 was taken.

The data from the GeLi detector is summarized in the table below. The raw data from both analyses is attached.

Source	Time	Cpm	Efficiency	Dpm
1	600 sec	0.0	3.19%	0.0
2	600 sec	11.4	3.19%	357.4
3	600 sec	0.0	3.19%	0.0
4	600 sec	0.0	3.19%	0.0
5	600 sec	0.0	3.19%	0.0
6	600 sec	0.0	3.19%	0.0
7	600 sec	0.0	3.19%	0.0
8	600 sec	10.1	3.19%	316.6
9	600 sec	0.0	3.19%	0.0
10	600 sec	0.0	3.19%	0.0
11	3600 sec *	57.2	3.19%	1793.1
12	600 sec	0.0	3.19%	0.0

Performed By: JStrydom Date: 9/6/95

Reviewed By: [signature] Date: 9/7/95

Requested when time counted to ID RN.

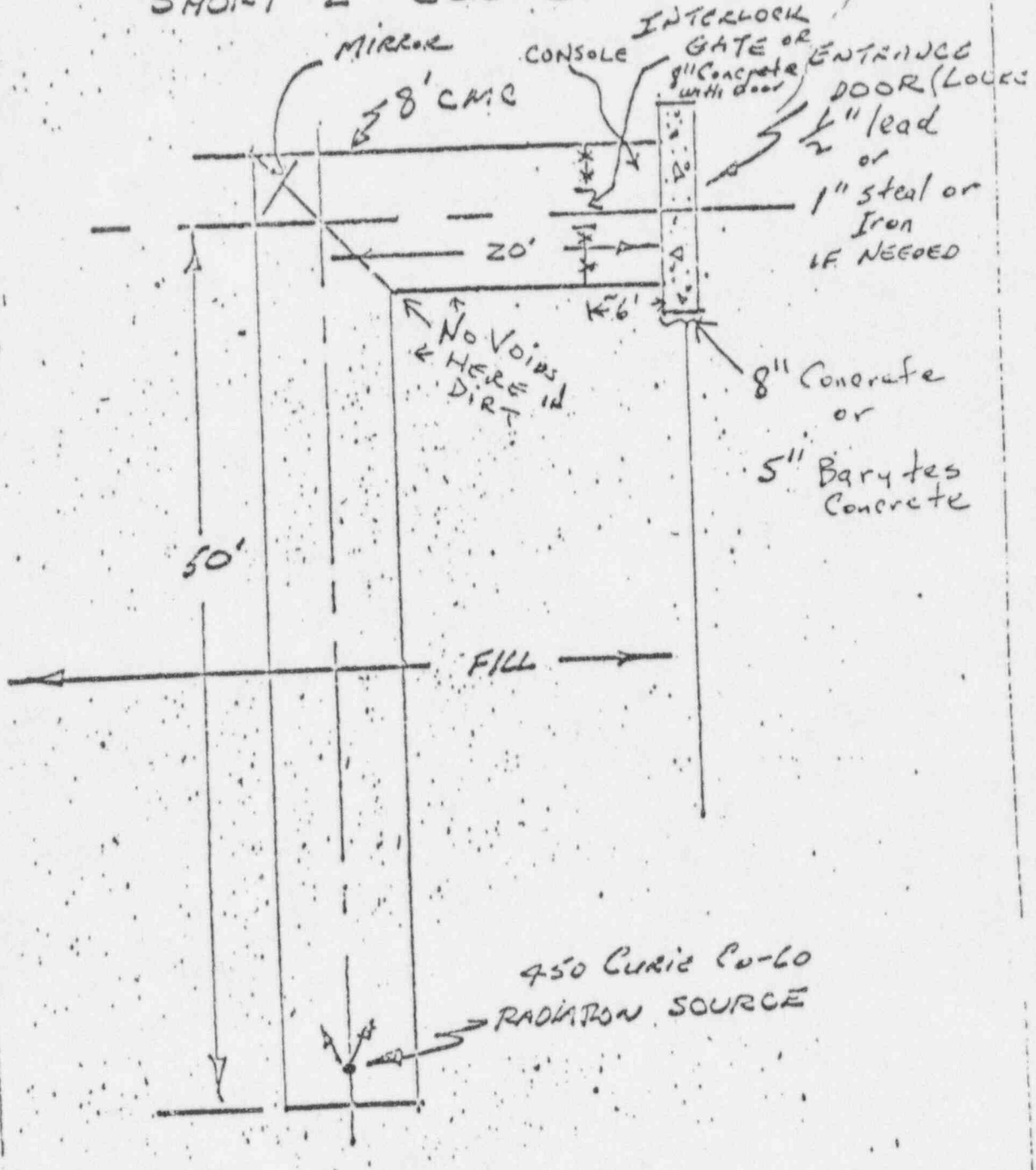
Results → All Cs-137 Trace contamination found -- probably associated with allowed contamination levels when sources were put in 30 years ago.

No source leaks > 0.005 uCi [signature].

N.B.

GAMMA IRRADIATOR CHAMBER

"SHORT L" CONFIGURATION



"CRENSHAWS" MOUNTAIN (Co-60)

NOTE: PROPER INTERLOCKS & WARNING DEVICES WILL BE INSTALLED BEFORE USE OF ANY SOURCE OF RADIATION.

