



6-710.66 B 1433

# FRIDAY MAILING

5/8/98

## INCLUDED IN THIS FRIDAY MAILING:

OFF-SITE COMMITTEE MEMBERS PLEASE NOTE

ON-SITE COMMITTEE MEMBERS PLEASE NOTE

- Graph: 1997 Average Monthly Total Uranium Concentration in Water Discharged from the Marshall Plume to the Great Miami River
- Special Report Summary: Amicus Curiae Brief
- Special Report Summary: Supplemental Preliminary Injunction
- Technical Report Summary: Proof of Principle Request for Proposal Silos 1 and 2 Statement of Work
- Technical Report Summary: Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride
- Technical Report Summary: Waste Pits Remedial Action Project Remedial Design Package
- Technical Report Summary: Installation of Aesthetic Barrier Work Plan
- Technical Report Summary: Estimation of the Impact of the Former Feed Materials Production Center on Lung Cancer Mortality in the Surrounding Community
- Technical Report Summary: Restoration Area Verification Sampling Program Summary Report
- Newsclippings

## CAB MEETINGS:

- EFFICIENCY COMMITTEE MEETING:** The Efficiency Committee of the Fernald Citizens Advisory Board will meet on Thursday, May 14, 1998, at 6:30 p.m. in the Jamtek Building.
- FERNALD CITIZENS ADVISORY BOARD MEETING:** The CAB will meet on Saturday, May 16, 1998, at 8:30 a.m. in the Alpha Building, 10967 Hamilton-Cleves Highway.

000001

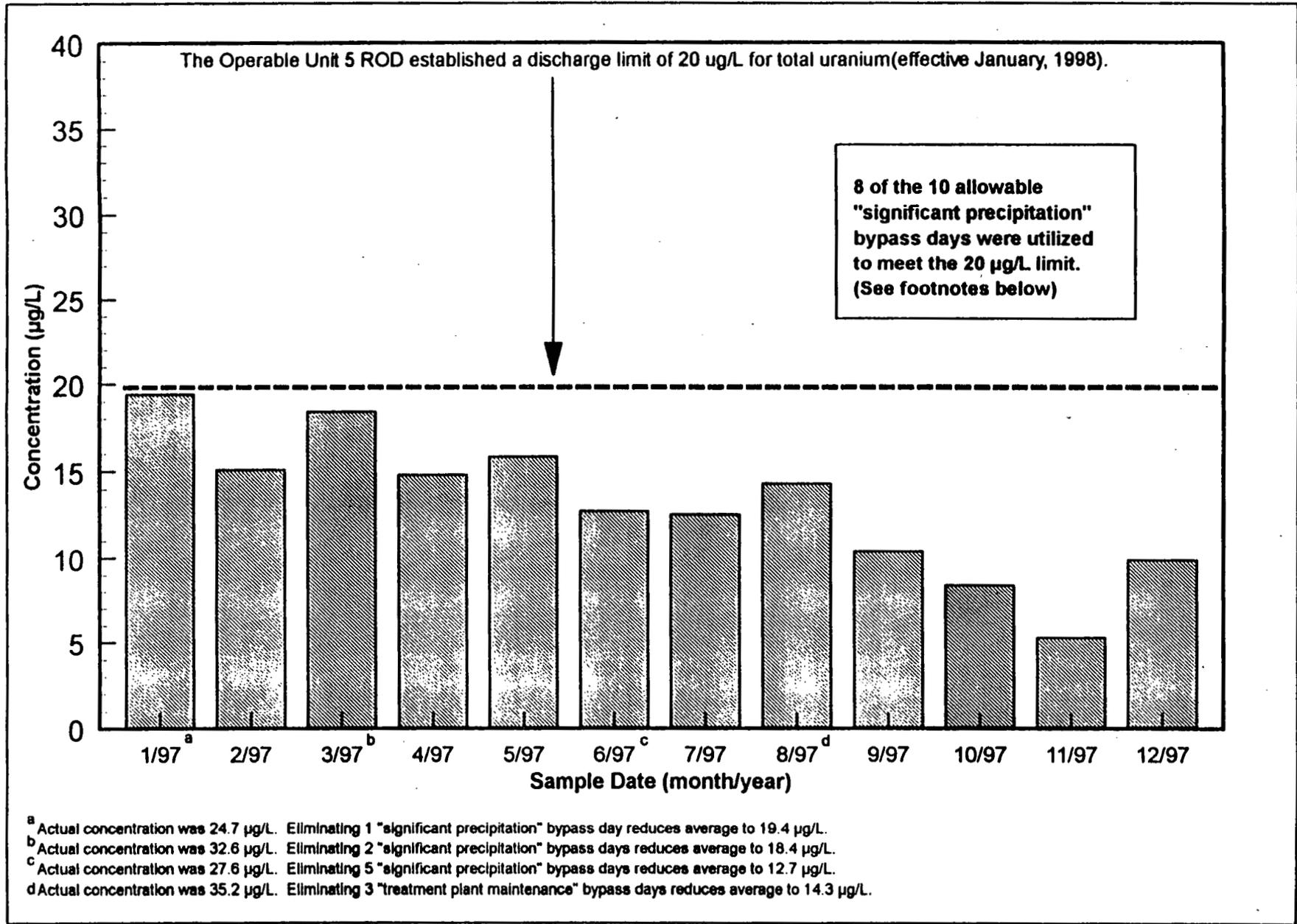
## QUESTIONS:

Please call John at [redacted] or Doug at [redacted] with questions or concerns. You may also fax or e-mail us at:

John  
Doug

Fax: 281-3331  
Fax: 648-3629

E-Mail: [john.applegate@law.uc.edu](mailto:john.applegate@law.uc.edu)  
E-Mail: [redacted]



**1997 AVERAGE MONTHLY TOTAL URANIUM CONCENTRATION IN WATER DISCHARGED FROM THE PARSHALL FLUME (PF 4001) TO THE GREAT MIAMI RIVER**

000002

PA  
1  
4  
3  
3



**What is the Amicus Curiae Brief?**

This brief was submitted to the court by the states of Arkansas, California, Colorado, Connecticut, Delaware, Illinois, Louisiana, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, and Washington. These states support DOE's position that the preliminary injunction in the case of WCS (Waste Control Specialists) vs. USDOE should be lifted.

**Why are the states involved in this case?**

These states feel that, in order to protect the public and the environment, DOE should not self-regulate the disposal of LLRW (low-level radioactive waste) as the WCS plan would have it do. Historically, DOE self-regulation has led to environmental contamination. The states feel that independent oversight benefits DOE, as it would any other industrial enterprise, by forcing accountability. The states do not want DOE to consider regulatory schemes such as those proposed by WCS.

**What are the states main arguments for lifting the injunction?**

- The Atomic Energy Act (AEA) gave the Atomic Energy Commission (AEC) the right to regulate the private sector. When the AEC was abolished, its regulatory responsibilities were given to the Nuclear Regulatory Commission (NRC). A key component of this regulatory responsibility requires that a license be obtained prior to the receipt, possession, or disposal of LLRW.
- The mission of DOE is to conduct energy research and development and operation of the federal nuclear weapons complex. DOE may oversee its contractors, but this does not amount to regulatory authority. DOE has no right under the AEA to regulate a private company and this regulation would be contrary to its mission.
- States may enter into agreements with the NRC for licensing authority. Such states are agreement states. As an agreement state, the State of Texas has regulatory powers over WCS.
- Under the AEA, no person may receive, possess, or dispose of LLRW unless licensed by the NRC or an agreement state. WCS proposes that it would be exempt from needing such a license if it accepted DOE waste.
- DOE does have partial exemption from the NRC licensing and regulation requirements. However, this exemption does not extend to WCS. WCS would not be a "representative, agent, or agency" of DOE and would, therefore, be ineligible from exemption. WCS proposes to be a private licensee of DOE, taking title of the waste.
- WCS contends that Section 110 of the AEA would pertain to its situation. Section 110 states "nothing in this chapter shall be deemed (a) to require a license for ... (2) the construction and operation of facilities under contract with and for the account of the Commission." This provision deals with production and utilization facilities, not with disposal facilities.

**Special Report Summary:**

**Preliminary Injunction WCS vs. USDOE: Amicus Curiae Brief, February 19, 1998  
(summary issued 5/8/98 for Off-Site Committee)**



**FERNALD  
CITIZENS  
ADVISORY  
BOARD**

- WCS cannot claim exemption from licensing under Parts 30, 40, and 70 of 42 U.S.C. 2111 because these exemptions are for prime contractors performing work at DOE-owned or controlled sites.
- Even if WCS were exempt from NRC regulation, it would still be subject to state regulation.
- Congress made it clear in the Low-Level Radioactive Waste Policy Amendments Act of 1985 that federal low-level waste disposed at a private facility is subject to state regulation.

#### **What is the status of this brief?**

This brief was rejected from consideration by the Fifth Circuit United States Court of Appeals. The court will not consider these arguments for an appeal.

000004

### **Special Report Summary:**

**Preliminary Injunction WCS vs. USDOE: Amicus Curiae Brief, February 19, 1998  
(summary issued 5/8/98 for Off-Site Committee)**

**Under what grounds is WCS filing a Supplemental Complaint for Preliminary Injunction?**

DOE has used the United States Corps of Engineers to dispose of low-level waste, which violates the terms of the original injunction issued in October 1997. WCS has found a total of 43 contracts between the Corps and DOE, six of which relate to disposal of low-level or mixed wastes. The use of interagency agreements with the Corps threatens to "drain the pond" of disposal opportunities for DOE wastes.

**How did DOE argue the use of the Corps of Engineers?**

DOE argued during the original preliminary injunction hearings that the Corps is not a DOE contractor and "has no relationship with the Department of Energy."

**What is WCS's relationship to the Corps of Engineers?**

Prior to the issuance of the preliminary injunction but after the start of action, WCS bid on a contract issued by the Corps for disposal of low-level wastes. The contract called for the necessity of the contractor having the "required permits," which the Corps interpreted to mean a state or NRC license. WCS submitted a bid, but received a score of zero because it does not have a state or NRC permit. In December 1997, the Corps ended up awarding the contract to Envirocare of Utah. The only other bidder was Envirocare of Texas, which is controlled by Envirocare of Utah. DOE did not notify the Corps that under the Preliminary Injunction WCS could not be disqualified from DOE waste disposal contracts because it not have a state or NRC license. Because DOE was subcontracting to the Corps to dispose of waste, WCS feels the preliminary injunction should have been upheld.

**What does WCS ask from the court?**

WCS is asking that the court grant a supplemental injunction that does not allow shipping for the purpose of disposal of any DOE-AEA (Atomic Energy Act) low-level or mixed radioactive waste under any United States Army Corps of Engineers contract awarded after the issuance of the preliminary injunction or the shipment of such waste to any agreement state.

000005



**Special Report Summary:**

**Preliminary Injunction WCS vs. USDOE: Supplemental Preliminary Injunction, February 17, 1998 (summary issued 5/8/98 for Off-Site Committee)**



### What is the purpose of Proof of Principle Testing?

Proof of Principle testing is designed to perform rigorous testing of proven and commercially available remediation technologies to evaluate their potential use for treatment of Silos 1 and 2 wastes. The testing focuses on meeting the necessary regulatory, processing, storage, transportation, and disposal requirements for the treated waste. There are four specific technology families that can be evaluated in the Proof of Principle testing:

- Vitrification by a joule-heated technology
- Vitrification by a non-joule heated technology
- Remediation by a cement-based technology
- Remediation by another chemical-based technology

The proof of principle testing will be performed at the sellers' facilities using nonradioactive surrogates which simulate the physical and chemical characteristics of the residues. FDF will provide the formulas for the surrogates. The testing will provide information on safety, reliability, implementability, cost, and schedule of the treatment process. The testing will also provide information to support revision of the OU4 Feasibility Study and the OU4 ROD amendment. The design under the Proof of Principle testing is limited to the treatment facility and secondary waste stream systems.

### What are some concerns about the Silos 1 and 2 waste?

Radon-226 and the daughter products of its decay (primarily Radon-222) are known to be emanating from the Silos through cracks and joints. The radon concentrations are in the 8-11 million pico Curies/liter range. Radon is capable of migrating through air and water. In addition, the wastes are currently in a slurry form. Previous experience has shown that slurries of up to 30% solids (by weight) can be handled. A higher percentage of solids cause blockages in pipes and tanks. Also, a layer of BentoGrout had been previously placed over the wastes in order to attenuate radon releases. This layer of BentoGrout will add to waste volume.

### What kind of documentation must the seller provide?

The seller is required to:

- Submit a Work Plan addressing treatment recipe development, testing, sampling, and analysis quality assurance
- Videotape the entire demonstration process and submit a copy of the tape to FDF
- Keep FDF informed of progress through weekly teleconferences and reporting
- Provide a Testing Quality Assurance/Quality Control Plan before start of the testing
- Allow FDF to collect samples of the surrogate prior to testing
- Provide FDF with a final report which includes objectives and rationale, experiment/demonstration design and procedures, sampling and analysis data, test results, conclusions, proposed layout of a full-scale facility, and a process-flow diagram for the primary waste stream
- Attend one meeting at FEMP to present the final report

### What tests must the treated surrogate pass?

The treated surrogate must:

- Appear uniform and homogeneous to non-magnified vision
- Have a compressive strength of at least 50 psi
- Contain no free standing liquids
- Pass the TCLP test for arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, antimony, beryllium, nickel, thallium, vanadium, and zinc

000006

- Contain no more than 1% wt (by weight) of less-than-10-micrometer-diameter particles, or 15% wt of less-than-200-micrometer-diameter particles
- Not exhibit a characteristic of a hazardous waste as defined by 40 Code of Federal Regulations 261 Subpart C-Characteristics of Hazardous Waste
- Be ready for direct disposal after treatment

**What additional concerns must the seller address?**

The seller must:

- Minimize generation of secondary waste, including wastewater
- Include systems to limit the release of gaseous and particulate nuclides or other air contaminants
- Provide information for FDF to develop a schedule for the project
- Provide plans for a radon control system to handle approximately 500 standard cubic feet per minute of air from the pre-treatment, post-treatment, and process equipment



**FERNALD  
CITIZENS  
ADVISORY  
BOARD**

**Technical Report Summary:**

**Proof of Principle Request for Proposal Silos 1 and 2 Statement of Work  
(summary issued 5/8/98 for Off-Site Committee)**

000007



FERNALD  
CITIZENS  
ADVISORY  
BOARD

**What is the Programmatic Environmental Impact Statement (PEIS) for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride (UF<sub>6</sub>)?**

This programmatic environmental impact statement assesses the impacts of six strategies for managing the depleted hexafluoride stored in cylinders at the Paducah site, the Portsmouth site, and the K-25 site on the Oak Ridge Reservation. A management strategy is defined as a series of activities needed to achieve safe long-term storage, use, or disposal. The PEIS examines the environmental, economic, and legal consequences of each of the six alternatives. Because the PEIS is not used to isolate a specific site, certain impacts have been assessed using representative or generic environmental conditions, especially those regarding conversion, long-term storage, manufacturing, and disposal. For each alternative, the impacts were estimated over a period of 40 years, from 1999 through 2039.

**What is uranium hexafluoride?**

Depleted uranium hexafluoride is a by-product of the uranium enrichment process. It is a solid at ambient temperature and is formed by combining uranium with anhydrous hydrogen fluoride and fluoride gas.

**Why is a long term management strategy needed?**

Storage of the depleted uranium hexafluoride began in the early 1950's and many of the cylinders show evidence of external corrosion. Seven cylinders have developed holes: one at Paducah, two at Portsmouth, and four at K-25. When the cylinder is breached, UF<sub>6</sub> forms a plug of solid uranium and iron compounds, preventing further leakage, and a small amount of hydrogen fluoride (HF) gas is released. There is a current plan that calls for conversion of the UF<sub>6</sub> to U<sub>3</sub>O<sub>8</sub> by the year 2010 if no alternative uses for the material are found. The U<sub>3</sub>O<sub>8</sub> would then be disposed of as low-level waste. Recent developments have led to the agreement that the plan should be revised.

**What are the alternatives being evaluated in the PEIS?**

- *No Action* - Continued storage of the cylinders indefinitely in yards at Paducah, Portsmouth, and K-25.
- *Long-Term Storage as UF<sub>6</sub>* - Storage in cylinders in yards, buildings, or a mine at a consolidation site.
- *Long-Term Storage as Uranium Oxide (UO<sub>2</sub> or U<sub>3</sub>O<sub>8</sub>)* - Conversion to an oxide, followed by storage in buildings, below-ground vaults, or a mine at a consolidated site.
- *Use as Uranium Oxide* - Conversion to an oxide, which will be used in the manufacture of oxide-shielded spent nuclear fuel or high-level waste storage containers.
- *Use as Uranium Metal* - Conversion to uranium metal, used to manufacture metal-shielded spent nuclear fuel or high-level waste storage containers.
- *Disposal* - Conversion to an oxide followed by disposal as low-level waste in shallow earthen structures, below ground vaults, or a mine.

**What were the environmental consequences evaluated?**

Consequences were evaluated for human health and safety, air quality, water and soil impacts, socioeconomics, ecology, waste management, resource requirements, land use, cultural resources, and environmental justice.