EXCERPT

GEORGIA INSTITUTE OF TECHNOLOGY

ENVIRONMENTAL RESOURCES CENTER
205 OLD CIVIL ENGINEERING BLDG.
ATLANTA, GEORGIA 30332

(404) 894-~~2975~~ XXX
3776

DATE: May 15, 1986

TO: James Hardeman, Program Manager
Environmental Radiation Program
Environmental Protection Division, DNR

FROM: Bernd Kahn, Director Bernd Kahn
Environmental Resources Center

SUBJECT: Monthly Report of Activities for the State by the Environmental Radiation Laboratory, April, 1986

The results of radionuclide analyses are reported for the following sample types that were processed this month:

Environmental radionuclide monitoring at nuclear facilities by DNR staff	Table 1-19
Monitoring by DNR staff of community water systems	Table 20
Environmental radiation monitoring at nuclear facilities by DNR staff	Table 21

Of the samples collected in the environment at nuclear facilities, the following contained radioactivity that may be attributed to the facility:

Table 14: Cs-137 in soil at the Georgia Tech Research Reactor; *

Tables 13, 14, 17 and 19: H-3 in milk, grass, fish and surface water at the Savannah River Plant. Note the concentration of 130,000 pCi/l in one surface water sample and somewhat higher levels than usual in public water supply sample in Table 14.

All other radionuclides in Table 1-14 are attributed to fallout or the natural radiation background. All samples collected for the NRC project are indicated by asterisks in the appropriate tables.

Radioactivity results for community water supplies, compiled in Table 20, are complete data for samples WS 5206-5269 and partial data for samples WS 5270-5431.

No elevated radium levels (>5 pCi/l) or elevated uranium concentrations (> 15 pCi/l) were found.

Results for community water supplies continue to be reported in a different form this month due to computer difficulties.

TLD measurements obtained in the vicinity of nuclear facilities are reported in Table 21. Ranges of exposure, in mR/yr, were:

Location	Near Plant	Background
Plant Hatch	25 - 53	33 - 58
Savannah River Plant	37 - 80	38 - 82
Georgia Tech Research Reactor	86 - 352 *	-------

Except for the highest exposure rate at the Georgia Tech Research Reactor, these values are attributable to the natural radiation background, but the background stations are not sufficiently matched to confirm this.

The types of samples and number of each that were analyzed are summarized in the following two tables.

Table 10

Radioactivity Levels in Grass Samples from the Environment of the Georgia Tech Research Reactor

Sample No.	Location	Dry wt/ Wet wt.	Radionuclide concentration, pCi/kg	
			Cs-137	Be-7
GT 187	TLD #2	0.15	< 50	1,400
GT 188	TLD #5	0.23	<100	2,300 ←
GT 189	TLD #7	0.23	<100	1,200
GT 190	TLD #8	0.18	<100	<1,000
GT 191	TLD 311	0.19	<100	<700

Notes: 1. Samples were collected on April 24, 1986.

2. No other man-made photon-emitting radionuclides were detected. Be-7 is formed in nature. AND IN REACTORS!

✓

Table 11

Radioactivity Levels in Soil Samples from the Environment of the Georgia Tech Research Reactor

Sample No.	Location	Dry wt/ Wet wt.	Radionuclide concentration, pCi/kg			
			Cs-137	K-40	Ra-226	Ra-228
GT 192	TLD #2	0.87	330	17,000	1,000	1,100
GT 193	TLD #5	0.83	130	20,000	1,200	1,500
GT 194	TLD #7	0.82	88	21,000	900	1,600
GT 195	TLD #8	0.88	1,400	15,000	1,100	1,000
GT 196	TLD #11	0.89	120	22,000	1,300	1,400

Notes: 1. Samples were collected on April 24, 1986.

2. No other man-made photon-emitting radionuclides were detected.

IN BOOK FOR 1985-1987

	DIRECTION
2 = SE CORNER OF GTRR FENCE	S.E.
5 = SW " " " "	S.W.
7 = GTRR WEST PARKING LOT (? UP HILL)	N.N.W.
8 = EIGHTH ST + FOWLER ST. (TECH COLISEUM)	E.N.E
11 = EIGHTH ST + CHERRY ST	E.

Table 12

Radioactivity Levels in Water Sample from the Georgia Tech Research Reactor

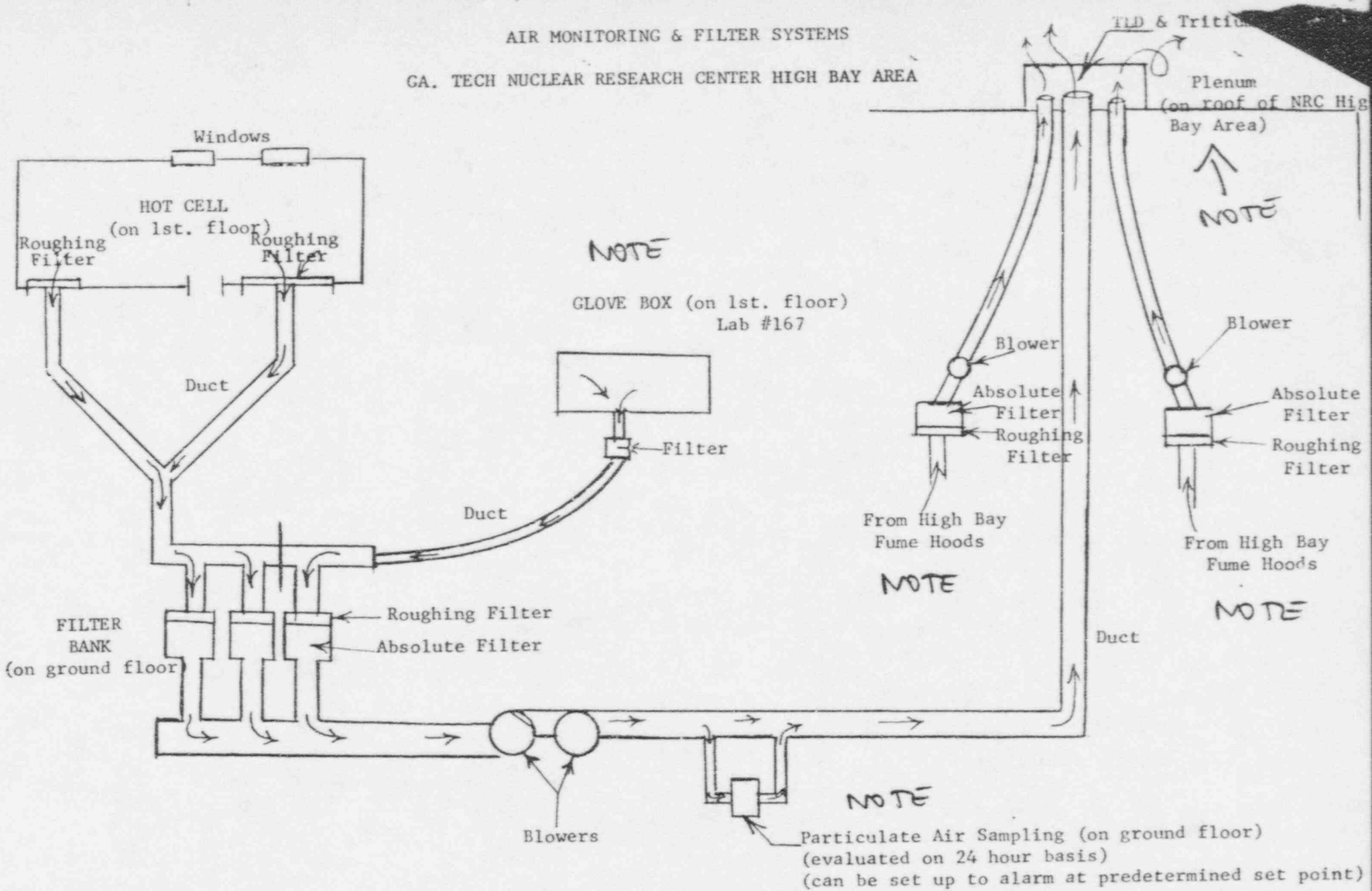
Sample No.	Location	Gross alpha, pCi/l	Gross beta, pCi/l	Radionuclide concentration, pCi/l			
				H-3	Co-58	Co-60	Cs-137
GT 197	waste water	< 5	44 ± 9	7,000±300	34	27	21