**What were the human health risks for the alternatives?**

For all alternatives, exposure of workers and the public to radiation and chemicals were estimated to be within acceptable public health standards and regulations, resulting in no additional latent cancer fatalities. A slight increase in the cancer rate may be seen in

000008

**Technical Report Summary:**

Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride, USDOE Office of Nuclear Energy, Science and Technology, December 1997 (summary issued 5/8/98 for Off-Site Committee)

involved workers (i.e., one worker fatality under the no action alternative and one to two in all other alternatives.) Physical accidents to workers would be expected in all alternatives. Accidents at facilities involving cylinders or chemicals at a conversion facility area were estimated to have greatest potential adverse effects. Those accidents, which would be extremely rare, are estimated to have the greatest impacts.

#### **What were the transportation risks of the various alternatives?**

A conservative estimate of transportation impacts was made by assuming that continued cylinder storage, conversion, consolidated long-term storage, manufacture and use, and disposal would occur at separate sites. The no action alternative would have negligible transportation impacts. All other shipments were considered to travel a distance of 620 miles, primarily through rural, but occasionally through urban, areas. For general transportation, it was estimated that the general public would receive less than 0.1 millirem (mrem) over 40 years. The total number of traffic fatalities were estimated to be between two and four for truck transport and one and two for rail transport. The most severe type of accident that could occur would be that of a rail accident involving anhydrous HF (produced as a by-product in the conversion processes to metal and oxides) in an urban area during stable weather conditions. The probability of this accident occurring is one in 30,000, but up to 30,000 people might experience irreversible adverse effects with the potential for up to 300 fatalities. Anhydrous HF is, however, routinely transported in the United States.

#### **What would be the impacts to air quality?**

Under all alternatives, air quality from construction and facility operations would be within existing regulatory standards and guidelines.

#### **What would be the impacts to soil and water?**

For all operations and under all alternatives, uranium concentrations in surface water, groundwater, and soil would remain within guidelines. All alternatives could have potential impacts resulting from spills. For the disposal alternative, if a disposal facility were located in a dry environmental setting, impacts to groundwater would not be expected to occur for 1,000 years. However, in a wet setting, the groundwater may become contaminated within 1,000 years. Mine and vault storage/disposal would result in removal of large quantities of soil, thus affecting topography.

#### **What would be the socioeconomic impacts?**

The no action alternative would result in the smallest socioeconomic impacts, creating about 110 jobs and generating \$5.1 million in income each operational year. Storage as  $UF_6$  would have the second smallest impact. All other impacts would have similar impacts, creating between 930 and 2,100 jobs and generating between \$51 and \$130 million per year.

000009

#### **What would be the impacts to Waste Management?**

Continued storage would have the lowest impacts, generating less than 1% of the current estimated annual low-level and mixed waste volume for all DOE facilities. Conversion to an oxide may have moderate impacts to the waste management program if the  $CaF_2$  generated from anhydrous HF has to be disposed as low-level waste. Likewise, in the metal conversion process, the  $MgF_2$  generated may need to be disposed as low-level waste, resulting in a low to moderate impact on the waste management system. Disposal alternatives would result in 2% to 7% of the projected low-level waste volumes.



**FERNALD  
CITIZENS  
ADVISORY  
BOARD**

## **Technical Report Summary:**

Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride, USDOE Office of Nuclear Energy, Science and Technology, December 1997  
(summary issued 5/8/98 for Off-Site Committee)

**What are the impacts to the other evaluation criteria?**

No disproportionately high or adverse human health effects would be expected to minority or low-income populations under any of the alternatives. Land use and ecology impacts will be dependent on the location and type of alternative. Cultural impacts are unlikely but are dependent on the locations selected.

**What is DOE's preferred alternative?**

DOE's preference is for the use of the entire inventory of UF<sub>6</sub>. Some would be used as an oxide and some as uranium metal. The PEIS evaluates the possibility of using 50% of the inventory as oxide and 50% as uranium metal.

**What are the impacts of the preferred alternative?**

The alternatives (in which the UF<sub>6</sub> would be converted to 100% metal, 100% oxide, or 50%/50% oxide/metal) would have similar impacts to human health and safety, air quality, water and soil quantity, transportation, and waste management. All three alternatives would generate about the same amount of HF and would require the same amount of material to be transported. The 50/50 alternative would require more workforce, acreage, and construction and operational facilities because of the necessity of two conversion facilities, two manufacturing facilities, and two cylinder treatment facilities. The resources needed for this alternative are not increased linearly; that is it does not take half of the resources to construct and operate a 50% capacity facility. Therefore, there are increased impacts for the split alternative. However, metal and oxide conversion facilities may be located together, thus reducing total impacts.



**Technical Report Summary:**  
Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride, USDOE Office of Nuclear Energy, Science and Technology, December 1997  
(summary issued 5/8/98 for Off-Site Committee)



**What is the Waste Pits Remedial Action Project Remedial Design Package?**

The Remedial Design Package gives an overview of the operation and processes; site plans; equipment and materials; excavation plan; grading plan; environmental control plan; health and safety plan; and other information related to the IT Corporation's removal of materials from Waste Pits 1-6, the Burn Pit, and the Clearwell.

**What are the activities to be fulfilled by IT?**

- Waste excavation and initial segregation
- Preparation of the excavated material (i.e., sorting, blending, size reduction, etc.)
- Thermal drying of some or all of the waste materials
- Blending of the processed material (e.g., radiological WAC blending)
- Storage and loadout for transport to the Commercial Disposal Facility (CDF)

**How will the excavation of these materials occur?**

The excavation aspect of the project will take place in 19 phases. These phases are engineered so that materials with low enrichment can be blended with those of high enrichment in order to meet the WAC (Waste Acceptance Criteria) for the CDF. Materials will also be excavated in phases in order to blend for moisture content after excavation.

**What will occur after excavation?**

After excavation, materials will be blended for moisture content and put through a dryer to achieve moisture contents that are acceptable for disposal at the CDF. Materials over 4 inches long cannot be placed into the dryer and will be disposed of separately. These activities will occur in the Materials Handling Building. When ready for rail shipment, the final blend will be tested for WAC prior to transport to the CDF.

**What types of wastes will be found in OU1?**

The majority of these wastes are composed of general sump sludge (filtrates from processing plants, wastewater from the laboratory, and lime), neutralized raffinate (a by product of uranium enrichment), and magnesium fluoride. Other wastes include:

- Contaminated asbestos materials
- Contaminated rags, paper, and polyethylene
- Dust collector bags
- Scrap salts
- Uranium and thorium tetrafluoride
- Contaminated soil, rocks, sand, brick, and ceramics
- Dust collector residues
- Miscellaneous sludges
- Uranium chips and turnings
- Water softening and treatment sludges
- Graphite crucibles and molds
- Ash from burning or incineration
- Flyash from coal-fired boiler
- Steel drums
- UO<sub>3</sub> and U<sub>3</sub>O<sub>8</sub> (uranium oxides)

The material in the waste pits is not homogeneous and pockets of certain types of materials will be found. One constituent of the wastes that may pose a concern is the amount of organic compounds. The heat within the dryer could cause these materials to burn, releasing carbon dioxide and other compounds into the atmosphere.

**How will the gas generated from the dryer be monitored?**

The dryer will include an air pollution control system. Airborne emissions will be regularly monitored. A gas control system will remove most compounds from dryer emissions. However, radon will not be removed by the gas control system.

000011

**Technical Report Summary:**

Waste Pits Remedial Action Project (WPRAP) Remedial Design Package, USDOE- Fernald, February 1998 (summary issued 5/8/98 for Off-Site Committee)

### What is the Installation of Aesthetic Barrier Work Plan?

This Work Plan is a response to the February 19, 1997, recommendation of the Fernald Citizens Advisory Board that barriers be constructed during site remediation to lessen the visual impacts of remediation to local residents. The plan considered three alternatives for accomplishing the goal of providing aesthetic appeal while restricting the view of remediated site areas.

### What three alternatives were considered?

- *Alternative 1*– Structural Barrier consisting of a barrier similar to a highway noise barrier. This alternative would, however, be costly and lack aesthetic appeal.
- *Alternative 2*– Aesthetic Barrier with Berm consisting of coniferous and flowering trees in alternating frequency atop a constructed soil berm. This alternative was not considered because there is not enough on-property soil to construct the berm.
- *Alternative 3*– Aesthetic Barrier without Berm consisting of coniferous and flowering trees in alternating frequency without a soil berm. This was the selected alternative.

### What area was selected for the aesthetic barrier?

The barrier will be constructed in the area adjacent to Willey Road and east of the South Access Road. This area will be utilized, starting in FY 1999, for borrow material for the On-Site Disposal Facility. Thus, this area will be the site of excavation and is highly visible from Willey Road. Other areas were also considered, but not selected. These areas included the northeast portion of the site (south of the intersection of S.R. 126 and the North Access Road) and the area west of the South Access Road. The elevation of the northeast area makes it impossible to block the remediation activities even with the planting of trees. At this time, few restoration activities are planned in the area west of the South Access Road, so an aesthetic barrier is not needed.

### What will be the design of the barrier?

The barrier will use the existing grade to support the installation of trees. The coniferous and deciduous trees that are planted will be of sufficient height to provide immediate screening of some site activities. Eastern White Pines, approximately 10-12 feet in height, will be planted in two alternating rows approximately 10 feet apart. Two alternating rows of deciduous trees will be planted south of the pines. A variety of deciduous trees, including Crabapple, Red Maple, River Birch, and Red Oak, will be planted in a random pattern to enhance the aesthetics of the barrier. Trees will be planted in holes approximately twice the width of the root ball and so that the top of the root ball is slightly above the surface of the ground. Peat moss, fertilizer, and water will be added to the soil removed from the hole as part of backfilling. After backfilling, the trees will be staked for approximately one year. During dry periods, the trees will be watered.

### What is the cost and schedule of the aesthetic barrier?

The estimated cost is \$45,000. The installation of the barrier is targeted for September 1998.

### What were the stakeholder reactions to the project?

While views among stakeholders did vary on the configuration and types of trees that should be utilized, no single group or individual opposed the aesthetic barrier.

000012



**FERNALD  
CITIZENS  
ADVISORY  
BOARD**

**Technical Report Summary:**

**Installation of Aesthetic Barrier Work Plan, USDOE-FEMP, March 1998  
(summary issued 5/8/98 for On-Site Committee)**



FERNALD  
CITIZENS  
ADVISORY  
BOARD

**What is the Estimation of the Impact of the FMPC on Lung Cancer Mortality in the Surrounding Community?**

This report outlines the results of the first phase of the Fernald Risk Assessment Project. This phase examines lung cancer, since it is the most likely health outcome associated with the radon and uranium radionuclides. The report estimates both the number of lung cancer deaths occurring from 1951 to 2088 and the percentage increase in the number of lung cancer deaths over background levels among residents within 10 kilometers from the site. Future reports will look at additional health concerns, including kidney and bone cancer. The results of the first phase will also be used to determine if an in-depth epidemiological study is warranted.

**What were the key results of the study?**

- The median estimate for lung cancer deaths is 85 deaths total, although the actual number may range from 25 to 309 deaths. This results in an increase of 1% to 12% in lung cancer deaths over background rates.
- Because there is a relationship between radon exposure and smoking, three times as many "ever smokers" (defined as someone who has smoked more than 100 cigarettes) are expected to die of lung cancer than "never smokers" and the percentage increase for "ever smokers" is two times greater than for "never smokers."
- Likewise, because more males smoke than females, the number of lung cancer deaths among males is 40% higher than for females, although the percentage increase is similar.
- The median lifetime radiation lung dose for people who lived in the domain from 1951 to 1988 was 0.45 sieverts (1 sievert = 100 rem), but could range from 0.12 to 1.74 sieverts.
- Half of the total lung cancer deaths occurred through the period from 1951 to 2000, and the other half is predicted to occur from 2001 to 2088. The percentage increase in lung cancer deaths occurring from 1951 to 2000 is 3 times the increase predicted from 2001 to 2088. This is due to the fact that the study population is aging and the background rates of lung cancer and mortality due to other causes will increase as they age.
- A higher percentage increase in lung cancer deaths is expected for areas to the east of the site (because of wind direction) and for those who live closest to the site.

**What population was used in the assessment?**

The assessment looked at population of approximately 40,000 to 53,000 individuals which resided within 6.2 miles or 10 kilometers of the FMPC from the years 1951 to 1988. The area with a radius of 10 kilometers from the FMPC was further subdivided into 16 compass sections, and within these sections, into 10 cells at one kilometer increments. Four geographic directions (NE, SE, SW, and NW) were also evaluated. The study did not examine the risk to workers at the FMPC.

**What are some problems and assumptions made in conducting this risk assessment?**

- Data was not collected from the community, thus assumptions were made for exposure history, lifestyle factors, and smoking history.
- Risk was calculated for the whole population and not for specific individuals.
- Risk models were developed from exposures to underground miners and survivors of atomic bomb blasts.

000013

**Technical Report Summary:**

Estimation of the Impact of the Former Feed Materials Production Center (FMPC) on Lung Cancer Mortality in the Surrounding Community  
Centers for Disease Control, March 18, 1998 (summary issued 5/8/98 for On-Site Committee)

- Components of the risk assessment are uncertain, so the resulting estimates of lung cancer deaths and percentage increase in deaths are also uncertain.
- Emigration/Immigration to the area is not considered in estimating risk until 1960 and then is considered only every 10 years.
- Data from the Fernald Dosimetry Reconstruction Project is used to estimate radiation dose to the population.
- The risk assessment was conducted until 2088 to allow for a 100 year lifespan of individuals exposed in 1988, the last year of operations at the FEMP.
- The risk assessment used a life-table estimation approach, which is when mathematical models are used to predict the mortality of a group of individuals through time. The total population was divided into cohorts, which were modeled separately. Each cohort was defined by the year of first exposure (five year increments were examined), age of first exposure (five year increments), location of residence relative to site, and gender.
- The estimation of lung cancer deaths caused by past releases of radioactive material from the FMPC depended on estimates of the cumulative lung dose within cohorts at different periods in time, estimates of the risk of lung cancer death that may result from these doses (based on miners and atomic bomb survivors), and estimates of the number of persons experiencing that risk at different time periods. All of these values have some uncertainty. This uncertainty was modeled using the Monte Carlo simulation, which developed a collection of possible values for lung cancer deaths attributable to the FMPC.
- Future rates of lung cancer were assumed to be the same as those in 1990.

#### What additional factors are of concern?

Because the silos were sealed in 1979, residents born or moving into the area after 1979 have been receiving a significantly lower radon exposure, thus they will have a lower risk of FMPC-related lung cancer.

000014



**FERNALD  
CITIZENS  
ADVISORY  
BOARD**

## Technical Report Summary:

Estimation of the Impact of the Former Feed Materials Production Center (FMPC) on Lung Cancer Mortality in the Surrounding Community  
Centers for Disease Control, March 18, 1998 (summary issued 5/8/98 for On-Site Committee)



**What is the Restoration Area Verification Sampling Program Summary Report?**

This report presents the groundwater data collected to evaluate Final Remediation Level (FRL) exceedances for non-uranium compounds that were found at wells outside the current uranium-based groundwater remediation footprint. FRLs were established within the OU5 ROD. The data contained in this report consists of samples collected during the calendar year 1997 that were in accordance with the Restoration Area Verification Sampling (RAVS) Project Specific Plan (PSP). The RAVS PSP required that all non-uranium groundwater data outside of the uranium-based footprint be evaluated to determine which sporadic FRL exceedances could be dismissed as non-FEMP related or were not of concern. It also called for a determination of which sporadic FRL exceedances required additional sampling before deciding whether there was a need to expand the restoration footprint. This report evaluates those FRL exceedances which required further sampling. The report also provides a recommendation as to whether or not modification of the uranium-based aquifer remedy is warranted at this time based on the sampling results.

**What was the protocol for the RAVS PSP for evaluating FRL exceedances?**

First, the concentration of the chemical over time was graphed by well location to identify that the exceedance was persistent. If two or more samples indicated that the concentrations had reduced to levels below the FRL, then the well was not considered for further remediation or monitoring [other than monitoring required by the Integrated Environmental Monitoring Plan (IEMP)]. Ten of the fourteen exceedances found under the RAVS PSP were one-time occurrences not attributed to the FEMP. The four remaining chemicals were not one-time occurrences and were monitored over the calendar year of 1997, as noted in this report.

**What wells were monitored?**

Seven groundwater wells were monitored for further FRL exceedances under the RAVS PSP:

- Well 3423 for antimony
- Wells 2733 and 3070 for lead
- Wells 2424 and 2436 for manganese
- Wells 2424, 3091, and 31217 for zinc

**What were the results of the monitoring?**

None of the wells monitored were found to merit further monitoring or remediation under stipulations of the RAVS-PSP. All FRL levels were found to be acceptable in the last two samples taken during 1997.

**What are the conclusions of this study?**

No additional groundwater monitoring is necessary to fulfill the RAVS PSP commitments and modification of the uranium-based aquifer remedy is not warranted at this time. Monitoring of wells 2424, 2733, 3070, and 31217 will continue, however, as part of the Property Boundary Sampling Network of the IEMP.

000015

**Technical Report Summary:**

Restoration Area Verification Sampling Program Summary Report, DOE-Fernald, February 1998  
(summary issued 5/8/98 for On-Site Committee)

April 20, 1998

Engineering News-Record

Page 40

**"The Top 500 Design Firms...A Sense of Optimism Prevails"**

By: Gary J. Tulacz and Mary B. Powers

1 of 6

1433

# THE 500 DESIGN FIRMS

53 THE TOP 500  
DESIGN FIRMS  
75 WHERE TO FIND  
THE TOP 500  
81 THE TOP 500  
SUBSIDIARIES  
87 INTERNATIONAL  
WORK



## A Sense of Optimism Prevails

But strong markets bring  
their own set of problems:  
Who will do all the work?

**T**he cyclical nature of the U.S. construction industry has made people stoic. During downturns, people tend to hunker down and say "it will pass." And in good times, people tend to be cautious, saying "this too will pass." But the duration of the current upsurge in the U.S. market has design firms more than simply "cautiously" optimistic. They are anticipating continued prosperity and seeking solutions to new problems posed by long-term growth.

The ENR Top 500 Design Firms had billings of \$92.72 billion in 1997, a 10.3% increase over 1996. The international market showed a big gain, increasing 18.7%, to \$7.3 billion. But the domestic market was no slouch, rising 8.1% to \$25.4 billion.

While these increases are impressive, the 1997 billing totals are not strictly comparable to those of 1996 because of a change in ENR's methodology. In the past, ENR has asked firms to allocate design billings from integrated design-build and engineering-procurement-construction contracts toward their Top 400 Contractors revenue, rather than their Top 500 Design Firms billings. This year, we have asked design firms to allocate all design billings to their Top 500 numbers, including those from design-build and EPC contracts. We believe that this methodology best reflects each firm's design capabilities. But this methodology change has the effect of increasing the overall Top 500 billings when compared with 1996.

However, the total market continues to be strong. "There have been several times in my career when I wished I had a market like this," says Charlie Oliver, group president of Fluor Daniel. "Generally, the market is extraordinarily strong and is projected to stay strong for quite a bit longer," says Frank J. Wilson, vice president, Daniel, Mann, Johnson, & Mendenhall.

But the strong market has brought a new set of problems. "The real problem is to hold on to good people," says Jack Kinstlinger, CEO of KCI Technologies. "There is a growing shortage of skilled professionals and firms are stealing from one another," he says. "You can always find bodies," says Robert Prieto, chairman of Parsons Brinckerhoff. "The real problem is to find and keep quality people," he says.

Many firms are philosophical about the problem. "If we give

000016

April 20, 1998

Engineering News-Record

Page 40

"The Top 500 Design Firms...A Sense of Optimism Prevails"

By: Gary J. Tulacz and Mary B. Powers

143

people interesting work and provide them with competitive compensation, they will stay," says William Randolph, CEO of The PBSJ Corp. Still, "we do lose people who go for more money, but often they leave for the more impressive title," he says.

Some firms try to use "golden handcuffs" to retain quality people. "We having generous investment programs with vesting over a period of years to help hold onto people," says Kinslinger of KCI. But often, especially among younger professionals, attractive benefit packages are not going to help. "We've always had excellent benefits. But some people ignore that fact and want to chase the buck," says Harold Adams, CEO of RTKL. "Many younger people disconnect from benefits, feeling that a job is not a security blanket," Adams says.

**KEEPING STAFFS HOME**

Freese and Nichols is one firm that is working hard on employee retention. It recently won a regional award for motivating and retaining employees as part of a best practices program sponsored by accounting and consulting firm Arthur Andersen. "It's been a high priority for us to show our employees that Freese and Nichols is the best place for them to work," says Robert Herchert, president and CEO. The award "has helped confirm that we've had some success," he says.

A major point of emphasis for Freese and Nichols is employee communication. "We have quality service teams and monthly employee roundtables with the principals," says Peggy Freeby, human resources director. So far, 157 employees in the firm have served on teams. "That way, employees understand that each of them has a voice and a stake in the firm," she says.

Freese and Nichols also cites its incentive compensation program as a motivator. It has a performance evaluation program with written goals and incentives for all employees, "not just a few of the principals," says Freeby. "This forces us to be very open with our company finances." The firm posts monthly

financial statements so employees can see where they stand.

The big winner in the Arthur Andersen program was architectural firm Gensler, with the international award for motivating and retaining employees. "There's no one factor that keeps people happy," says Laurie Dreyer-Hadley, vice president of human resources. "You have to present a whole buffet of options." The emphasis is on the freedom of employees to develop and be entrepreneurial within a loose structure, she says. Training is stressed and employees are encouraged to develop their own best practices.

Gensler also has an incentive program that touches all employees. "We believe in a bottom-up approach, not trickle-down," says Dreyer-Hadley. Gensler takes great pains to remain competitive. "We provide the full range of benefits and monitor pay and benefit surveys from around the country to make sure we keep up," she says. The program must be working. At Gensler, 12% of their employees are people who left the firm and have returned, she says.

As design firms scramble for talented individuals, compensation and benefit levels have been rising steadily, according to a recent survey of the industry published by Zweig-White Associates Inc., a Natick, Mass.-based management consulting firm. "In good times, firms tend to be magnanimous in providing employees with new benefits," says Frederick White, a principal at Zweig-White. He warns that "providing new benefits in good times is easy, but when the market turns bad, it will be hard to take that benefit back....Nothing gets people so riled as taking away a benefit."

The industry continues to consolidate. "Of course there is consolidation in the middle areas of the industry," says Richard Beumer, chairman of Sverdrup Corp. "Some will survive as niche players. Others because they are large. It will be very tight for those in between."

Among large firms, acquisition for diversity often is the

THE TOP 20 GENERAL BUILDING Billed \$2.0 billion	THE TOP 20 INDUSTRIAL PROCESS/PETRO Billed \$6.3 billion	THE TOP 20 POWER Billed \$1.9 billion
1 Bechtel, Clark + Knowlton (BCK)	1 Fluor Daniel Inc.	1 Sargent & Lundy LLC
2 Bechtel Corp.	2 Bechtel Group Inc.	2 Stone & Webster
3 Bechtel	3 Brown & Root Inc.	3 Skid & Poth
4 HOK Greiner Woodward-Clyde	4 ABB Lummus Global Inc.	4 Raytheon Engineers & Constructors Int'l
5 HOK	5 Foster Wheeler Corp.	5 Bechtel Group Inc.
6 Parsons & Harris	6 Raytheon Engineers & Constructors Int'l	6 Parsons Corp.
7 Daniel, Mann, Johnson, & Mendenhall	7 Parsons Corp.	7 Burns and Roe Corporation Inc.
8 Clarke Bechtel	8 The H.W. Mallory Co.	8 Foster Wheeler Corp.
9 Professional Service Industries Inc.	9 BE&K Inc.	9 McDermott International Inc.
10 HOK Inc.	10 The Krueger Group	10 Fluor Engineering Co.
11 Skidmore, Owings & Merrill LLP	11 McDermott International Inc.	11 Parsons Brinckerhoff Inc.
12 Heery International Inc.	12 Lockwood Greene Engineers Inc.	12 Dames & Moore Group
13 RTKL Associates Inc.	13 CDI Engineering Group Inc.	13 HOK Greiner Woodward-Clyde
14 Parsons Brinckerhoff Inc.	14 Fluor Inc.	14 Burns & McDonnell
15 Bechtel Group Inc.	15 Petrocon Engineering Inc.	15 General Physics Corp.
16 Law Engineering & Environ. Services Inc.	16 Harsco Engineering Inc.	16 Fluor Daniel Inc.
17 HOK Group Inc.	17 Day & Zimmermann International Inc.	17 Foster-Powell Corp.
18 Perkins & Will	18 ICF Kaiser International Inc.	18 Law Engineering & Environ. Services Inc.
19 Parsons Corp.	19 Dames & Moore Group	19 H.W. Bechtel Inc.
20 The Hillier Group	20 Skid & Poth	20 EBR

April 20, 1998

Engineering News-Record

Page 40

"The Top 500 Design Firms...A Sense of Optimism Prevails"

By: Gary J. Tulacz and Mary B. Powers

1433

**THE TOP 500 DESIGN FIRMS**

key. "I can't imagine where we would be now if we remained simply a domestic power engineering firm," says Jim Adam, CEO of Black & Veatch.

One large firm examining its options is Fluor Corp. Other firms "are buying for the sake of volume and size. That is not our strategy. We don't want to get more of what we already have. We use acquisition to get into new ball games," says Oliver.

On the environmental side, Fluor sold its Canadian subsidiary Fluor Daniel GTI Canada last month. And rumors abound that Fluor plans to sell its entire GTI subsidiary. But Fluor Group President Ronald Peterson

says that isn't necessarily so. "We are looking at what we have to do to enhance margins. Maybe [Fluor GTI doesn't] have enough critical mass to increase revenues....We can reach that [level] by either buying a business or selling our business." Fluor will present a study on margins to its board shortly, he says.

Some firms prefer internal growth to acquisitions. "We have to grow to be successful," says Craig Zeien, president of regulatory operations, CH2M Hill. "We've made modest

acquisitions. But they're hard. There are more failures than successes out there." So CH2M is attempting to grow organically to move into such markets as telecommunications, nuclear decommissioning and design-build, he says. "But

we're paying attention to our core. Water and wastewater are our oldest businesses, and there is a resurgence in that market."

Customer demands have caused many design firms to alter the way they do business. In the face of demands for fixed price, design-build and lump-sum contracts, "We've had to reinvent the way we do business," says James F. McNulty, CEO of the

Parsons Corp. "For 49 of our 50 years we did cost reimbursable business....Now we're having to do the design, buy the materials and build the plant," he says.

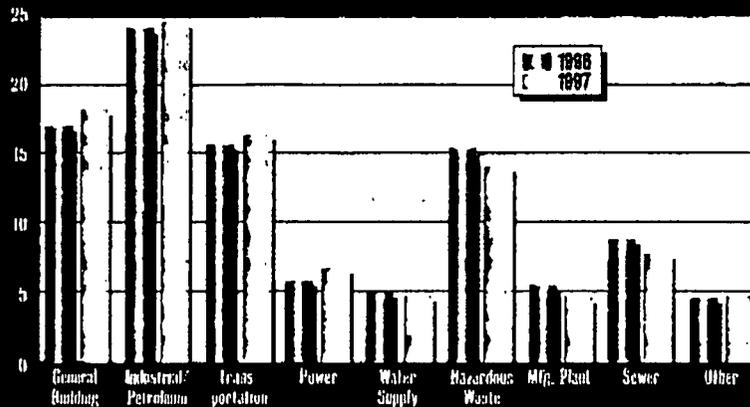
This has led to a whole new approach to design, McNulty says. "Parsons was largely an engineering firm, but we've had to add construction capability to be comfortable that what we bid is reasonable. We have to understand construction and how to manage the contracts."

Many firms are taking similar steps to succeed in specific

**GENERAL BUILDING MARKET CONTINUES GROWTH**

Markets as % of total billings

1997 TOTAL: \$ 32.71 billion



Source: ENR

**THE TOP 20 TRANSPORTATION**

Billed \$2.8 billion

- 1 Parsons Brinckerhoff Inc.
- 2 URS Greiner Woodward-Clyde
- 3 The Louis Berger Group
- 4 HNTB Corp.
- 5 Parsons Corp.
- 6 Brown & Root Inc.
- 7 Daniel, Mann, Johnson, & Mendenhall
- 8 ICF Kaiser International Inc.
- 9 The PBSJ Corp.
- 10 Overdrop Corp.
- 11 Frederic R. Harris Inc.
- 12 CH2M Hill Cos. Ltd.
- 13 Bechtel Group Inc.
- 14 Kimley-Horn & Associates Inc.
- 15 HDR Inc.
- 16 Law Engineering & Environ. Services Inc.
- 17 James & Moore Group
- 18 Michael Baker Corp.
- 19 STV Group
- 20 Raytheon Engineers & Constructors Int'l

**THE TOP 20 WATER**

Billed \$892 million

- 1 Black & Veatch
- 2 Montgomery Watson Inc.
- 3 Camp Dresser & McKee Inc.
- 4 CH2M Hill Cos. Ltd.
- 5 Brown & Root Inc.
- 6 Malcolm Pirnie Inc.
- 7 Law Engineering & Environ. Services Inc.
- 8 HDR Inc.
- 9 URS Greiner Woodward-Clyde
- 10 Parsons Corp.
- 11 EA Engineering, Science, and Techno. Inc.
- 12 Earth Tech Inc.
- 13 Metcalf & Eddy
- 14 The Louis Berger Group
- 15 James & Moore Group
- 16 Dewberry & Davis
- 17 Harza Engineering Co.
- 18 Ogden Environmental & Energy Svcs. Co. Inc.
- 19 Michael Baker Corp.
- 20 Gannett Fleming Inc.

**THE TOP 20 SEWERAGE**

Billed \$1.4 billion

- 1 Montgomery Watson Inc.
- 2 CH2M Hill Cos. Ltd.
- 3 Camp Dresser & McKee Inc.
- 4 Black & Veatch
- 5 Metcalf & Eddy
- 6 Malcolm Pirnie Inc.
- 7 Brown and Caldwell
- 8 Earth Tech Inc.
- 9 Ray F. Weston Inc.
- 10 Rust Environ. & Infrastructure
- 11 HDR Inc.
- 12 URS Greiner Woodward-Clyde
- 13 Chester Engineers Inc.
- 14 The Louis Berger Group
- 15 Hazen and Sawyer P.C.
- 16 Parsons Corp.
- 17 Frederic R. Harris Inc.
- 18 Gravelly and Hansen
- 19 Carollo Engineers
- 20 Conover Townsend Environmental Engineers

**"The Top 500 Design Firms...A Sense of Optimism Prevails"**  
 By: Gary J. Tulacz and Mary B. Powers

1433

**THE TOP 500 DESIGN FIRMS**

markets. For example, Edwards and Kelcey has created a new contracting subsidiary to do design-build telecommunications and systems integration work, says Kevin McMahon, president. "In some of these markets, you can't really isolate the engineering from the construction. In-house construction capabilities let us provide true value-added services."

Another firm on the same wavelength is KCI Technologies. "We got into the telecom market on the design end, but we saw a lot of the industry demanding turnkey," says Kinslinger. "Design-build is an opportunity, but it's also a challenge. Too often, you just end up working for the contractor." Contracting in-house resolves some of these concerns.

The general building market has helped lead the surge in design work. "The U.S. market is as strong as I've seen it in a long time," says Adams of RTKL. "And it's a solid strength, not a speculative one." RTKL has had major success in the hotel sector, including jobs in Miami, St. Louis and the Bahamas.

The office and convention center market also is growing rapidly, says Thomas W. Ventulett, senior principal of Thomp-

son, Ventulett, Stainback & Associates. The firm scored a major coup last week by winning the Phase IV design contract for the Georgia World Congress Center in a joint venture with Heery International.

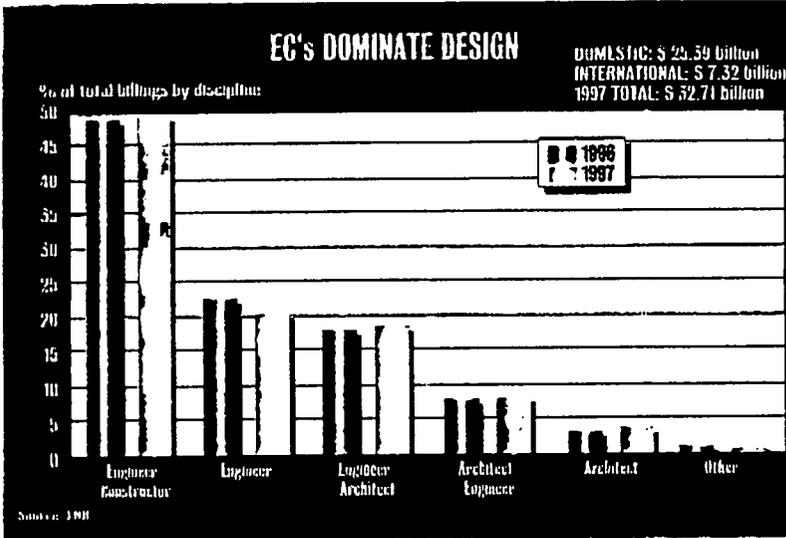
A new sector in the office market is to provide integrated industrial architecture. "Industrial companies are seeking an industrial architecture interface office, where office facilities are integrated with an industrial structure," says Ventulett. "This allows the client to bring each of its employee groups together in a central facility."

The office rehabilitation market is booming. "You have a lot of existing urban stock on the market and owners are upgrading the facilities for sale," says George Alexander, principal at Swanke Hayden Connell Ltd. He notes that even the federal government is getting into the act. The Postal Service is rehabbing for resale a 2-million-sq-ft building in lower Manhattan. This job is helping the firm get back into the government building market, he says.

In addition, design work is helping current owners add value to their buildings. "Mechanical plants are getting more compact and efficient," says Alexander. "You tell an owner that an upgrade will not only add efficiency savings but provide a pickup in usable space and you'll see his eyes light up."

"The school market is projected to be in the \$60-billion to \$65-billion range over the next four years," says James Moynihan, CEO of Heery International. There has been a new surge in school work in the Northwest and California. "Education is our strongest market and now that California is coming around, it's turning into a monster market for us," he says.

On the transportation side, recent congressional action on the new Intermodal Surface Transportation Efficiency Act funding bill has design firms ready to pop the clutch. "Washington is showing a lot of positive signs on the new ISTEA," agrees Prieto of Parsons Brinckerhoff. But he warns firms not to jump the gun. "We did a study of the (I.K.W.) Dodge reports after the passage of the original ISTEA bill and found that there was a dip in projects for a few months before and after its passage," he notes. He expects the same thing to happen this year, as transportation



**THE TOP 20 MANUFACTURING**

Billed \$883 million

- 1 CH2M Hill Cos. Ltd.
- 2 Lockheed Brown Engineers Inc.
- 3 Day & Zimmerman International Inc.
- 4 Inverdup Corp.
- 5 General Physics Corp.
- 6 ENR
- 7 Fluor Daniel Inc.
- 8 CCI Engineering Group Inc.
- 9 Professional Service Industries Inc.
- 10 Dames & Moore Group
- 11 Lester S. Knight & Associates Inc.
- 12URS Greiner Woodward-Clyde
- 13 The Reinhart Cos.
- 14 The Kvaerner Group
- 15 EG&E Inc.
- 16 Griffith Associates Inc.
- 17 O'Neal Inc.
- 18 Albert Kahn Associates Inc.
- 19 BE&K Inc.
- 20 Burns and Roe Enterprises Inc.