Notes: 1. Sample was collected on April 30, 1986.

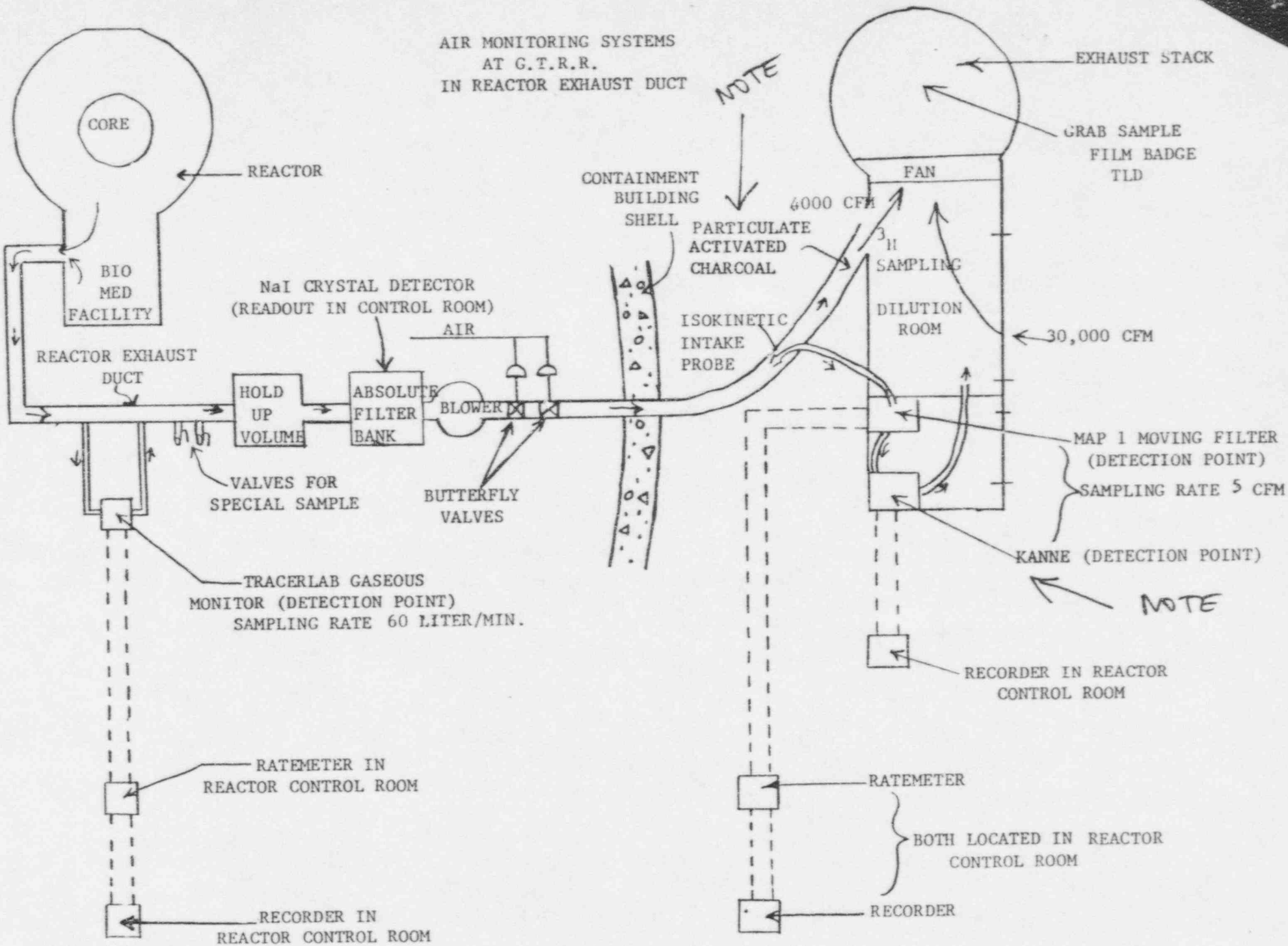
2. No other man-made photon-emitting radionuclides were detected in the sample.