**THE TOP 20 HAZARDOUS WASTE**

Billed \$3.0 billion

- 1 Fluor Daniel Inc.
- 2 ICF Kaiser International Inc.
- 3 EAM Group
- 4 CH2M Hill Cos. Ltd.
- 5 URS Greiner Woodward-Clyde
- 6 Tetra Tech Inc.
- 7 Dames & Moore Group
- 8 International Technology Corp.
- 9 Parsons Corp.
- 10 Roy F. Weston Inc.
- 11 Raytheon Engineers & Constructors Int'l.
- 12 Harding Lawson Associates
- 13 ARCADIS Garaghty & Miller Inc.
- 14 Foster Wheeler Corp.
- 15 Brown & Root Inc.
- 16 Montgomery Watson Inc.
- 17 Redman International LLC
- 18 Camp Dresser & McKee Inc.
- 19 Bechtel Group Inc.
- 20 Metcalf & Eddy

April 20, 1998  
 Engineering News-Record  
 Page 40  
 "The Top 500 Design Firms...A Sense of Optimism Prevails"  
 By: Gary J. Tulacz and Mary B. Powers

B 1423

**THE TOP 500 DESIGN FIRMS**

agencies gear up for new funding levels. Prieto expects "some dislocations" in work for the short-term followed by a strong transportation market six months after ISTEA is enacted.

Local infrastructure markets have many firms smiling. "I just saw a study that showed that the Dallas-Fort Worth area has grown by 600,000 people in the past eight years," says Herchert of Freese and Nichols. "That growth in our part of the world has translated into an increased need for infrastructure by public agencies," he says.

"It's nice to see California coming back to be a major market," says David Evans, CEO of David Evans and Associates. "The Southern California area is now up to full employment. People who left the market for Las Vegas and the rest of the Southwest are coming back home again," he says.

But the upswing in work in previously slow markets hasn't drawn prosperity away from strong markets. "Florida, Georgia and Texas continues to be strong, particularly in highway work," says Randolph. And Las Vegas continues to provide both highway and water pipeline jobs, he says.

**PRIVATIZING OPPORTUNITIES**

A growing phenomenon that is causing both opportunity and consternation among design firms, particularly in water and wastewater, is privatization. "We are like a lot of firms feeling the squeeze from privatization," says Randolph. "We find we are having to link up with other firms to be participants."

But many firms see privatization as an opportunity. "Many water authorities have been forced to compete with privatized entities and are coming to us to find out how better to remain competitive," says Herchert.

If there is a cloud looming over the public infrastructure market, it is the PEGG initiative in California. The June 2 ballot initiative, sponsored by the Professional Engineers in California Government, would severely restrict that state's ability to contract out work to private design firms. The measure "prescribes a set of outcomes, limiting the state's options in how it chooses delivery systems just at the time when states are discovering the value of more flexible approaches," says Wilson of DMJM. Some believe that if the PEGG initiative passes, government professional employees unions will press for similar protections in other states. Already, ads have begun to appear in support of a similar move in New York.

There is one factor that may affect the PEGG initiative's chances. "There is another major union issue on the ballot—the state paycheck protection initiative," says Evans. That initiative would codify in California the U.S. Supreme Court's ruling in the *Rick* case, which bars unions from using compulsory union dues for political purposes. Evans believes that much of the financial support from unions that might have gone to pass the PEGG initiative will instead be spent in an attempt to defeat the paycheck protection initiative.

Infrastructure is not the only market that is spurring optimism. In the long-dormant power sector, some firms are beginning to see the light at the end of the tunnel. "The power market has been down for 10 years, particularly in the utility generation sector," says Adam of Black & Veatch. "But we've seen an interesting trend. In 1996, 21% of our [firm's] domestic billings came from the power sector. In 1997, it was 31%. And we are projecting as much as 50% this year could come from the power market," he says. The reason is that

**THE 1998 TOP 500 AT A GLANCE\***

VOLUME					
BILLINGS	DOMESTIC		INTERNATIONAL		TOTAL
	\$BIL.	%CHG.	\$BIL.	%CHG.	\$BIL. %CHG.
	25.4	+8.1	7.3	+18.7	32.7 +10.3

PROFITABILITY				
	NUMBER OF FIRMS REPORTING		AVERAGE % OF	
	PROFIT	LOSS	PROFIT	LOSS
DOMESTIC	488	24	9.1	NA
INTERNATIONAL	174	42	8.4	NA

PROFESSIONAL STAFF				
	NUMBER OF FIRMS REPORTING		AVERAGE % OF	
	INCREASE	DECREASE	INCREASE	DECREASE
INCREASE	309	87	13.7	36.7
DECREASE	64	8	8.1	24.4
SAME	116	52	NA	NA

BACKLOG		
	NUMBER OF FIRMS REPORTING	AVERAGE %
	HIGHER	304
LOWER	39	12.8
SAME	124	NA

MARKET ANALYSIS		
TYPE OF WORK	BILLINGS \$MIL.	PERCENT OF TOTAL
BUILDING	4,890.0	16.8
MANUFACTURING	1,558.8	5.3
INDUSTRIAL	2,988.3	10.1
PETROLEUM	4,048.9	13.7
WATER	1,452.2	4.9
SEWER/WASTE	2,573.5	8.7
TRANSPORTATION	4,588.9	15.4
HAZARDOUS WASTE	4,468.9	15.1
POWER	1,665.5	5.6
OTHER	1,344.6	4.5

INTERNATIONAL REGIONS			
	NUMBER OF FIRMS	BILLINGS \$MIL.	PERCENT OF TOTAL
CANADA	73	419.4	6.8
LATIN AMERICA	159	576.5	9.4
CARIBBEAN ISLANDS	73	114.8	1.9
EUROPE	132	2,371.5	38.5
MIDDLE EAST	88	818.9	13.2
ASIA/AUSTRALIA	179	1,717.1	27.8
NORTH/CENTRAL AFRICA	85	334.0	5.4
ANTARCTIC/ARCTIC	6	21.0	0.3

\* Ranked according to billings contained in 1997. NA = not available

April 20, 1998  
Engineering News-Record

Page 40  
"The Top 500 Design Firms...A Sense of Optimism Prevails"

By: Gary J. Tulacz and Mary B. Powers

6 of 6

1143

**THE TOP 500 DESIGN FIRMS**

**THE TOP 100  
'PURE' DESIGNERS**

RANK	FIRM	TYPE OF FIRM	RANK	FIRM	TYPE OF FIRM
1	URS Greiner Woodward-Clyde	EA	51	McCluer	AE
2	Parsons Brinckerhoff Inc.	EA	52	Woolbert LLP	EAP
3	The Louis Berger Group	EA	53	A. Epstein and Sons International Inc.	AE
4	Law Engineering & Environ. Svcs. Inc.	E	54	David Evans and Associates Inc.	EA
5	Sargent & Lundy LLC	EA	55	DLR Group Inc.	AE
6	Heilmuth, Obata & Kassabaum (HOK)	AE	56	O'Brien & Gere Engineers Inc.	E
7	Lockwood Greene Engineers Inc.	EA	57	Blaissland, Bouck & Lee Inc.	E
8	Tetra Tech Inc.	ENV	58	Perkins & Will	AE
9	HDR Inc.	EA	59	Versar Inc.	AE
10	CDI Engineering Group Inc.	EA	60	McLaren/Hart Environ. Engrg. Corp.	E
11	The PBSJ Corp.	EAP	61	The Hillier Group	A
12	Metcalf & Eddy	E	62	S&O Inc.	EA
13	Golder Associates Corp.	E	63	Hazen and Sawyer P.C.	E
14	Professional Service Industries Inc.	E	64	T.Y. Lin International	E
15	Rust Environ. & Infrastructure	E	65	Delta Environmental Conslts. Inc.	ENV
16	Genieser	A	66	Robert Bein, William Frost & Assoc.	E
17	Fraderic R. Harris Inc.	E	67	EDAW Inc.	AP
18	Miscim Plmie Inc.	E	68	Levine, Fricke, Reoon Group Inc.	ENV
19	Helman & Harver	EA	69	R.G. Vanderweil Engineers Inc.	E
20	General Physics Corp.	E	70	Martin Associates Group	E
21	Fugro Inc.	E	71	Boyle Engineering Corp.	EA
22	Burns & McDonnell	EA	72	Zimmer Ounsul Fraesa Partnership	A
23	Gannett Fleming Inc.	EA	73	Fru-Con Engineering Inc.	E
24	Dewberry & Davis	EAP	74	Chaster Engineers Inc.	E
25	Carter & Burgess Inc.	EA	75	Grashome & O'Mara Inc.	E
26	Peterson Engineering Inc.	EA	76	EQE International Inc.	E
27	NBBJ	A	77	QDS Engineers Inc.	EA
28	Kimley-Horn & Associates Inc.	E	78	Universal ENSCO Inc.	E
29	Brown and Caldwell	E	79	Grasham, Smith and Partners	AE
30	Marza Engineering Co.	E	80	Carollo Engineers	E
31	Mustang Engineering Inc.	E	81	Wimberly Allison Tong & Goo Inc.	A
32	STV Group	EA	82	Middough Associates Inc.	EA
33	Consor Townsend Envirodyne Engrs.	EA	83	TranSystems Corp.	EA
34	Heery International Inc.	AE	84	Vollmer Associates LLP	E
35	QST Environmental Inc.	E	85	Vanasse Hangen Brustlin Inc.	E
36	Lester B. Knight & Associates Inc.	EA	86	TCB Inc.	E
37	AGRA Infrastructure	E	87	AVCA Corp.	EA
38	Skidmore, Owings & Merrill LLP	AE	88	Quife Associates Inc.	AE
39	SmithGroup Inc.	AE	89	Merrifox & Co.	EA
40	HKS Inc.	AE	90	Kling Lindquist	AE
41	RMT Inc.	E	91	Braun Intertec Corp.	E
42	RTKL Associates Inc.	AE	92	The Saar-Brown Group Inc.	EA
43	EA Engineering, Science, & Techno.	ENV	93	Greenman-Pedersen Inc.	E
44	The Kleinfelder Group Inc.	E	94	Barge, Waggoner, Sumnar and Cannon	EA
45	Wilbur Smith Associates Inc.	E	95	The Cannon Corp.	AE
46	Leo A Daly	AE	96	Cauleon Architecture	A
47	Simons Engineering Inc.	EA	97	S&B Inc.	E
48	Maxim Technologies Inc.	E	98	Grealey and Hansen	EA
49	The Terracon Cos. Inc.	E	99	Harris Group Inc.	E
50	TAMS Consultants Inc.	EA	100	Reynolds, Smith and Hills Inc.	AE

\*Traditional design firms with no construction capability. A=architect; E=engineer; AE=architect-engineer; EA=engineer-architect; ENV=environmental;

reserve margins are shrinking in the U.S., says Adam.

Cogeneration jobs also continue to flourish. "There's a lot of inside-the-fence action for industrial firms, food processing companies, semiconductor plants and the like," says Marshall Ralph, a manager for Power Engineers Inc. Ralph believes deregulation will force plant efficiency upgrades. "I'd be quaking in my boots if I was relying on a 20-year-old unit."

On the nuclear side, "plants are at a point where they need technical upgrades. We expect that to be a big business for the next five years," says McNulty of Parsons. "But there aren't too many nuclear engineers left in the industry."

The petroleum and chemical markets continue to be a mixed bag in the U.S. Many firms are concerned about the petroleum market because of the recent drop in oil prices. "There has been a pause...but the base is still in place for a strong market," says Oliver of Fluor Daniel. "We always worry about the price of crude oil," agrees Adam of Black & Veatch. But he notes that the mild winter has had much to do with the plunge in oil prices, "and that impact won't last."

On the chemical side, the market is unsteady. "Chemicals and polymers are beginning to slow. We don't know if it's just a little dip rather than a downturn," says Larry Pope, president of Brown and Root Engineering and Construction. But with polymers, "there is always new and exciting technology there, which makes it a continuous growth market as new technologies make their way up to the market place," says Michael Rich, vice president of engineering, M.W. Kellogg.

One area that continues to surprise is metals. "We keep thinking that we can see the end of the boom, but it keeps going strong," says M. Lane Fowler, senior vice president, Lockwood Greene Engineers. This is especially true in the steel industry, where technological advances are the driver. "If you are trying to operate [a steel plant] with old technology, you are going to be out of business," he says.

It is a strong market for design firms. But with a strong market comes new problems. Even a good market does not guarantee success. "These are exciting times, but challenging times because of the rate of change. You have to be fleet of foot to survive," says Rich of Kellogg.

By Gary J. Tulacz and Mary B. Powers

# THE TOP 500 DESIGN FIRMS



## HOW TO USE THE TABLES

**COMPANIES** are ranked according to construction revenue in 1997 in \$ millions (\*). Those with subsidiaries included (†) are listed by company rank on pp. 61, 82 and 84. Firms not ranked last year are designated \*\*. Some markets may not add up to 100% due to omission of "other" miscellaneous market category and rounding. NA=Not available.

**KEY TO TYPE OF FIRM:** A=architect; E=engineer; EA=engineer-architect; AE=architect-engineer; EN=environmental; GE=geologist or geotechnical engineer; P=planner; other combinations possible. Firms classified themselves.

**GENERAL BUILDING**=commercial buildings, offices, stores, educational facilities, government buildings, hospitals, medical facilities, hotels, apartments, housing, etc.

**MANUFACTURING**=auto assembly, electronic assembly, textile plants, etc.

**POWER**=thermal and hydroelectric powerplants,

waste-to-energy plants, transmission lines, substations, cogeneration plants, etc.

**WATER SUPPLY**=dams, reservoirs, transmission pipelines, distribution mains, irrigation canals, desalination and potability treatment plants, pumping stations, etc.

**SEWERAGE/SOLID WASTE**=sanitary and storm sewers, treatment plants, pumping plants, incinerators, industrial waste facilities, etc.

**INDUSTRIAL PROCESS**=pulp and paper mills, steel mills, nonferrous metal refineries, pharmaceutical plants, chemical plants, food and other processing plants, etc.

**PETROLEUM**=refineries, petrochemical plants, offshore facilities, pipelines, etc.

**TRANSPORTATION**=airports, bridges, roads, canals, locks, dredging, marine facilities, piers, railroads, tunnels, etc.

**HAZARDOUS WASTE**=chemical and nuclear waste treatment, asbestos and lead abatement, etc.

RANK	FIRM	TYPE OF FIRM	1997		MARKETS (% OF BILLIONS)										1997 RANK
			TOTAL	INTERNATIONAL	GEN. BLDG.	MFG.	POWER	WATER SUPPLY	SEWER/INDUS./WASTE	PETRO.	TRANSP.	HAZ. WASTE			
1	Fluor Daniel Inc., Irvine, Calif.†	EC	1,852.0	407.0	1	3	2	0	1	58	0	23	4		
2	Bechtel Group Inc., San Francisco, Calif.†	EC	1,203.0	828.0	1	0	15	0	0	65	8	6	26		
3	Crown & Root Inc., Houston, Texas†	EC	1,022.0	734.0	3	0	0	8	0	66	14	9	1		
4	Parsons Corp., Pasadena, Calif.†	EC	977.3	278.4	8	1	14	3	4	35	20	12	2		
6	Raytheon Engineers & Constructors Int'l, Lexington, Mass.†	EC	878.0	235.0	0	0	21	0	0	59	9	12	6		
6	Foster Wheeler Corp., Clinton, N.J.†	EC	798.9	829.6	2	1	10	0	2	74	0	11	10		
7	URS Greiner Woodward-Clyde, San Francisco, Calif.†	EA	788.5	101.4	16	3	5	4	6	7	32	27	17		
8	CH2M Hill Cos. Ltd., Denver, Colo.†	EC	753.3	120.9	0	21	0	11	25	0	13	30	3		
9	ABB Lummus Global Inc., Bloomfield, N.J.†	EC	644.1	526.4	0	0	1	0	0	99	0	0	7		
10	Black & Veatch, Kansas City, Mo.†	EC	638.0	319.0	1	3	35	28	17	13	2	3	8		
11	Parsons Brinckerhoff Inc., New York, N.Y.†	EA	599.3	133.9	11	0	8	2	1	2	78	0	11		
12	ICF Kaiser International Inc., Fairfax, Va.†	EC	588.7	47.0	0	0	0	0	0	15	21	64	8		
13	Dames & Moore Group, Los Angeles, Calif.†	EC	485.7	100.8	5	7	9	4	4	17	17	37	12		
14	Sverdrup Corp., Maryland Heights, Mo.†	EAC	431.5	17.7	45	15	0	3	1	8	26	2	15		
15	Stene & Webster, Boston, Mass.†	EC	412.0	189.0	1	1	63	1	1	10	3	10	13		
16	Montgomery Watson Inc., Pasadena, Calif.†	EC	402.0	134.3	0	0	0	30	48	0	0	21	16		
17	Camp Dresser & McKee Inc., Cambridge, Mass.†	EC	338.0	52.0	0	0	0	32	38	0	6	24	24		
18	The Louis Berger Group, East Orange, N.J.†	EA	311.1	257.3	1	0	0	6	14	0	78	1	23		
19	Law Engineering & Environmental Services Inc., Kansasaw, Ga.†	E	310.5	108.4	20	5	6	11	4	3	28	20	21		
20	The M.W. Kellogg Co., Houston, Texas†	EC	306.1	157.5	0	0	0	0	0	99	0	0	18		
21	Sargent & Lundy LLC, Chicago, Ill.†	EA	297.0	91.4	0	0	100	0	0	0	0	0	36		
22	Hellmuth, Obata & Kassabaum (HOK), St. Louis, Mo.†	AE	295.0	88.0	100	0	0	0	0	0	0	0	32		
23	HNTB Corp., Kansas City, Mo.†	EAC	288.3	2.2	16	0	0	2	5	0	77	0	27		
24	Lockwood Greene Engineers Inc., Spartanburg, S.C.†	EA	281.6	40.4	0	38	3	0	0	56	0	5	38		
25	Tetra Tech Inc., Pasadena, Calif.†	ENV	258.3	9.0	4	0	1	3	9	3	1	79	28		
26	BE&K Inc., Birmingham, Ala.†	EC	248.5	33.5	0	8	3	0	2	81	0	0	25		
27	ERM Group, Exton, Pa.†	EC	249.8	82.8	0	0	0	0	0	0	0	94	28		
28	Ostel, Mason, Johnson, & Mendenhall, Los Angeles, Calif.†	EC	233.2	28.0	39	0	0	0	0	0	61	0	33		
29	McDermott International Inc., New Orleans, La.†	EC	224.8	180.3	0	0	26	0	0	74	0	0	14		
30	The Kraemer Group, Tampa, Fla.†	EC	221.0	41.0	0	11	0	0	0	88	0	1	20		