AIR MONITORING & FILTER SYSTEMS

GA. TECH NUCLEAR RESEARCH CENTER HIGH BAY AREA



3/24/82


AIR MONITORING SYSTEMS
AT G.T.R.R.
IN REACTOR EXHAUST DUCT
NOTE
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BIO
MED
FACILITY
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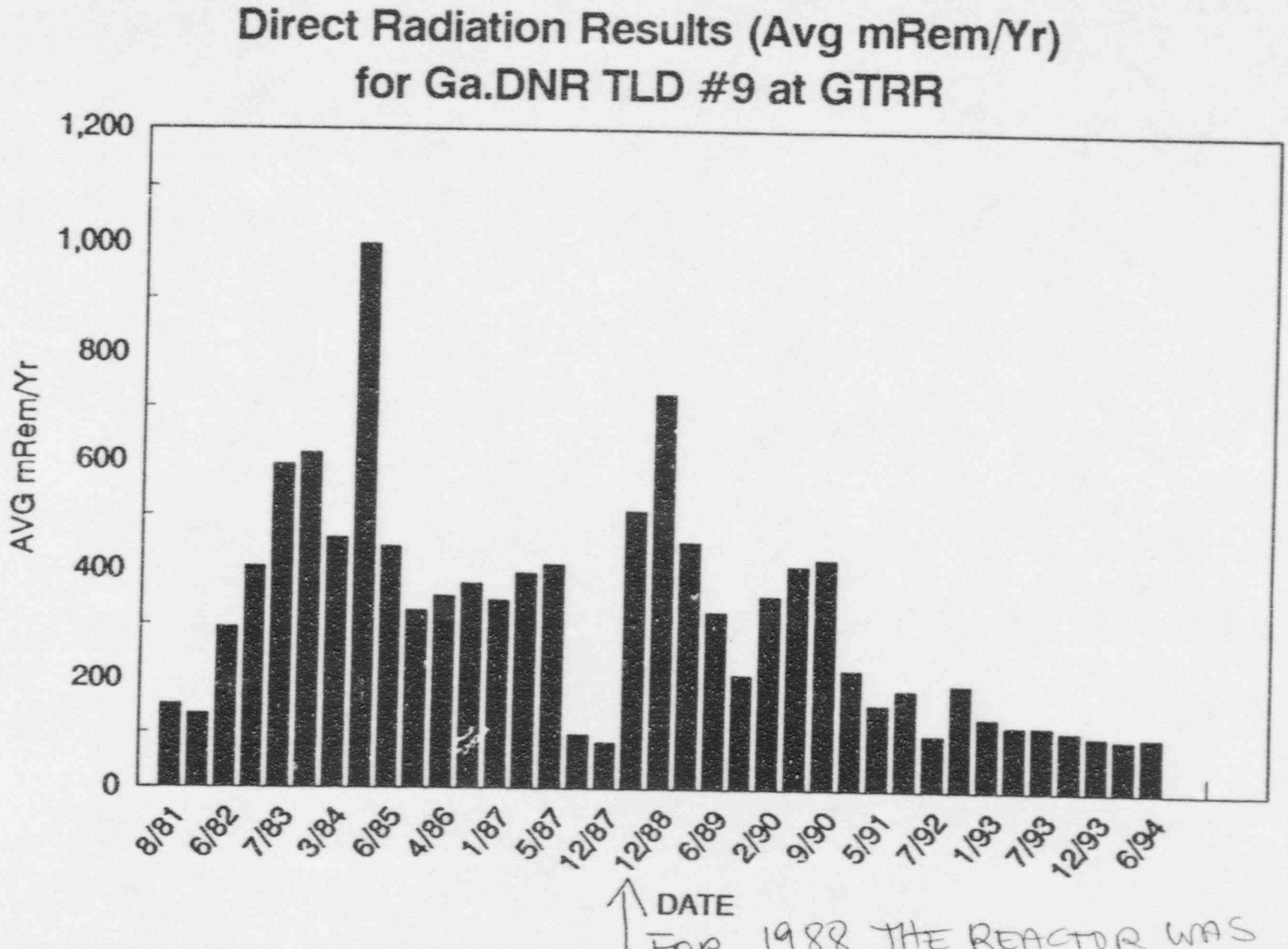
HOLD
UP
VOLUME
ABSOLUTE
FILTER
BANK
BLOWER
NaI CRYSTAL DETECTOR
(READOUT IN CONTROL ROOM)
AIR
VALVES FOR
SPECIAL SAMPLE
BUTTERFLY
VALVES
CONTAINMENT
BUILDING
SHELL
PARTICULATE
ACTIVATED
CHARCOAL
ISOKINETIC
INTAKE
PROBE
4000 CFM
EXHAUST STACK
GRAB SAMPLE
FILM BADGE
TLD
FAN
^3H
SAMPLING
DILUTION
ROOM
30,000 CFM
MAP 1 MOVING FILTER
(DETECTION POINT)
SAMPLING RATE 5 CFM
KANNE (DETECTION POINT)
NOTE
TRACERLAB GASEOUS
MONITOR (DETECTION POINT)
SAMPLING RATE 60 LITER/MIN.
RECORDER IN REACTOR
CONTROL ROOM
RATEMETER IN
REACTOR CONTROL ROOM
RATEMETER
BOTH LOCATED IN REACTOR
CONTROL ROOM
RECORDER IN
REACTOR CONTROL ROOM
RECORDER

3/24/82

FROM GA. EPD



FOR 1988 THE REACTOR WAS MEANT TO BE SHUTDOWN. THEY ALWAYS TRY & SAY TLD 9 IS NEAR A GRANITE WALL OR THE WASTE "BARN". DR. KARAM SAID IN JAN. 30TH 1996 LETTER TO MR. HINK EPD THEY SHIPPED "BARN" WASTE OUT. SO WHY IS IT SO HIGH?

Table 1: Summary of NRC Analytical Results for Liquid Waste and Cooling Tower Water Samples Collected on March 22, 1995 from the Georgia Tech Research Reactor Facility

3/28/95
EPD/DNR/TECH
TEST
5 DAYS LATER

Sample Matrix	Radionuclide	Concentration (μCi/ml) NRC/RESL[1] +/- 1σ[2]	
Liquid Waste	Th-228	not detected	
	Th-230	not detected	
	Th-232	not detected	
	U-234/U-233	not detected	
	U-235	not detected	
	U-238	3.00 +/- 4.00 E-11	
	H-3	2.55 +/- 0.03 E-04	155,000 pCi/L
	Co-60	not detected	18 pCi/L
Cooling Tower	Th-228	not detected	
	Th-230	not detected	
	Th-232	7.00 +/- 5.00 E-11	
	U-234/U-233	not detected	
	U-235	not detected	
	U-238	not detected	
	H-3	1.50 +/- 1.70 E-07	
	Co-60	not detected	CS 137 3pCi/L BETA 34 pCi/L ALPHA 4 pCi/L

[1]Radiological Environmental Sciences Laboratory at DOE's Idaho Falls Facility
[2]Estimated random uncertainty reported as 1σ. Results less than or equal to 2σ are interpreted as including zero or as not detected. For results greater than 2σ but less than or equal to 3σ, detection is questionable. Results greater than 3σ indicate detection.

NRC
FROM INSPECTION 95-01

Attachment 1

Extra

IN THE PIPELINE

CITY EXPRESSES CONCERN OVER TECH REACTOR'S RADIOACTIVE WASTEWATER

BY GREG LAND

In a quiet meeting last week among city officials, Nuclear Regulatory Commission (NRC) staffers, representatives of the state Department of Natural Resources, and the administrators of Georgia Tech's Neely Nuclear Research Reactor, the city expressed surprise at the fact that radioactive waste had been routinely discharged into the city's sewer system — and acknowledged it has no way to test for such wastes.

In fact, as the meeting progressed, it became apparent that no place in the city has such a permit.

The issue arose when the city was apprised that, since its construction 30 years ago, the reactor complex — which includes a reactor, an irradiation facility which houses a pool of Cobalt-60, and another containing Cesium-137 — has routinely discharged radioactive wastewater into the 100-year-old sewers that run to the city's R.M. Clayton sewage treatment plant [see "Ramblin' Reactor," *CL*, Dec. 17, '94]. The reactor complex is currently applying for a reissuance of its NRC license, which would allow it to operate for another 20 years.

"Any wastewater containing radioactivity in excess of federal Environmental Protection Agency standards for drinking water ... is not permitted," said Hillock.

The reactor's director, Dr. Ratib Karam, disputed the charges, asserting that the 5,000 gallon wastewater storage "farm" is only emptied into the sewers after being tested and found to be within acceptable levels.

Karam said that any releases would have been well below the federal Environmental Protection Agency standards for drinking water, which the city uses as its own standards for discharge into the sewers.

However, an analysis of the reactor complex's wastewater from 1978 through 1994, compiled by the state Department of Natural Resources, reveals that:

- Tritium levels have fluctuated wildly over the years, peaking at nearly 3 million picoCuries per liter (pCi/L) in 1979 — 150 times EPA standards — and surging back to 1.1 million pCi/L in 1991.
- Cesium-137 le els went as high as 1,450 pCi/L in 1980 — over seven times federal EPA standards.
- Cobalt-60 remains a presence, peaking at 520 pCi/L in 1991 — 3.6 times federal standards.
- Strontium-90, which has been within federal levels for over 10 years, peaked at 125 pCi/L in 1980 — 15 times EPA standards.

Phil Nongeeser, acting deputy director of the city's Bureau of Pollution Control, expressed concern that the tanks contained wastewater from the facility as well as rainwater, which is allowed to flow into the tanks.

When Karam noted that other facilities — hospitals and universities, for instance — also produced radioactive waste, and might also be in violation of city ordinances, the city officials expressed surprise — and some concern. Hillick noted that there was no facility for testing for radioactive isotopes in wastewater.

"We never thought we needed one," he said. Currently, sewage is tested for heavy metals and other industrial pollutants before being treated. Contaminants are filtered out and turned into sludge, which is burned or formed into bricks.

"Now we're hearing that there's more sources than [the Neely Reactor]," added city inspector Tyler Richards. "That woke us up."

The prospect that the city has routinely allowed radioactive waste to return to the river, go up the stack at the incinerator, or be mixed with other waste products was not a pleasant one for Nongeeser. Even so, he assured Karam that the facility would be issued a temporary permit pending a review of the reactor's discharge reports.

But Karam, joined by Tech legal counsel Kathy Maher, indicated that they were not convinced the city had any authority to control the discharges.

"I'm not aware that the NRC delegated *you* any responsibility," said Karam.

"We own the sewers," replied Nongeeser. "We operate under federal guidelines, and we control what goes in them." ■

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

JUL 18 1988

Georgia Institute of Technology
ATTN: Dr. J. P. Crecine, President
225 North Avenue
Atlanta, GA 30332

Gentlemen:

SUBJECT: RESPONSE TO QUESTIONS CONCERNING INSPECTION REPORT NO. 50-160/87-08

This is in reference to (1) the letter dated May 13, 1988, which responded to NRC concerns regarding progress toward renewed operation of the Georgia Institute of Technology (Georgia Tech) Research Reactor, and (2) the letter dated June 13, 1988, asking specific questions concerning recent NRC actions.

It appears from the May 13, 1988, letter that NNRC management may still be focusing their attention on specific issues and individuals involved with the August radioactivity contamination event rather than evaluating the program and management controls over the program that allowed the specific event to occur. The fact that the event had minor radiological consequences is fortuitous. The event, in and of itself, showed management and program weaknesses that are slowly being addressed by Georgia Tech. Further, the Order issued on January 20, 1988, requires an evaluation of the management controls that allowed this situation to exist.