April 20, 1998

Engineering News-Record

Page 53

"The Top 500 Design Firms"

2 of 6

R. 1439

## WHERE TO FIND THE TOP 500

FIRM	RANK	FIRM	RANK	FIRM	RANK	FIRM	RANK
<b>ABC</b>		Bohannon-Muston Inc.	439	CUNZA Inc.	201	Farnsworth & Wylie Inc.	412
ABB Environmental Services Inc.	183	Bolton & Menk Inc.	480	Cunningham Group	243	Fay, Spofford & Thorndike Inc.	222
ABB Lummus Global Inc.	9	Boswell Engineering Inc.	289	<b>DEF</b>		Finkbainer, Pettit & Strout Inc.	328
Aber Engineers & Consultants Inc.	459	Sidney S. Bowne & Son LLP	401	Leo A Daly	63	Fishback, Thompson, Carr & Huber Inc.	330
Aeres International Corp.	474	Boyle Engineering Corp.	113	Dames & Moore Group	13	Flack + Kurtz Consulting Engineers LLP	195
AEPGO Inc.	225	BR-A/Bard, Rao + Athanas Consulting Engineers	281	Daniel, Mann, Johnson, & Mendenhall	29	Flad & Associates	213
Affiliated Engineers Inc.	233	Braun Intertec Corp.	137	Dannenbaum Engineering Corp.	331	Fletcher-Thompson Inc.	484
AGRA Infrastructure	73	Brennan Beer Gorman/ Architects	264	Davis & Floyd Inc.	268	Fluor Daniel Inc.	1
AJT & Associates Inc.	329	Brian Kangas Foulk	270	Davis Brody Bond	483	Foster Wheeler Corp.	6
Aker Maritime Inc.	242	Brown and Caldwell	61	Day & Zimmermann Int'l Inc.	37	Foth & Van Dyke	209
Allen & Washaf	308	Brown & Root Inc.	3	Delon Hampton & Associates Chartered	390	FROM Design Worldwide	292
Amdbitech Engineering Corp.	279	BSA Design	437	Delta Environmental Consults. Inc.	105	Freese and Nichols Inc.	234
American Consulting Engineers Inc.	378	The BBO Group Inc.	488	DEB Architects & Engineers	409	Froehling & Robertson Inc.	321
Ammann & Whitney	376	BHW International Inc.	175	Dawberry & Davis	55	Fru-Con Engineering Inc.	116
Anderson & Associates Inc.	486	Buchart-Horn Inc. /BASCO Associates	170	DLB Associates Inc.	407	Fugro Inc.	62
Anshen + Allen Architects	239	Bucher, Willis & Ratliff Corp.	245	DLR Group Inc.	85	Fuss & O'Neill Inc.	334
Apax Environmental Inc.	273	Burgess & Niple Ltd.	149	DOWL Engineers	479	<b>GHI</b>	
ARCADIS Geraghty & Miller Inc.	46	Burns & McDonnell	53	DBAtlanta Corp.	244	GAI Consultants Inc.	178
Architectural Alliance	468	Burns and Roe Enterprises Inc.	32	Dufresne-Henry Inc.	312	Gannett Fleming Inc.	54
Ardaman & Associates Inc.	212	Burt Hill Kosar Ritzmann Associates	208	The Durrant Group Inc.	352	Garver + Garver P.A.	446
Arrowstreet Inc.	262	George Butler Associates Inc.	283	Ovirka & Bartilucci Consulting Engineers	457	QDS Engineers Inc.	120
ABCO Inc.	180	Gallison Architects	144	Dyer, Riddle, Mills & Prescott Inc.	419	Q.E.C. Inc.	441
ASL Consulting Engineers	262	Camp Dresser & McKee Inc.	17	EA Engineering, Science, and Technology Inc.	60	Qee & Jensen EAP Inc.	331
Atlanta Testing & Engineering (ATB) Inc.	323	The Cannon Corp.	142	The EADS Group Inc.	324	QEI Consultants Inc.	254
The Austin Co.	145	Carlson Design/Construct Corp.	139	Earth Systems Inc.	388	General Physics Corp.	80
AVCA Corp.	133	Carollo Engineers	123	Earth Tech Inc.	44	Genstar	42
Ayres Associates	177	Carter & Burgess Inc.	87	Eckenfelder Inc.	409	GeoSyntec Consultants Inc.	202
Michael Baker Corp.	43	Casco Corp.	289	Ecology and Environment Inc.	90	Geomatrix Consultants Inc.	189
Kenneth Balk & Associates Inc.	424	CDI Engineering Group Inc.	33	EDAW Inc.	108	Ghafari Associates Inc.	166
Ballingar	476	Cella Barr Associates	442	Edwards and Kelcey Inc.	89	Giffels Associates Inc.	134
Barga, Waggoner, Sumner and Cannon Inc.	141	Century Engineering Inc.	389	Ehrlich-Rominger E.I. Associates	217	Golder Associates Corp.	38
Barr Engineering Co.	181	Century West Engineering	489	Eichleay Holdings Inc.	131	Gould Evans Affiliates	235
Bartlett & West Engineers Inc.	400	Chemstress Consultant Co.	277	Einhorn Yaffee Prescott	157	OPD Associates	482
Bateman Engineering Inc.	127	Chester Engineers Inc.	117	Eikun/Munford Architects Ltd.	308	Graf Anhalt Schloemer & Associates Inc.	292
Baxter & Woodman Inc.	482	CH2M Hill Cos. Ltd.	8	Eikerbe Becket	70	Granary Associates	443
Bechtel Group Inc.	2	Q&I Engineering	338	EnSafe Inc.	216	Greely and Hansen	148
R.W. Beek Inc.	172	Civil & Environmental Consultants	386	Engineering & Testing Services Inc.	497	Howard R. Green Co.	386
BEI Associates Inc.	406	Clark + Nexsen	472	Engineering Consulting Services Ltd.	260	Greenhorne & O'Mara Inc.	116
Belawong, Hooch & Associates	368	Clough, Harbour & Associates LLP	162	ENBR	47	Greenman-Pedersen Inc.	140
BE&K Inc.	26	CMA Architects & Engineers	448	Entranco	237	Gresham, Smith and Partners	122
Beijing Consultants Inc.	684	Concor Towns and Envirodyne Engineers	68	A. Epstein and Sons International Inc.	62	Gruzan Samton	420
Alfred Benesch & Co.	347	Construction Technology Laboratories Inc.	370	EQE International Inc.	119	GRW Engineers Inc.	363
Bangdon, DeBell & Elkin Ltd.	422	The Converse Professional Group	267	Edman, Anthony & Associates Inc.	230	G.H. Quernsey & Co.	316
The Benham Cos.	71	Cooper Carry Inc.	267	ERM Group	27	QZA GeoEnvironmental Inc.	112
Berger, Lehman Associates P.C.	468	Corgan Associates Inc.	176	David Evans and Associates Inc.	83	Hayley & Aldrich Inc.	182
The Louis Berger Group	18	Corrpro Cos. Inc.	72	Evans, Mechwart, Hamblen & Tilton Inc.	307	Haff Associates Inc.	316
Bergmann Associates	299	Crawford, Murphy & Tilly Inc.	300	Ewing Cole Cherry Brott Inc.	102	Hammel Green and Abrahamson Inc.	164
Bermelo, Ajami & Partners Inc.	373	Criticalum Engineers	481	The Facility Group Inc.	379	Hampton-Tilley Associates Inc.	354
Bernard Johnson Young Inc.	194	Q&S Engineers Inc.	348	Fanning/Howey Associates Inc.	193	Han-Padron Associates LLP	246
Berryman & Heniger Inc.	189	CSA Architects & Engineers	403			Hanson Engineers Inc.	200
Beyer Blinder Belle Architects & Planners LLP	381	DTL Engineering Inc.	453			Hardisty & Hanover LLP	383
Bibb & Associates Inc.	488					Harding Lawson Associates	58
Black & Veatch	10					Hardy Holzman Pfeiffer Associates	288
Blealand, Bouck & Lee Inc.	97					Harley Ellington Design	293

000023



April 20, 1998  
 Engineering News-Record  
 Page 53  
 "The Top 500 Design Firms"



## WHERE TO FIND THE TOP 500

FIRM	RANK	FIRM	RANK	FIRM	RANK	FIRM	RANK
The S/L/A/M Collaborative	285	Sverdrup Corp.	14	TSP Group Inc.	344	Roy F. Weston Inc.	40
Smallwood, Reynolds, Stewart		Swanke Hayden Connell Ltd.	285	Universal Engineering Sciences	319	Weston & Sampson	
Stewart	168	Symmes Maini & McKee		Universal ENSCO Inc.	121	Engineers Inc.	350
S&ME Inc.	143	Associates Inc.	305	Urban Engineers Inc.	384	W&H Pacific Inc.	224
Smith Bookman Reid Inc.	221	Syska & Hennessey	107	Urbikran Group	304	Whitman, Requardt and	
SmithGroup Inc.	78	Tait & Associates Inc.	500	URS Greiner Woodward-Clyde	7	Associates LLP	240
Soil and Materials Engineers Inc.	322	TAMS Consultants Inc.	87	USKH Inc.	454	Wight & Co.	469
Southern Engineering Co.	377	Taylor, Wiseman & Taylor	388	Vanasse Hangen Brustlin Inc.	130	Wilbur Smith Associates Inc.	82
Spactor Group	429	TBE Group Inc.	298	R.G. Vanderwell Engineers Inc.	110	Wilay & Wilson,	
Spills Dandale & Partners Inc.	228	TOB Inc.	132	Verbar Inc.	99	A Professional Corp.	477
The Spink Corp.	438	Teng & Associates Inc.	238	Vtatta Group	231	Willdan Associates	241
Spotts, Stavens & McCoy Inc.	499	The Terracon Cos. Inc.	85	David Volkert & Associates Inc.	108	Wilson & Co.	218
SRAF Consulting Group Inc.	478	Tetra Tech Inc.	25	VOA Associates Inc.	203	Wilson, Miller, Barton & Peck Inc.	367
SSOE Inc.	102	Thompson, Ventulett,		Vollmer Associates LLP	129	Wimberly Allison Tong & Gos Inc.	124
The Stanley Consultants Group	126	Steinback & Associates Inc.	165	VTN Nevada	380	Wink Inc.	317
Stearns & Wheeler, LLC	287	SD/International Inc.	274	<b>WXYZ</b>		Winzier & Kelly Consulting	
Stevens Painton Corp.	488	Tighe & Bond Inc.	383	Wade-Trim Group Inc.	181	Engineers	418
Stevens & Wilkinson Inc.	385	Tilden Lubnitz Cooper	444	Walker Parking Consultants	180	Wies, Jannay, Elstner	
The Stohler Design Group Inc.	349	TIMMONS	383	G.C. Wallace Inc.	268	Associates Inc.	150
STS Consultants Ltd.	171	TMP Associates Inc.	402	Wallace, Roberts & Todd	388	Woodard & Curran	255
Edward D. Stone Jr. & Associates	426	R.M. Towill Corp.	318	Wank Adams Slavin Associates	470	Woolpert LLP	91
Stons & Webster	18	TrenSystems Corp.	128	Watkins Hamilton Ross		R.O. Zande & Associates Inc.	327
Strand Associates Inc.	278	Triad Engineering Inc.	480	Architects	435	Zimmer Gunsul Frason	
The Stubbins Associates Inc.	314	TRO/The Ritchie Organization	341	Waldinger Associates	248	Partnership	114
STV Group	85	TBQI/Kabus & Associates	411			the Zimmerman Design Group	410