The information received thus far indicates that many of the identified problems relate to issues that are "proximate" causes. We believe the "ultimate" or "root" cause is a weakness in management controls and programs at your facility. The information we have received from Georgia Tech to date does not recognize that this root cause exists which causes us to question the long-team effectiveness of any corrective actions. Thus, we find this submittal to be inadequate.

Surprisingly, the questions in the letter of June 13, 1988, and the content of the interim report both indicate that NNRC management's investigation into, and understanding of, the event were apparently somewhat superficial. The questions indicate a lack of full discussion with facility staff and also an inadequate assessment of the consequences of the contamination event. Enclosure 1 is a general response to the questions. Enclosure 2 is a response to the specific questions.

If you have any questions on the above, or the enclosures to this letter, I would appreciate it if you would contact me personally for resolution.

Sincerely,

J. Nelson Grace
Regional Administrator

Enclosures: (see page 2)

8808010314 1/PP

Enclosures:
1. General Response to Questions
2. Response to Specific Questions

cc w/encls:
Dr. T. E. Stelson, Senior Vice President
for Research
Dr. R. A. Karam, Director
Neely Nuclear Research Center

ENCLOSURE 1

General Response

The June 13, 1988, letter appears to question the conclusions concerning the degree of contamination of the reactor building in Inspection Report 50-160/87-08, since the August 19, 1987, survey result showed only minor contamination (100-200 cpm) in a small area of the reactor building floor. (The August 1987, survey document did not show contamination on the catwalk, the second floor, or on the first floor except for a 10 square foot area.) This apparent lack of understanding, at this the time, of the circumstances associated with this event is quite surprising. It should be clearly understood that:

(1) The referenced August 19, 1987, documented survey gave the initial indication of contamination above normal; it was not a documentation of all of the surveys of the reactor building associated with the radioactivity contamination event. Licensee personnel (operations and health physics) stated that after noting the widespread contamination, they began to survey and decontaminate areas without recording results.

(2) Surveys for contamination were conducted throughout the NNRC. The contamination was indicated to be spread in discrete locations over approximately one-third of the building area.

(3) Licensee personnel stated that the catwalk approximately 60 feet from the top of the reactor shield was contaminated.

(4) Licensee personnel and the Director, NNRC, stated that the Director, NNRC, was directly responsible in overseeing the decontamination effort over large areas of the facility.

(5) Licensee personnel stated that during decontamination efforts, the personal clothing (pants) of an operator involved were contaminated to levels exceeding release limits.

(6) One additional record showed smearable contamination of 20 mrem/hr.

(7) When records are incomplete, interviews of personnel must be utilized to provide missing information.

ENCLOSURE 2

Response to Specific Questions

1. Did the Manager of the Office of Radiation Safety (MORS) or other Office of Radiation Safety (ORS) personnel in fact inform the Radiation Specialist Inspector of the existence of the August 1987, survey document or its contents?

At no time during the inspection did licensee personnel provide a copy of the survey to the inspector and inform him that this survey documented the extent of contamination after the August event.

The August 19, 1987, survey document was not reviewed by the inspector until after the January 22, 1988, exit interview. Licensee personnel informed the NRC that this survey document recorded the routine surveys conducted up to and including the initial finding of contamination within the reactor building, but did not include the specific details regarding the subsequent surveys conducted during decontamination efforts. Licensee personnel, both operations and health physics (HP) staff members, stated that they conducted additional contamination surveys, including the top of the reactor shield, areas of the reactor building floors and equipment located there, and other building areas such as the corridors and access point leading into containment of the Neely Nuclear Research Center (NNRC). The inspector specifically asked for these survey results. The inspector was informed that when a contaminated area was found, the area was immediately decontaminated without recording the survey results. Initially, there may have been a misunderstanding between the inspector and MORS regarding the information requested, the information available, and the final records provided to the inspector for review. At no time during the inspection did the MORS appear to deliberately withhold information as noted by the availability of other pertinent data, for example, air sampling records and memoranda detailing the contamination event, which were provided to the inspector.

The failure to document the detailed survey results was attributed to both operations and HP licensee staff. The extent of surveys should have been known by the Director, NNRC, who was responsible for and observed the decontamination efforts in progress. Although the Director, NNRC, was responsible for the decontamination activities, at no time during the onsite NRC inspection did he present the August 19, 1987, survey results. Neither did he provide any additional information, either qualitative or quantitative, regarding other surveys conducted and which indicated the extent of (or absence of) contamination levels measured. It should also be noted that the person responsible for decontamination activity in the reactor building (Director, NNRC) limited access to the area for an extended period of time.

2. Did the inspector ask to see all pertinent records and if so were they provided to him for his inspection?

The inspector requested of all licensee personnel (operations, HP, and the Director, NNRC) to provide any information which would assist in properly evaluating the cadmium contamination incident. Data reviewed and discussed with HP personnel included the radiological analyses of air samples collected within the reactor building for August 1987, routine radiation survey levels in the reactor building, post-decontamination survey records, and memos relating to the building and personnel contamination surveys. The inspector was informed by HP and operations personnel that, although they did perform decontamination work, data indicating the measured radiation survey results were not recorded because personnel were involved in decontamination activities and failed to record the measured survey results as the work progressed.

In addition, on January 14, 1988, both the radiation specialist and the NRC Region II Section Chief discussed explicitly with the Director, NNRC, the importance of obtaining, either from himself or his staff, all data relating to the August incident. The Director stated that the NRC would be provided with all data. The rationale for detailing the NRC concerns to the Director, NNRC, and requesting his input in gathering all facts regarding the August event is outlined below.

The Director, NNRC, stated to NRC personnel that he previously had evaluated the August spill himself when it had occurred, had been responsible for decontamination activities, and had informed the campus radiation safety officer (RSO) of the incident. In addition, the inspector was informed by staff and the Director, NNRC, that the Director observed the decontamination activities. Given the above information, the inspector concluded that to complete the evaluation of the event, the Director had reviewed all pertinent survey documents. At no time during the inspection did the Director, NNRC, take exception to the inspector's comments regarding the spread of contamination nor did he volunteer the August 19, 1987, survey data.