1433

## THE TOP 500 SUBSIDIARIES LISTED BY FIRM RANK

RANK	FIRM	RANK	FIRM	RANK	FIRM	RANK	FIRM	
1	Fluor Construction International Inc.		Labron		LO Indium-Lockwood Greene Indium		Warton International Inc.	
2	Bechtel Construction Co. Bechtel Corp. Bechtel National Inc. Bechtel Power Corp. Bechtel Construction Co. Inc.	14	Sverdrup DMV Inc. Sverdrup Environmental Inc. Sverdrup Facilities Inc. Sverdrup Technology Inc.		LO Systems-Lockwood Greene Systems LO-Lockwood Greene Technologies POP-LO-Peter Strasser & Partners Lockwood Greene	43	Baker Engineering Inc. Baker Engineering R.T. Inc. Baker Environmental Inc. Baker Environmental Inc. Baker Heavy & Highway Inc. Baker Mission Street Construction Inc. Baker and Associates Baker/MD Services Inc. Milton Stutz Construction Int'l Inc. Michael Baker Jr. Inc. Michael Baker Co Mexico SA de CV	
3	Brown & Root Services Brown & Root U.K. Ltd.	15	Stora & Webster Management Consultants Inc. Stora & Webster Canada Ltd. Stora & Webster Engineering Ltd.	23	Commodity Development Corp. FLO Engineering Inc. HBI OptTrac Inc. IWA Engineers KCM Inc. KCM Consultants Inc. Simora LI & Associates Inc. Tetra Tech EM Inc. Whitson & Co. Inc.		44	OIT-Hyundai SA E.C.I. Frederic R. Harris BV Frederic R. Harris India Pvt. Ltd. Frederic R. Harris Ltd. Harris Transportation Systems Labrousse Armstrong & Associates
4	Formerly: The Parsons Corp. Parsons Asia Pacific Parsons Development Group Parsons Energy & Chemicals Group Inc. Parsons Europe, Middle East, Africa, and South Asia Parsons Infrastructure & Technology Group Parsons Latin America Parsons Transportation Inc.	16	MW Americas MW Asia Ltd. MW Constructors MW Enterprises MW Ltd.	24	AWAB AD States F.H. Thompson Solt Construction Vitech Services		45	Formerly: Gensky & Miller Inc. Lacoste Environmental Corp. Environmental Construction Inc. Gensky & Miller International Inc. JBA Environmental Inc. Piedmont Urban Services
5	Litwin SA Raytheon Constructors Int'l Inc. Raytheon Engineers & Constructors Inc. Raytheon Engineers Constructors BV Raytheon Infrastructure Inc.	17	CDM Engineering & Constructors Inc. CDM Federal Programs Corp. CDM International Inc.	25	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		46	EB&E Consulting & Engineering EB&E International EB&E Remediation & Construction NAM Services Inc. Nobus & Verwer Inc. NVAL
6	Foster Wheeler (France) Ltd. Foster Wheeler Andros Foster Wheeler China Foster Wheeler Canada Foster Wheeler China Foster Wheeler Eastern Private Ltd. Foster Wheeler Environmental Corp. Foster Wheeler France SA Foster Wheeler (Gulf) SA Foster Wheeler (Italy) SA Foster Wheeler Ltd. Foster Wheeler Petroleum Dev. Ltd. Foster Wheeler USA Corp.	18	ARI Engineering Inc. BERDYVINE Bergier (Europe) SA Bergier LatinAmerica SA Bergier/BBM Engineers Inc. Bergier/Carlson & Associates Inc. Bergier/Lairson PD Brookings AD Development Economics Group Inc. Ertan & Associates (SD) PD SIEGAM, SARE and Louis Berger Route Orlando-Toronto Laboratory for Environmental Planning Louis Berger & Assoc. (DO) PD Louis Berger & Assoc. P.O. (MA) Louis Berger & Assoc. P.O. (PA) Louis Berger & Assoc. P.O. (VA) Louis Berger & Associates Inc. Louis Berger & Associates Inc. (Mexico) Louis Berger & Associates S.L. Inc. Louis Berger (Canada) Ltd. Louis Berger Facility Services Inc. Louis Berger Finance & Dev. Co. Ltd. Louis Berger Group Inc. Louis Berger Inc. (Rigport) Louis Berger International Inc. (F.R.G.) Louis Berger International Inc. Korea Louis Berger Peru SA Louis Berger SA Louis Berger SA (Luxembourg) Louis Berger Thailand Ltd. Northern Facility Insurance Co. Ltd. SEA-Gensul (Thailand) Ltd. Shinkoh Consulting Co. (Pty.) Ltd. The Centre for Rural Development VNB Inc.	26	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		47	EB&E Consulting & Engineering EB&E International EB&E Remediation & Construction NAM Services Inc. Nobus & Verwer Inc. NVAL
7	Formerly: URS Constr. Inc. E.C. Drive & Associates WYP Corp. Woodward-Clyde Group Inc.	19	ARI Engineering Inc. BERDYVINE Bergier (Europe) SA Bergier LatinAmerica SA Bergier/BBM Engineers Inc. Bergier/Carlson & Associates Inc. Bergier/Lairson PD Brookings AD Development Economics Group Inc. Ertan & Associates (SD) PD SIEGAM, SARE and Louis Berger Route Orlando-Toronto Laboratory for Environmental Planning Louis Berger & Assoc. (DO) PD Louis Berger & Assoc. P.O. (MA) Louis Berger & Assoc. P.O. (PA) Louis Berger & Assoc. P.O. (VA) Louis Berger & Associates Inc. Louis Berger & Associates Inc. (Mexico) Louis Berger & Associates S.L. Inc. Louis Berger (Canada) Ltd. Louis Berger Facility Services Inc. Louis Berger Finance & Dev. Co. Ltd. Louis Berger Group Inc. Louis Berger Inc. (Rigport) Louis Berger International Inc. (F.R.G.) Louis Berger International Inc. Korea Louis Berger Peru SA Louis Berger SA Louis Berger SA (Luxembourg) Louis Berger Thailand Ltd. Northern Facility Insurance Co. Ltd. SEA-Gensul (Thailand) Ltd. Shinkoh Consulting Co. (Pty.) Ltd. The Centre for Rural Development VNB Inc.	27	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		48	EB&E Consulting & Engineering EB&E International EB&E Remediation & Construction NAM Services Inc. Nobus & Verwer Inc. NVAL
8	CH2M Hill Constructors Inc. CH2M Hill Core & Storage Ltd. CH2M Hill Inc. Industrial Design Group Operations Management International Quality Analytical Laboratories	20	CH2M Hill Constructors Inc. CH2M Hill Core & Storage Ltd. CH2M Hill Inc. Industrial Design Group Operations Management International Quality Analytical Laboratories	28	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		49	Burns & McDonnell Mexico CONSTRUCTORA INC. Gohmert-Burns & McDonnell Hochlinger Inc.
9	ABB Lummus Global ABB Lummus Global BV ABB Lummus Global GmbH ABB Lummus Global Ltd. ABB Lummus Global s.r.l. ABB Lummus West Transfer BV ABB Lummus Resources Ltd. ABB Sturand Corp. Lummus Advers Ltd. Co.	21	Bergant & Lundy Engineers Ltd. Bergant & Lundy Enterprises Ltd. Bergant & Lundy (India) Ltd. Bergant & Lundy Indonesia Ltd. Bergant & Lundy Pacific Ltd. Formerly: Heilmann, OSHA & Rosenbaum Inc. HNTB Group/ENR Inc. Thorne & Dyer Inc.	29	Formerly: Matusz & Cody/ANT Cos. DAZ Utility Services Inc. DZI Process & Industrial Day & Zimmerman Construction Inc. Day & Zimmerman Infrastructure Inc. WFB Energy Services Inc.		50	Cartier & Burgess, De Mexico SA de CV Mitsubashi Design Group
10	Black & Veatch Pritchard Inc.	22	GRANDTAS Ltd. M.W. Kellogg Ltd. Paragon Engineering	30	Formerly: Matusz & Cody/ANT Cos. DAZ Utility Services Inc. DZI Process & Industrial Day & Zimmerman Construction Inc. Day & Zimmerman Infrastructure Inc. WFB Energy Services Inc.		51	Cartier & Burgess, De Mexico SA de CV Mitsubashi Design Group
11	Mira & Hamilton Ltd. PB Aviation Inc. PB Becker Associates Inc. PB Ferrovys Inc. Persons Environmental (Europe) Ltd. Persons Environmental Const. Services Inc. Persons Environmental Energy Services Inc. Persons Environmental Int'l Pte. Ltd. Persons Environmental Ltd. Persons Environmental China & Douglas Inc.	23	Bergant & Lundy Engineers Ltd. Bergant & Lundy Enterprises Ltd. Bergant & Lundy (India) Ltd. Bergant & Lundy Indonesia Ltd. Bergant & Lundy Pacific Ltd. Formerly: Heilmann, OSHA & Rosenbaum Inc. HNTB Group/ENR Inc. Thorne & Dyer Inc.	31	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		52	Cartier & Burgess, De Mexico SA de CV Mitsubashi Design Group
12	10F Kallier Engineers Inc. Kallier Engineers Pty. Ltd. Kallier-RTS LLC	24	ARI Engineering Inc. BERDYVINE Bergier (Europe) SA Bergier LatinAmerica SA Bergier/BBM Engineers Inc. Bergier/Carlson & Associates Inc. Bergier/Lairson PD Brookings AD Development Economics Group Inc. Ertan & Associates (SD) PD SIEGAM, SARE and Louis Berger Route Orlando-Toronto Laboratory for Environmental Planning Louis Berger & Assoc. (DO) PD Louis Berger & Assoc. P.O. (MA) Louis Berger & Assoc. P.O. (PA) Louis Berger & Assoc. P.O. (VA) Louis Berger & Associates Inc. Louis Berger & Associates Inc. (Mexico) Louis Berger & Associates S.L. Inc. Louis Berger (Canada) Ltd. Louis Berger Facility Services Inc. Louis Berger Finance & Dev. Co. Ltd. Louis Berger Group Inc. Louis Berger Inc. (Rigport) Louis Berger International Inc. (F.R.G.) Louis Berger International Inc. Korea Louis Berger Peru SA Louis Berger SA Louis Berger SA (Luxembourg) Louis Berger Thailand Ltd. Northern Facility Insurance Co. Ltd. SEA-Gensul (Thailand) Ltd. Shinkoh Consulting Co. (Pty.) Ltd. The Centre for Rural Development VNB Inc.	32	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		53	Cartier & Burgess, De Mexico SA de CV Mitsubashi Design Group
13	BRW	25	ARI Engineering Inc. BERDYVINE Bergier (Europe) SA Bergier LatinAmerica SA Bergier/BBM Engineers Inc. Bergier/Carlson & Associates Inc. Bergier/Lairson PD Brookings AD Development Economics Group Inc. Ertan & Associates (SD) PD SIEGAM, SARE and Louis Berger Route Orlando-Toronto Laboratory for Environmental Planning Louis Berger & Assoc. (DO) PD Louis Berger & Assoc. P.O. (MA) Louis Berger & Assoc. P.O. (PA) Louis Berger & Assoc. P.O. (VA) Louis Berger & Associates Inc. Louis Berger & Associates Inc. (Mexico) Louis Berger & Associates S.L. Inc. Louis Berger (Canada) Ltd. Louis Berger Facility Services Inc. Louis Berger Finance & Dev. Co. Ltd. Louis Berger Group Inc. Louis Berger Inc. (Rigport) Louis Berger International Inc. (F.R.G.) Louis Berger International Inc. Korea Louis Berger Peru SA Louis Berger SA Louis Berger SA (Luxembourg) Louis Berger Thailand Ltd. Northern Facility Insurance Co. Ltd. SEA-Gensul (Thailand) Ltd. Shinkoh Consulting Co. (Pty.) Ltd. The Centre for Rural Development VNB Inc.	33	ERM-Asia Pacific ERM-Environment Group ERM-Europe ERM-North America ERM-South America Fusion Staffing Services		54	Cartier & Burgess, De Mexico SA de CV Mitsubashi Design Group



April 20, 1998

Engineering News-Record

Page 87

"The Top 500 Design Firms...Banner Year Abroad Haunted by Fears and Hopes About Asia"

By: Gary J. Tulacz and Mary B. Powers

THE TOP 500 DESIGN FIRMS

# Banner Year Abroad Haunted by Fears and Hopes About Asia

It was the best of times, it was the worst of times. Charles Dickens could have been referring to the 1997 international design market. International billings for the Top 500 hit \$7.32 billion last year, 18.7% higher than 1996. The increase is partly attributable to ENR's new reporting methodology for design billings (see page 40), but the Top 500 still enjoyed strong success outside the U.S.

The Top 500 posted a dramatic surge in Asian design billings in 1997, but the results obscure the industry's current worries following the crash of Southeast Asia markets last year. The financial crisis started in July in Thailand and then swept through Indonesia, Malaysia and



the Philippines. The year also saw South Korea's aggressive economic machine slip a gear and Japan's economy continue to struggle.

"The Philippines, Malaysia, Indonesia and Thailand have had a near-death ex-

perience," says Harold Adams, CEO of architect-engineer RTKL Associates. The downturn caused the firm to downsize in Hong Kong and reassign people in its Los Angeles office. Some strong private-sector clients in Korea and Japan filled the gap, as well as "a lot of work in Europe and Middle East," he says.

Adams remains cautious, however. RTKL recently won a job to help develop a master plan for a massive land reclamation project to build a new port city: the Manila Harbour Centre in the Philippines. "But whether that job results in actual architectural work for us is yet to be seen," he says.

"The building side has taken it on the

## COUNTRY CODES

(AND NUMBER OF FIRMS WORKING IN EACH COUNTRY)

### NORTH AMERICA

- 1. Canada (107)

### LATIN AMERICA

- 10. Argentina (84)
- 11. Bolivia (18)
- 12. Brazil (78)
- 13. Chile (67)
- 14. Colombia (48)
- 16. Costa Rica (17)
- 18. Ecuador (18)
- 17. El Salvador (16)
- 18. Guatemala (14)
- 19. Guyana (8)
- 20. Honduras (12)
- 21. Mexico (128)
- 22. Nicaragua (9)
- 23. Panama (48)
- 24. Paraguay (11)
- 25. Peru (47)
- 26. Uruguay (10)
- 27. Venezuela (58)

### CARIBBEAN ISLANDS

- 30. Greater Antilles (88)

### EUROPE

- 31. Puerto Rico (84)
- 35. Lesser Antilles (88)
- 40. Albania (8)
- 41. Armenia (6)
- 42. Austria (18)
- 43. Azerbaijan (8)
- 44. Belarus (4)
- 45. Belgium (37)
- 46. Bulgaria (19)
- 47. Czech Rep. (29)
- 48. Denmark (16)
- 49. Estonia (6)
- 50. Finland (14)
- 51. France (66)
- 52. Georgia (10)
- 53. Germany (86)
- 54. Greece (28)
- 55. Hungary (29)
- 56. Ireland (26)
- 57. Italy (61)

- 58. Latvia (11)
- 59. Lithuania (7)
- 60. Moldova (2)
- 61. Netherlands (81)
- 62. Norway (12)
- 63. Poland (38)
- 64. Portugal (23)
- 65. Romania (16)
- 66. Russia (66)
- 67. Slovakia (12)
- 68. Spain (69)
- 69. Sweden (16)
- 70. Switzerland (20)
- 71. Ukraine (12)
- 72. United Kingdom (88)
- 73. Yugoslavia (former) (4)

### MIDDLE EAST

- 80. Afghanistan (0)
- 81. Bahrain (16)
- 82. Cyprus (7)
- 83. Iran (8)
- 84. Iraq (0)
- 85. Israel (55)
- 86. Jordan (21)
- 87. Kuwait (35)
- 88. Lebanon (17)
- 89. Oman (14)
- 90. Pakistan (25)

- 91. Qatar (22)
- 92. Saudi Arabia (48)
- 93. Syria (5)
- 94. Turkey (42)
- 95. U.A.E. (41)
- 96. Yemen (8)

### ASIA/AUSTRALIA

- 100. Australia (82)
- 101. Bangladesh (17)
- 102. Brunei (6)
- 103. Burma (7)
- 104. China (P.R.C.) (101)
- 105. Diego Garcia (4)
- 106. Hong Kong (48)
- 107. India (81)
- 108. Indonesia (70)
- 109. Japan (80)
- 110. Kazakhstan (24)
- 111. Korea, South (77)
- 112. Kyrgyzstan (8)
- 113. Malaysia (68)
- 114. Nepal (10)
- 115. New Zealand (30)
- 116. Pacific Islands (21)
- 117. Papua N-Guinea (10)
- 118. Philippines (86)
- 119. Singapore (61)
- 120. Sri Lanka (18)
- 121. Taiwan (68)

- 122. Tajikistan (8)
- 123. Thailand (70)
- 124. Turkmenistan (4)
- 125. Uzbekistan (17)
- 126. Vietnam (88)

### NORTH AFRICA

- 130. Algeria (10)
- 131. Egypt (47)
- 132. Ethiopia (8)
- 133. Libya (1)
- 134. Morocco (18)
- 135. Niger (1)
- 136. Somalia (2)
- 137. Sudan (1)
- 138. Sub Sahara (2)
- 139. Tunisia (7)

### AFRICA

- 140. Angola (4)
- 141. Benin (2)
- 142. Botswana (6)
- 143. Burkina Faso (1)
- 144. Burundi (11)
- 145. Cameroon (4)
- 146. Cape Verde Is. (1)
- 147. Congo (8)
- 148. Gabon (6)
- 149. Gambia (2)
- 150. Ghana (10)

- 151. Guinea (7)
- 152. Ivory Coast (4)
- 153. Kenya (6)
- 154. Lesotho (8)
- 155. Liberia (1)
- 156. Malawi (6)
- 157. Mozambique (8)
- 158. Nigeria (8)
- 159. Rwanda (1)
- 160. Senegal (6)
- 161. Sierra Leone (4)
- 162. South Africa (82)
- 163. Swaziland (1)
- 164. Tanzania (8)
- 165. Uganda (7)
- 166. Zaire (8)
- 167. Zambia (18)
- 168. Zimbabwe (4)

### 160. ANTARCTIC/ARCTIC (7)

April 20, 1998

Engineering News-Record -  
Page 87

"The Top 500 Design Firms...Banner Year Abroad Haunted by Fears and Hopes About Asia"

By: Gary J. Tulacz and Mary B. Powers

2 of 5

1 4 3 3

# THE TOP 500 OVERSEAS

DESIGNERS AND COUNTRIES (SEE INDUSTRY CODES ON P. 87)

ABB Environmental Services Inc. 1, 10, 27, 31, 48, 51, 53, 56, 63, 65, 66, 104, 109, 110, 121, 123, 134  
 ABB Lummus Global Inc. 1, 10, 12, 21, 25, 27, 42, 47, 48, 50, 51, 53, 57, 61, 62, 63, 64, 66, 67, 69, 70, 72, 81, 92, 100, 104, 107, 108, 109, 111, 113, 121, 123, 128, 131, 135, 158, 162  
 Acres International Corp. 1, 13, 15, 18, 23, 25, 31, 107, 114, 123, 126  
 AEPSCO Inc. 121  
 Affiliated Engineers Inc. 1, 21  
 AGRA Infrastructure 1, 12, 21, 25, 108, 162  
 Ammann & Whitney 10, 17, 30, 31, 87, 89, 107, 113, 110, 123  
 Arehon + Allen Architects 1, 72, 94, 104, 110  
 ARCADIS Garaghty & Miller Inc. 10, 12, 13, 21, 27, 31, 42, 47, 53, 61, 63, 64, 65, 66, 68, 72, 104, 107  
 Ardeman & Associates Inc. 12, 21, 27, 34, 68, 92, 100, 107, 131, 139  
 Arrowstreet Inc. 10, 13, 16, 21, 24, 31, 53, 94  
 ASI Consulting Engineers 41  
 AT&T Inc. 1, 25, 27, 111  
 The Austin Co. 1, 12, 17, 21, 72, 100, 111, 118  
 AVCA Corp. 1, 13, 14, 21, 27, 31, 46, 68, 88, 104, 107, 111, 123, 126, 162  
 Ayres Associates 111  
 Michael Baker 20, 21, 23, 31, 46, 53, 57, 61, 68, 68, 72, 81, 94, 109, 180  
 Bateman Engineering Inc. 13, 21, 27, 66, 72, 85, 110, 122, 125, 162, 168, 167, 168, 180  
 Bechtel Group Inc. 1, 10, 12, 13, 14, 21, 23, 27, 46, 47, 48, 51, 57, 62, 63, 66, 69, 72, 81, 88, 90, 91, 92, 93, 96, 100, 101, 104, 106, 107, 108, 109, 110, 111, 113, 117, 118, 119, 121, 123, 125, 126, 131, 139  
 R.W. Beck Inc. 1, 10, 12, 13, 14, 18, 21, 23, 25, 30, 31, 35, 45, 58, 66, 57, 61, 63, 64, 68, 72, 85, 90, 100, 104, 109, 109, 111, 113, 115, 116, 118, 121, 123, 153, 156  
 BEI Associates Inc. 1  
 Belingwanger, Hosh & Associates 16, 17, 31, 51, 53, 66, 85, 100, 109  
 BE&K Inc. 1, 12, 21, 47, 48, 60, 63, 66, 69, 72, 104, 107, 108, 113, 116, 118, 119, 121, 123  
 The Benham Cos. 12, 14, 21, 27, 56, 68, 104, 108, 107  
 The Louis Berger Group 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 26, 26, 27, 30, 31, 35, 40, 41, 42, 43, 44, 46, 48, 49, 50, 51, 52, 53, 54, 55, 57, 68, 59, 60, 62, 63, 65, 66, 67, 69, 71, 72, 73, 81, 82, 88, 90, 91, 94, 98, 101, 102, 104, 108, 107, 108, 109, 110, 112, 113, 114, 116, 118, 119, 121, 122, 123, 124, 125, 126, 130, 131, 132, 134, 136, 136, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 158, 167, 168, 169, 180, 181, 182, 184, 185, 186, 187, 188  
 Bormello, Ajamil & Partners Inc. 12, 14, 21, 23, 27, 30, 31, 38, 66  
 Berward Johnson Young Inc. 1, 23, 31, 45, 46, 60, 61, 63, 72  
 Barryman & Hanigar Inc. 23  
 Bibb & Associates Inc. 14, 21, 25, 64  
 Black & Veatch 1, 10, 13, 14, 18, 21, 27, 42, 53, 72, 81, 85, 87, 88, 90, 91, 92, 94, 95, 100, 104, 106, 107, 108