Throughout the onsite inspection period (December 16, 1987 through January 22, 1988), the Director, NNRC, was aware of the NRC's concern regarding the extent of contamination and was requested to provide all data necessary to evaluate the August incident. At no time during the inspection, including the January 22, 1988, exit interview, did the Director, NNRC, provide the August 19, 1987, survey results. Thus, the NRC concluded that all pertinent records had been provided.

3. If the Radiation Specialist Inspector did not see the August 19, 1987, smear survey as claimed by the Deputy Regional Administrator and Section Chief responsible for GTRR, how could the description of the survey results (as described in Inspection Report (IR) 50-160/87-08) appear in the report? It is clear that the information could not have come from facts provided by NNRC at the related Enforcement Conference, since that conference was not referenced in the IR.

   The August 19, 1987, survey results were presented to the local news media following the January 22, 1988, exit interview. Following the exit interview, the Region II Georgia Tech Research Reactor (GTRR) Section Chief telephoned the Director, NNRC, and requested the document for review. The documents were transmitted to NRC Region II (as an attachment to a letter dated January 22, 1988), by the Director, NNRC. Thus the surveys were made available to and reviewed by the radiation specialist prior to the February 23, 1988, Enforcement Conference, contrary to what is stated in the June 13, 1988, letter from the Director, NNRC. Furthermore, the presentation of these surveys to the media following the January 22, 1988, exit interview and their subsequent submittal to the NRC Region II Office resulted in their review and inclusion as part of IR 50-160/87-08, dated February 10, 1988.

4. What documents contained the above referenced 100-200 cpm above background levels on the containment (main) floor.

   The forms provided by the licensee to the NRC following the January 22, 1988, exit interview. Specifically, Form RS-51, Daily Masslin Survey Report, August 1987, indicated that for Area 7 on August 19, 1987, count rates approximately 100 to 200 counts per minute (cpm) above background were measured. These quantitative results were for routine surveys conducted by a student HP technican.

   The existence of elevated contamination levels was discussed by licensee staff prior to the inspector's review of the survey results. During interviews of the operations and HP staff, selected survey results were described as ranging from measurable to approximately 22 millirem per hour (mrem/hr). Both operations and HP staff stated that contaminated areas were located in the main reactor building which required more detailed surveys and decontamination activities which were not recorded. These contamination levels never were specifically quantified but were described as "measurable," that is, detectable above background.

5. Which documents contained the followup surveys?

   Page 6, Paragraph 3, of IR 50-160/87-08 specifically states "Discussion with cognizant licensee health physics staff indicated that ... the reactor shield." The inspector interviewed all personnel involved in the decontamination activities including operations, HP, and the Director, NNRC, and all stated that because of the contamination event and subsequent decontamination activities, followup surveys of personnel and areas within the NNRC were conducted. Both operations and HP staff

discussed with and showed to the inspector during tours of the facility, those areas where they had performed surveys and subsequent decontamination activities. Several of the areas requiring followup surveys and decontamination efforts were corroborated between the operations and HP staff, including an operations staff member who stated that he had to decontaminate an area of the catwalk across from the top of the reactor shield.

6. Were any results conveyed verbally (without contemporaneous official documentation backup) to the Radiation Specialist Inspector?

See response to Question No. 5.

By whom?

See response to Question No 5.

What results?

NNRC staff stated that surveys indicating contamination ranged from measurable up to 20 mrem/hr. During discussion of the contamination levels, excluding the 20 mrem/hr reading, both operations and HP staff referred mainly to elevated or measurable contamination levels for areas within the reactor building where contamination was reported. Excluding several memoranda detailed in IR 50-160/87-08, both operations and HP staff were unable to provide written records of the contamination levels they measured. For example, operations personnel conducted decontamination activities on top of the reactor shield in the area designated by the licensee to be the location of the August spill and also to have the highest contamination levels. However, no detailed records of the survey results used to properly conduct decontamination activities were maintained.

Details corroborating licensee statements were provided in the August 19, 1987, survey record and subsequent memoranda from the HP staff to the Director, NNRC. For example, a survey indicating 20 mrem/hr was documented for a Masslin wipe survey conducted by a HP student technician which was recorded in a personal log book and also detailed in a memorandum (Boyd to Karam, August 20, 1987) reviewed by the radiation specialist inspector. Additional documented survey results were noted for contamination levels at the storage cask which remained elevated following decontamination efforts (memorandum, dated August 27, 1987, Sharpe to Karam).

7. Given the obvious conflict between the inspector's determination and the August 19, 1987, survey, how and based on what information did the inspector determine that approximately one-fourth to one-third of the reactor containment building had measurable contamination?

There is no obvious conflict between the inspector's determination and the August 19, 1987, survey. This referenced survey, because it was incomplete, was not used to estimate the area of contamination. As stated in the previous responses, the August 19, 1987, record only indicated results of the routine surveys conducted up to the point in time when definite contamination was observed. For example, survey data indicating the extent and levels of contamination on top of the reactor shield, an area that the Director, NNRC, HP, and operations staff knew to be contaminated (memorandum from Boyd to Karam, dated August 20, 1987) and which required extensive decontamination effort following the August incident were not recorded on the August 19, 1987, survey. Furthermore, the August 19, 1987, survey results would not be used to estimate the extent of contamination because these routine surveys only monitored a small area of the reactor building containment floor, each area surveyed was not drawn to scale on the data sheets, and the surveys appeared to be conducted for locations near the shield wall of the reactor. Results of surveys for floor areas near the outer reactor building wall and equipment located on the main floor were not listed on the survey. Thus, the inspector was required to use interviews of operations and HP staff to determine the extent of contamination as described.