110, 111, 113, 118, 119, 121, 123, 125, 131, 142, 167  
 Boyle Engineering Corp. 1, 16, 61, 63, 72  
 BR-A/Bard, Rao + Athanas Consulting Engrs. 88, 101  
 Braun Intertec Corp. 1, 21, 104  
 Brennan Bear Gorman/Architects 21, 104, 106, 111, 113, 118, 131  
 Brown and Caldwell 1, 10, 121  
 Brown & Root Inc. 1, 14, 27, 43, 72, 91, 100, 101, 119, 123, 126, 130, 131, 162  
 BSW International Inc. 11, 21  
 Bochert-Horn Inc./BASCO Associates 42, 53, 54, 57, 72, 94  
 Bucher, Willis & Rexilly Corp. 121  
 Burgess & Nigro Ltd. 111  
 Burns & McDonnell 10, 12, 20, 21, 27, 31, 45, 51, 53, 64, 57, 65, 72, 96, 92, 94, 98, 100, 104, 106, 107, 108, 109, 110, 111, 113, 119, 121, 123, 131, 164, 167  
 Burns and Roe Enterprises Inc. 12, 13, 21, 23, 41, 43, 44, 47, 62, 67, 58, 65, 71, 100, 102, 104, 105, 106, 107, 109, 109, 111, 113, 116, 118, 119, 121, 123, 125  
 Callison Architecture 1, 63, 65, 95, 100, 104, 106, 107, 108, 109, 111, 113, 118, 121  
 Camp Dresser & McKee Inc. 1, 11, 12, 13, 15, 16, 18, 20, 21, 22, 24, 26, 27, 41, 46, 62, 63, 64, 65, 61, 65, 67, 72, 85, 88, 68, 69, 100, 104, 106, 107, 108, 110, 111, 114, 116, 119, 120, 121, 122, 125, 131, 132, 138, 139, 141, 165, 167, 167  
 The Cannon Corp. 1, 21, 46, 57, 66, 85, 87, 94, 104, 109, 111, 118, 124  
 Carter & Burgess Inc. 1, 12, 21, 31, 53, 54, 66, 72, 97, 100, 104, 106, 110, 111, 112, 118  
 Casso Corp. 1, 10, 21, 31  
 Chemtreat Consultant Co. 42, 111, 123  
 Chester Engineers Inc. 1, 12, 21, 27, 30, 63, 104, 121  
 CH2M Hill Cos. Ltd. 1, 10, 12, 13, 15, 21, 25, 46, 47, 51, 63, 65, 66, 61, 63, 68, 68, 71, 72, 85, 91, 94, 100, 102, 104, 106, 107, 109, 110, 111, 112, 113, 115, 119, 121, 123, 124, 125, 131  
 C&I Engineering 1, 107  
 Clark - Neeson 31, 35, 54, 57, 68, 72, 81, 114, 131, 134  
 CMA Architects & Engineers 30, 31, 39  
 Consoar Townsend Envirodyne Engineers 113, 115, 119, 180  
 Construction Technology Laboratories Inc. 1, 10, 14, 15, 18, 21, 23, 25, 27, 31, 45, 50, 51, 68, 90, 92, 94, 100  
 The Coopers Professional Group 62, 95  
 Corgeon Associates Inc. 31, 35, 72, 111  
 Corpro Cos. Inc. 1, 10, 12, 13, 14, 15, 16, 21, 23, 25, 27, 30, 31, 40, 42, 43, 45, 46, 47, 48, 50, 51, 52, 53, 64, 65, 66, 57, 58, 59, 61, 62, 63, 64, 66, 67, 68, 69, 70, 71, 72, 73, 81, 82, 88, 87, 88, 89, 90, 91, 92, 93, 94, 95, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 113, 114, 115, 116, 117, 118, 119, 120, 121, 123, 126, 130, 131, 145, 148, 158  
 CTL Engineering Inc. 1, 107  
 CUNZA Inc. 72  
 Leo & Daly 12, 31, 61, 63, 67, 64, 66, 68, 81, 89, 91, 92, 95, 104, 106, 108, 118, 123  
 Dames & Moore Group 1, 10, 11, 12, 13, 14, 16, 17, 21,

22, 23, 25, 26, 27, 31, 42, 43, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 58, 57, 58, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 82, 88, 88, 89, 90, 91, 92, 94, 95, 100, 103, 104, 107, 108, 100, 111, 113, 115, 116, 117, 118, 119, 121, 123, 128, 131, 134, 139, 145, 150, 152, 160, 162, 164, 167  
 Daniel, Mann, Johnson, & Mendenhall 1, 31, 67, 92, 94, 95, 100, 106, 111, 118, 121, 123, 126  
 Davis Brady Bond 12, 21, 61, 72  
 Day & Zimmermann International Inc. 10, 21, 31, 47, 63, 86, 97, 63, 70, 107, 110, 121  
 Delta Environmental Consultants Inc. 1, 16, 21, 25, 42, 48, 51, 53, 65, 67, 69, 70, 72  
 DEB Architects & Engineers 21, 118  
 OLB Associates Inc. 65  
 DOWL Engineers 180  
 EA Engineering, Science, and Techno. Inc. 21, 23, 25, 53, 57, 58, 64, 66, 104, 131  
 Earth Tech Inc. 1, 12, 21, 53, 57, 72, 100, 104, 103, 108, 109, 109, 113, 116, 118, 119, 121, 123  
 Eckhardt Inc. 1, 68, 72, 106, 113  
 Ecology and Environment Inc. 10, 11, 12, 14, 23, 25, 27, 53, 66, 68, 67, 95, 104, 105, 118, 134, 152  
 ED&W Inc. 1, 15, 30, 35, 51, 53, 54, 57, 58, 68, 71, 72, 86, 87, 93, 100, 104, 106, 107, 108, 108, 111, 113, 114, 116, 118, 119, 121, 131  
 Ebbeloy Holdings Inc. 1  
 Eimhoff Valve Precast 10, 14, 20, 47, 61, 67, 68, 70, 84, 101, 104, 118, 160  
 Elterbe Beckett 44, 66, 72, 83, 89, 92, 100, 108, 111  
 EnSafe Inc. 10, 10, 23, 30, 31, 51, 57, 67, 68, 72  
 ENSR 1, 11, 12, 16, 21, 27, 31, 45, 47, 51, 52, 53, 54, 55, 67, 61, 63, 64, 68, 72, 90, 94, 100, 104, 106, 107, 111, 113, 118, 119, 123, 148, 165  
 A. Epstein and Sons International Inc. 21, 31, 63, 68, 72, 83, 108, 109  
 EQE International Inc. 1, 13, 14, 21, 27, 30, 31, 35, 45, 46, 47, 48, 50, 51, 53, 58, 57, 61, 63, 66, 67, 68, 69, 70, 72, 85, 94, 95, 100, 104, 106, 107, 108, 109, 111, 113, 115, 116, 118, 119, 121, 140, 162  
 ERM Group 1, 10, 11, 12, 13, 14, 21, 24, 25, 26, 27, 30, 31, 36, 42, 44, 46, 46, 47, 48, 51, 53, 54, 55, 56, 57, 61, 62, 63, 64, 66, 66, 67, 68, 69, 70, 71, 72, 97, 92, 94, 100, 103, 104, 106, 107, 108, 110, 111, 113, 114, 115, 118, 118, 120, 121, 123, 126, 130, 131, 134, 147, 153, 162, 166  
 Ewing Cole Cherry Brett Inc. 118  
 The Facility Group Inc. 61  
 Fanning/Howay Associates Inc. 118  
 Frank + Korte Consulting Engineers LLP 1, 10, 21, 31, 45, 51, 53, 57, 61, 68, 70, 72, 85, 100, 104, 106, 107, 108, 109, 111, 113, 118, 123  
 Fried & Associates 31, 118  
 Fluor Daniel Inc. 1, 10, 12, 13, 14, 21, 23, 27, 31, 43, 53, 56, 59, 61, 63, 66, 68, 72, 91, 92, 95, 100, 104, 107, 108, 109, 110, 111, 113, 118, 119, 120, 121, 122, 126, 131, 137, 162, 167, 168  
 Foster Wheeler Corp. 10, 13, 14, 20, 21, 27, 31, 35, 45, 46, 47, 48, 50, 51, 53, 54, 55, 58, 57, 58, 61, 62, 63, 64,

April 20, 1998  
Engineering News-Record  
Page 87

'The Top 500 Design Firms...Banner Year Abroad Haunted by Fears and Hopes About Asia'  
By: Gary J. Tulacz and Mary B. Powers

14331

## THE TOP 500 OVERSEAS

DESIGNERS AND COUNTRIES (SEE COUNTRY CODES ON P. 87)

68, 69, 70, 72, 73, 85, 86, 87, 90, 92, 94, 106, 109,  
113, 118, 119, 121, 123, 128, 130, 131, 134, 148, 159,  
162  
FRCH Design Worldwide 10, 12, 13, 21, 45, 82, 104,  
106, 111, 121, 123, 162  
Fruess and Nichols Inc. 21  
Geo-Gen Engineering Inc. 21, 100, 108, 113  
Fugro Inc. 12, 13, 14, 21, 27, 50, 68  
GAI Consultants Inc. 12, 13, 107, 108, 123  
Gannett Fleming Inc. 1, 21, 27, 31, 57, 94, 132, 151,  
164, 165  
Geo & Johnson EAP Inc. 30, 31, 35  
General Physics Corp. 1, 10, 12, 13, 14, 18, 21, 27, 35,  
48, 51, 63, 61, 66, 72, 85, 92, 94, 100, 104, 107, 108, 109,  
111, 113, 116, 118, 162  
Genetec 12, 21, 31, 43, 51, 53, 67, 68, 72, 85, 87, 95,  
100, 104, 106, 108, 111, 113, 116, 118, 121  
Geomatrix Consultants Inc. 1, 10, 12, 20, 21, 25, 31,  
118, 121, 130  
GeoSymbio Consultants Inc. 14, 31, 48, 51, 64  
Ghafari Associates Inc. 1, 12, 21, 45, 81, 83, 85, 87,  
88, 104, 106, 107, 108, 118, 123, 128, 132  
Giffith Associates Inc. 1, 21, 85, 92  
Golder Associates Corp. 1, 10, 11, 12, 13, 14, 18, 19,  
20, 21, 22, 23, 28, 29, 27, 30, 31, 35, 41, 42, 45, 46, 47,  
48, 50, 51, 63, 54, 55, 56, 57, 58, 59, 61, 62, 63, 64, 85,  
88, 89, 89, 70, 72, 85, 87, 90, 94, 95, 98, 100, 104, 105,  
107, 108, 109, 110, 111, 112, 113, 115, 116, 117, 118,  
119, 121, 123, 125, 131, 132, 142, 162, 164, 166, 167  
Gould Evans Associates 1, 10, 21, 27, 31, 53, 64, 68, 72  
Gravelly and Hansen 14, 23, 25  
Gruzen Samton 104, 111  
GZA GeoEnvironmental Inc. 1, 21, 31, 81, 83, 89, 72  
Halaj & Aldrich Inc. 1, 19, 21, 51, 123  
Hall Associates Inc. 21  
Han-Pedron Associates LLP 10, 14, 21, 23, 27, 85, 89,  
111  
Hanson Engineers Inc. 10, 21, 30, 31, 57, 89, 95, 118  
Hardesty & Hanover LLP 1  
Harding Lawson Associates 21, 100  
Hardy Holzman Pfeiffer Associates 116  
Frederic R. Harris Inc. 13, 14, 17, 23, 26, 27, 30, 31,  
42, 45, 47, 49, 57, 59, 60, 61, 63, 65, 73, 81, 89, 92, 95,  
101, 106, 107, 108, 111, 118, 119, 121, 123, 128, 145,  
151  
Harris Group Inc. 21, 25, 68, 72, 104, 123  
Hart Grower Inc. 1, 11, 12, 13, 15, 16, 21, 23, 25, 68,  
100, 105, 113, 118, 159, 167  
Harza Engineering Co. 10, 11, 12, 13, 14, 15, 16, 17,  
18, 19, 20, 22, 23, 24, 25, 27, 30, 31, 46, 59, 60, 66, 80,  
84, 104, 107, 110, 111, 112, 113, 114, 118, 120, 121, 123,  
131, 132, 160, 164, 162, 165, 167  
Hayes, Saxe, Mattson & Mattson Inc. 12, 17, 23, 30,  
42, 67, 89, 95, 94, 104, 122  
Hazen and Sawyer PC 11, 14, 15, 21, 23, 24, 25, 85  
HDR Inc. 1, 21, 31, 57, 63, 72, 86, 87, 92, 100, 107, 113,  
121, 123  
Heery International Inc. 21, 51, 53, 68, 72  
Hellmuth, Obata & Kassabaum (HOK) 1, 10, 11, 12,

13, 21, 23, 25, 27, 31, 45, 47, 51, 53, 55, 56, 57, 61, 63,  
64, 66, 67, 68, 72, 83, 87, 89, 91, 92, 94, 95, 100, 104,  
106, 107, 108, 109, 111, 113, 115, 118, 119, 120, 121,  
123, 126, 131, 139  
The Hillier Group 1, 47, 54, 63, 72, 94, 100, 111, 110  
HKS Inc. 30, 100, 108  
HLW International LLP 51, 58, 61, 68, 70, 72, 87, 88,  
92, 104, 111, 113, 162  
HNTB Corp. 1, 10, 12, 21, 23, 28, 30, 31, 104, 109, 118,  
121  
Holmes & Narver 1, 13, 111, 115, 116, 131, 160  
HOK Group 31  
ICF Kaiser International Inc. 1, 12, 13, 14, 15, 21, 23,  
27, 42, 45, 47, 48, 51, 55, 56, 64, 68, 72, 94, 95, 100, 104,  
105, 108, 113, 118, 121, 123  
Industra Service Corp. 1  
International Technology Corp. 21, 62, 111, 121  
Jordan, Jones & Goulding Inc. 31  
Albert Kahn Associates Inc. 1, 12, 72, 107  
Kaplan/McLaughlin/Diaz Inc. 12, 13, 14, 15, 21, 27,  
45, 68, 89, 104, 108, 107, 108, 109, 111, 113, 118, 119,  
131  
Karlberger Cos. 67  
The M.W. Kellogg Co. 1, 10, 12, 14, 21, 27, 42, 45, 46,  
47, 60, 81, 84, 88, 57, 63, 66, 68, 69, 72, 83, 88, 89, 90,  
91, 82, 94, 100, 104, 107, 108, 109, 111, 113, 121, 123,  
130, 162, 160  
Kinley-Hord & Associates Inc. 1, 53, 68, 72, 106, 111  
Kling Lindquist 21, 45, 58, 72, 92, 118  
Lester B. Knight & Associates Inc. 1, 10, 12, 21, 42,  
47, 51, 53, 55, 61, 70, 72, 100, 104, 108, 111, 113, 118,  
119  
Kohn Pedersen Fox Associates PC 10, 12, 21, 31, 43,  
45, 63, 64, 61, 63, 72, 82, 83, 88, 92, 98, 100, 104, 106,  
107, 108, 109, 111, 113, 118, 119, 121, 123, 128  
KRT Corp. 1, 10, 12, 21, 27, 30, 87, 92, 109, 113, 119  
The Kvaerner Group 1, 11, 12, 13, 14, 24, 30, 31, 55,  
65, 72, 83, 92, 100, 108, 113, 117, 118, 119, 123, 163,  
167  
Langan Engrg. & Environ. Svcs. Inc. 54, 57  
Langdon Wilson Architecture Ping. Int. 21, 61, 63, 67,  
68, 90, 92, 104, 118, 121  
Law Engineering & Environ. Services Inc. 1, 10, 13,  
22, 25, 45, 46, 48, 49, 81, 52, 63, 54, 56, 58, 57, 63, 64,  
65, 66, 68, 70, 72, 73, 81, 88, 89, 89, 91, 93, 94, 95, 98,  
101, 106, 107, 108, 109, 110, 112, 117, 118, 120, 123,  
124, 128, 132, 133, 134, 137, 139, 142, 148, 160, 153,  
154, 160, 161, 162, 164, 165, 168  
Legat Architects Inc. 13, 55, 62, 104, 108, 120  
Lewin/Friels/Recon Group Inc. 21  
T.Y. Lin International 1, 23, 31, 64, 68, 100, 101, 104,  
107, 108, 109, 111, 113, 116, 119, 121, 123, 128  
LJB Engineers & Architects 10, 12, 21  
LJM Architects 1, 104  
Lockwood Greene Engineers Inc. 1, 10, 12, 13, 21, 24,  
25, 28, 31, 33, 42, 47, 53, 56, 57, 63, 66, 68, 71, 104, 109,  
109, 110, 111, 113, 118, 119, 123, 157, 162  
Lovbl Schirmer & Mackl Inc. 13, 21, 104  
Lohan Associates Co. 161, 104