As previously stated, the Director, NNRC, was responsible for decontamination efforts; however, he was unable to provide any qualitative or quantitative survey data. Furthermore, the Director never provided information regarding the inspector's concerns of the extent of contamination nor did he initially take exception to the NRC's comments during the inspection.

8. What amount of measurable contamination was found?

See response to Question No. 7.

By whom?

All personnel interviewed at the NNRC indicated that the contamination above background was measured in various locations of the reactor building.

9. Is the NRC aware of any supporting documents which indicate contrary to our best information, that the catwalk, the control room areas of the main floor or any other area of the main floor (other than area #7) required decontamination.

It is not at all clear as to what is meant by the phrase "contrary to our best information" given the full awareness of the NNRC staff and involvement of the Director in the decontamination efforts.

The inspector was informed by licensee representatives that results of surveys associated with decontamination efforts in the aforementioned areas following the August incident were not recorded. IR 50-160/87-08

noted an apparent violation for a failure to maintain appropriate records for surveys.

However, interviews with operations and HP staff members indicated that operations personnel physically decontaminated the reactor shield top, reactor building floor, and an areas of the catwalk across from the reactor shield top. In fact, the Director, NNRC, knew of this operator's involvement as it was discussed during the February 23, 1988, Enforcement Conference. In addition, both HP and operation staff stated to the inspector that locations in the reactor building other than Area 7 on the August 19, 1987, survey record, were determined to be contaminated with cadmium and were subsequently cleaned.

10. Are there any documents which support the numbers provided in the memorandum from the MORS?

The NRC has not reviewed documents which could s[illegible] r[illegible]rute the numbers stated. Furthermore, comparison of the [illegible]ontamination results (memorandum, Boyd to Karam, dated August 20, [illegible] should not be compared to the 100 cpm background results (letter from [illegible]aram to Grace, dated June 13, 1988). For example, the 400 cpm was for a qualitative wipe of a large area, whereas the referenced 100 cpm may represent a wipe collected over a 100 cm^2 area. Additional data of the area surveyed, instruments used and their associated efficiencies, and the actual sample locations would be necessary to properly evaluate the numbers presented.

COMPARE WITH REVISED CAMPUS SURVEY!

11. Did RII or the Office of Investigations (OI) investigate the possibility of personnel of the ORS deliberately misleading NRC inspectors as to the impact of the August spill?

It would be inappropriate for NRC to comment on possible ongoing investigative activity, especially to confirm or deny the specific focus of such investigations. This standing policy ensures that investigations are pursued under the best possible conditions.

12. Did RII make any attempt to independently verify (for example, through the use of official records, required by the NRC to be maintained by the licensee) just how accurate or inaccurate the information provided by personnel of the ORS was?

The NRC did request that all written information pertaining to the August 1987 event be provided to the NRC, in order to better support the interviews of the operations and health physics personnel. The NRC has substantial reason to believe, based on the actions of the entire NNRC staff after the August, 1987, event, that oral information provided by the ORS staff regarding the contamination in the reactor building was correct. In fact, the information provided orally was consistent with the limited available documentation.

13. If such an investigation was performed, when was it done and what were its findings?

It would be inappropriate for NRC to comment on possible ongoing investigative activity, especially to confirm or deny the specific focus of such investigations. This position ensures that investigations are pursued under the best possible conditions.

14. The regulations in 10 CFR 2.201 and 2.202 appear to provide opportunity for the licensee to answer charges raised under any pretense and regardless of accuracy. What chain of reasoning caused RII and the NRC to issue an Order to Modify rather than an Order to Show Cause as is required by the regulations?

This question only addresses 10 CFR 2.201 and 10 CFR 2.202 and ignores or overlooks 10 CFR 2.204, "Order for Modification of License," which is the regulatory basis for the Order that was issued on January 20, 1988. Regarding the complaint that Georgia Tech was not afforded an opportunity to "answer charges," the January 20, 1988, Order specified that the licensee "may request a hearing on this Order within twenty days of its issuance." Also the licensee erroneously cited Section 2.201(c) as 2.202(c) and cited Section 2.202(b) as 2.202(a)(c).

Regarding the chain of reasoning, it was apparent to the NRC that the August contamination event occurred because of lack of management controls over the conduct of irradiations. Also, the event initially went undetected, and subsequent documented surveys of the scope of the event were sparse. This indicated a lack of management controls over the assessment of the consequences of the event, further exacerbated by lack of management corrective actions to improve future operations. It is true that the NRC's judgement is that the particular contamination event in August did not represent a significant threat to public health and safety. However, the purpose of the order was not punitive -- it was imposed only to avoid possible future misoperations of more consequences to public health and safety and to send a clear message to Georgia Tech that future irradiations would not be permitted unless suitable enhancements in management controls were implemented.

15. Is it policy and practice of the NRC to assume guilt or were these utterances unauthorized and mistaken impressions?

The policy of the NRC has always been to expect a licensee to meet the appropriate requirements of its license and operate the facility in a safe manner. Inspections are conducted to verify whether the facility is being operated safely and in accordance with its license. During this inspection process, if problems are identified, they are brought to the attention of the licensee. Thus, the inspection process has as its basis a presumed "innocent" philosophy; but, of necessity, information obtained is evaluated objectively to determine whether problems appear to exist. In the case of an enforcement conference, where the NRC does have information that shows that there is an apparent safety problem or

violation, the NRC expresses the concerns to be discussed. Among the issues to be discussed are the items of noncompliance; and there is a presumption of guilt at this stage to the extent that, unless new information is provided that alters our initial judgement on the issues, there will be a conclusion that the violations occurred. One of the purposes of an enforcement conference is to provide a licensee the opportunity to clarify any misunderstanding concerning the information associated with the apparent violation. Our conference summary dated March 14, 1988, clearly identified concerns with management control of health physics and operation programs.

It is difficult, based on the information you provide, to assess whether the alleged statements were made in the above context. If not, we would appreciate further information on this subject.