Joseph R. Loring & Associates Inc. 58, 72, 89, 95,  
104  
THE LPA GROUP INC. 35  
The LZA Group Inc. 13, 21  
Maguire Group Inc. 30  
Malcolm Pirnie Inc. 1, 12, 14, 21, 30, 31, 38, 53, 57, 63,  
65, 100, 113, 115, 118, 123, 160  
Martin Associates Group 10, 53, 104, 108, 111, 113  
Matrix Technologies Inc. 109  
McCluer 10, 12, 13, 21, 51, 104, 113  
McDermott International Inc. 1, 62, 68, 72, 89, 91, 92,  
98, 104, 107, 115  
McLarand, Yaquez & Partners Inc. 21, 23, 106  
McLaren/Bart Environ. Engrg. Corp. 104  
Mead & Hunt Inc. 107  
Merrick & Co. 21  
Metcalfe & Eddy 1, 12, 14, 21, 31, 47, 65, 63, 67, 72, 86,  
87, 91, 92, 95, 100, 118, 119, 123, 131  
Middough Associates Inc. 21, 45, 53, 61  
Moffatt & Nichol Engineers 13, 14, 21, 23, 30, 52, 85,  
100, 104, 108, 109, 111, 113, 123, 151  
Montgomery Watson Inc. 1, 10, 12, 13, 21, 23, 30, 40,  
43, 45, 46, 47, 49, 53, 58, 57, 59, 59, 63, 65, 67, 72, 81,  
82, 89, 97, 99, 99, 99, 100, 102, 104, 106, 107, 108,  
111, 113, 115, 116, 117, 118, 119, 121, 123, 128, 131  
Walter P. Moore and Assoc. Inc. 17, 58, 92  
Morris Architects 30, 104, 123  
Morrison Knudsen Corp. 1, 10, 12, 21, 24, 25, 27, 53,  
57, 63, 66, 71, 72, 90, 92, 101, 104, 108, 109, 110, 113,  
114, 116, 118, 121, 123, 128, 131, 157, 166  
Mueser Rutledge Consulting Engineers 12, 13, 21, 23,  
25, 92, 108, 111, 115, 118, 121  
J. Muller International Inc. 1, 31, 51, 113, 118, 123,  
161  
Mustang Engineering Inc. 16, 27, 104, 140, 159  
NBBJ 10, 13, 72, 94, 103, 104, 108, 111, 118, 119, 121  
Waldemar S. Nelson & Co. Inc. 108  
Newcomb & Boyd 104, 109  
Niles Bolton Associates Inc. 30, 68, 131  
O'Brien & Gere Engineers Inc. 1, 21, 31  
Ogden Environmental & Energy Svcs. Co. Inc. 1, 10,  
53, 69, 100, 110  
On-Board Chemical Corp. 12, 21, 53, 55, 65, 68, 72,  
104, 107  
O'Neal Inc. 21  
The Osborn Engineering Co. 104, 107  
PageSoutherlandPage 57  
Paramatrix Inc. 89, 100, 108, 117  
Parsons Brinckerhoff Inc. 1, 10, 14, 21, 23, 28, 31, 47,  
55, 63, 66, 72, 81, 85, 86, 87, 83, 84, 93, 100, 104, 106,  
107, 108, 109, 110, 113, 118, 119, 120, 121, 123, 126,  
131, 159, 162, 165, 167  
Perkins Corp. 1, 10, 11, 12, 13, 14, 16, 17, 21, 23, 25,  
27, 31, 46, 48, 53, 54, 55, 57, 63, 69, 69, 67, 71, 72, 69,  
85, 87, 89, 90, 91, 92, 95, 101, 104, 107, 108, 109, 110,  
111, 113, 116, 118, 120, 121, 123, 125, 126, 130, 131,  
152, 162  
Patriot Engineering Inc. 1

April 20, 1998

Engineering News-Record

Page 87

"The Top 500 Design Firms...Banner Year Abroad Haunted by Fears and Hopes About Asia"

By: Gary J. Tulacz and Mary B. Powers

1493

THE TOP 500 DESIGN FIRMS

chin" in Southeast Asia, says Robert Prieto, chairman of Parsons Brinckerhoff. But he is confident that the transportation market will rebound. "We have a strong backlog and only one [project] cancellation. So we expect only a short-term dropoff," Prieto says.

Not all of Asia is gloom and doom. "The Asian market has shrunk, but China continues to provide plenty of opportunities, along with Hong Kong," says

Jim Adam, CEO of Black & Veatch. India shows huge potential, "but it's a market that has been slow to start up."

Another concern among international design firms is the impact of low oil prices on the petroleum construction market. "The price of oil has a psychological effect," says Charlie Oliver, group president. Fluor Daniel Corp. Petroleum jobs have been delayed, but none have been canceled, he says. It will take at

least another six months to a year of low oil prices before projects start to dry up. "The oil companies say they are looking to the long term, so we are not materially concerned with the price of oil," he says.

As Asia has slowed down, other regions have picked up. Latin America and the Middle East are lively. "Latin America is particularly a hot bed of additional projects," especially in the heavy oil mar-

THE TOP 500 OVERSEAS

GEARHEAD AND COUNTRIES (SEE COUNTRY CODED ON P. 87)

- Pryor Associates Inc. 96, 97, 98, 111, 113
The P&S Corp. 16, 17, 23, 27, 30, 31, 38, 68, 94, 95, 104, 110, 123, 163, 163
Peer Consultants 162
Pel Cobb Freed & Partners Architects LLP 61, 53, 61, 68, 65, 65, 104, 109, 109, 118, 118, 121
Pennoni Associates Inc. 21, 31, 68, 98, 108, 109, 111, 118, 118
Perkins Eastman Architects PC 1, 12, 24, 68, 104
Parkins & Will 12, 14, 21, 68, 72, 68, 92, 98, 103, 104, 105, 109, 112, 118, 119, 121, 131
Peterson Engineering Inc. 21, 27, 31, 72, 81, 92, 99, 100, 104, 108, 111, 130, 138
Pickering Inc. 63
Pitt-Des Moines Inc. 10, 13, 17, 18, 21, 23, 27, 31, 67, 81, 92, 94, 104, 113
Polchak & Partners Architects 111, 119
Power Engineers Inc. 1, 119
Process Facilities Inc. 1
Proto-Power Corp. 1
The P&I Group of Cos. 1, 51, 53, 109, 118
Raba-Kistner Consultants Inc. 21
Redian International LLC 1, 10, 13, 21, 31, 53, 57, 61, 68, 72, 100, 104, 110, 121, 123, 128
Raymond Professional Group Inc. 23, 31, 71, 104, 120
Raytheon Engineers & Constructors Int'l 1, 10, 11, 12, 13, 14, 18, 21, 23, 27, 30, 31, 35, 43, 50, 61, 63, 65, 66, 67, 81, 62, 63, 64, 65, 66, 67, 68, 69, 70, 72, 81, 86, 87, 89, 90, 91, 92, 93, 94, 104, 107, 108, 109, 111, 113, 118, 119, 121, 123, 128, 130, 131, 162
The RBA Group 118
Robert Bohn, William Frost & Associates 21, 108, 113, 117
RMT Inc. 21, 53, 72, 100
Ruchlin, Baran & Barbora Inc. 104, 108
Russer International Inc. 1, 31, 43, 53, 72, 131
RTKL Associates Inc. 1, 10, 12, 13, 14, 21, 25, 26, 27, 31, 46, 47, 50, 51, 53, 63, 64, 66, 72, 88, 87, 88, 95, 100, 104, 106, 107, 108, 109, 111, 113, 118, 119, 121, 123, 128, 131, 134, 133, 162
Rust Environmental & Infrastructure 21, 27, 61, 72, 85, 106, 123
Sergent & Lundy 1, 10, 12, 14, 17, 21, 25, 27, 53, 63, 66, 70, 72, 85, 90, 94, 100, 104, 105, 107, 108, 109, 110, 111, 118, 119, 123, 131, 160

- Sasaki Associates Inc. 30, 38, 51, 64, 57, 62, 108, 109, 113, 118, 131
SCS Engineers 1, 14, 115
Sebesta Blomberg & Associates 72
Chan, H. Saka Inc. 19
Shannon & Wilson Inc. 21, 23
Sheladin Associates 19, 60, 107, 108, 110, 150, 151, 157, 158, 161, 162, 164, 165
Simons Engineering 1, 12, 21
Simpson Gumpertz & Heger Inc. 1, 12, 18, 21, 31, 68, 62, 64, 95, 104, 106, 118, 123, 126, 134, 162
Skidmore, Owings & Merrill LLP 1, 12, 18, 58, 61, 68, 72, 85, 87, 94, 104, 105, 107, 109, 111, 113, 118, 119, 121, 123
Skilling Ward Magnusson Barkshire Inc. 42, 94, 100, 102, 104, 109, 111, 113, 118, 119, 120, 123, 128
Smallwood, Reynolds, Stewart, Stewart & Assoc. Inc. 12, 30, 81, 81, 85, 103, 104, 107, 108, 113, 119, 128, 131, 162
SmithGroup Inc. 1, 51, 67, 100, 113, 118
Spector Group 51, 65, 72
SpM&S Candala & Partners Inc. 10, 12, 13, 15, 20, 21, 22, 23, 30, 31, 35, 68
SSDE Inc. 12, 21, 27, 51, 72, 104
The Stanley Consultants Group 13, 14, 21, 26, 30, 35, 45, 68, 68, 67, 81, 103, 104, 109, 131, 142, 165, 157
The Stichter Design Group Inc. 113
Edward D. Stone Jr. & Associates 10, 12, 13, 15, 16, 21, 23, 27, 31, 35, 58, 97, 92, 99, 162
Stone & Webster 1, 10, 12, 14, 17, 21, 25, 27, 31, 35, 45, 46, 47, 48, 50, 51, 53, 54, 58, 58, 57, 61, 62, 63, 64, 66, 68, 69, 70, 72, 81, 82, 87, 89, 90, 91, 92, 94, 95, 100, 101, 104, 107, 108, 109, 111, 112, 113, 118, 118, 118, 119, 121, 123, 128, 128, 131, 160, 168, 162
STV Consultants Ltd. 21, 30, 31, 35
The Stubbins Associates Inc. 67, 68, 62, 69
STV Group 10, 13, 15, 16, 22, 23, 31, 41, 51, 53, 67, 68, 68, 94, 104, 108, 118, 121, 123, 128, 147, 160
Swardrop Corp. 1, 12, 20, 21, 31, 38, 51, 53, 68, 68, 70, 87, 91, 92, 95, 100, 109, 109, 111, 121, 123
Swanson Hayden Dennis Ltd. 23, 27, 31, 32, 66, 66, 72, 94
Syka & Heaney 82, 111
TAMS Consultants Inc. 1, 10, 11, 14, 15, 16, 20, 23, 30, 51, 81, 88, 68, 90, 98, 101, 104, 118, 123, 131, 132, 149,

- 154, 158, 161, 164, 167
TBE Group Inc. 31
Tetra Tech Inc. 1, 10, 13, 21, 23, 28, 35, 47, 53, 55, 68, 71, 100, 101, 104, 103, 107, 108, 109, 111, 118, 121, 123
Thompson, Ventulett, Stainback & Assoc. Inc. 12, 13, 30, 31, 109, 111
Tight & Bond Inc. 12
R.M. Towill Corp. 104, 111, 118
Transtystems Corp. 14, 23, 25, 100, 104, 108, 110
TRB/The Ritchie Organization 64, 67
TSD/Korva & Associates 123
Universal ENCO Inc. 1, 21, 31, 68, 110, 140
Urban Group 68
URS Greiner Woodward-Clyde 1, 10, 11, 12, 13, 14, 16, 16, 17, 19, 21, 22, 23, 28, 27, 30, 31, 35, 42, 43, 45, 46, 47, 51, 62, 63, 64, 65, 66, 67, 64, 68, 68, 70, 72, 81, 90, 94, 99, 100, 104, 106, 107, 108, 109, 111, 113, 115, 116, 117, 118, 120, 121, 123, 128, 161
Vanessa Hangan Bruntin Inc. 107
Vansar Inc. 61, 68, 72, 106, 162
VDA Associates Inc. 1, 12, 13, 14, 25, 31, 99, 107
Vulmer Associates LLP 1, 12, 13, 21
Walker Parking Consultants 1, 31, 68, 118
Wallace, Roberts & Todd 13, 23, 35, 111, 113, 118
Watkins Hamilton Ross Architects 38
Weidinger Associates 10, 23, 57, 68, 87, 92, 104, 111, 113
Roy F. Weston Inc. 12, 21, 23, 27, 31, 48, 56, 58, 70, 72, 104, 118, 121
Wilbur Smith Associates Inc. 11, 13, 16, 25, 31, 48, 58, 58, 63, 72, 85, 101, 104, 108, 107, 108, 113, 114, 118, 119, 123, 128, 132, 150
Wiley & Wilson, A Professional Corp. 31, 68
Wilson & Co. 21
Wimberly Alliance Tong & Goo Inc. 10, 12, 21, 23, 26, 31, 66, 61, 64, 68, 72, 88, 87, 92, 93, 100, 107, 108, 109, 111, 113, 116, 118, 119, 120, 123, 126, 131, 139, 150
Wink Inc. 27, 35
Wingler & Kelly Consulting Engineers 111, 116
Wiss, Janney, Elstner Associates Inc. 1, 10, 20, 30, 31, 33, 72, 88, 87, 100, 101, 104, 105, 111, 110, 118, 131
Woolpert LLP 11, 12, 14, 24, 27, 31, 63, 109, 111
Zimmer Group Frases Partnership 104, 107

April 20, 1998

Engineering News-Record

Page 87

"The Top 500 Design Firms...Banner Year Abroad Haunted by Fears and Hopes About Asia"

By: Gary J. Tulacz and Mary B. Powers

5 of 5

1433

**THE TOP 500 DESIGN FIRMS**

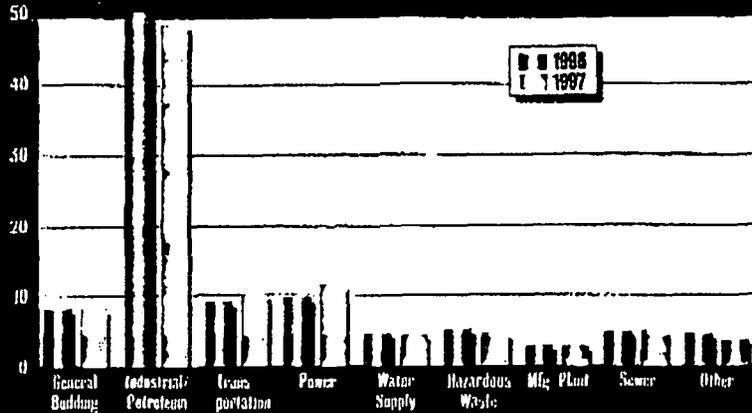
ket, says Larry Pope, president of Brown and Root Engineering and Construction.

The power market in Latin America also is strong. "Power is a tough business and the independent power producers are tough clients," says James F. McNulty, CEO of the Parsons Corp. "But there is still a big need, and we don't see any slowdown. South America, particularly Brazil, seems to be the best."

Europe also is providing a substantial workload. "In Europe, there is a lot more new building going on than in the past," says George Alexander, principal at Swanke Hayden Connell Ltd. "Much of the existing stock that was put up in the 1960s was not well built." Now, European clients are putting more thought into

**INDUSTRIAL PROCESS/PETROLEUM MARKET REMAINS ON TOP**

Markets as % of total international billings 1997 TOTAL: \$ 7.32 billion



Source: ENR

says Craig Zeien, president of regulatory operations at CH2M Hill Cos. "Multinational companies want you to follow them," he says. "If you can't, they will find someone who can."

Clients going global are relying on design firms to deliver more than just designs. They want to know how to execute a job abroad, says Michael L. Rich, vice president of engineering for M.W. Kellogg. "The one thing they always want to know is how to do business there," he says.

"[Owners] start out talking to our engineers and project managers. But they want the sales, marketing and legal people in the dialogue. They want to talk to the business people."

Even so, firms hoping to follow U.S. clients abroad must be careful. "Clients will expect the same level of service in

er, a New Zealand-based power consultancy, which should be finalized in May. At that time, PB plans to create a new global power group, tying the skills of Merz and Design Power together.

Another firm planning to parlay its corporate relationships into a strong European presence is Lockwood Greene.

**TOP DESIGNERS IN INTERNATIONAL MARKETS**

- 1 Bechtel Group Inc.
- 2 Brown & Root Inc.
- 3 Foster Wheeler Corp.
- 4 ABB Lummus Global Inc.
- 5 Fluor Daniel Inc.
- 6 Black & Veatch
- 7 Parsons Corp.
- 8 The Louis Berger Group
- 9 Raytheon Engrs. & Constructors Int'l
- 10 Stone & Webster

- 11 McDermott International Inc.
- 12 The M.W. Kellogg Co.
- 13 Montgomery Watson Inc.
- 14 Parsons Brinckerhoff Inc.
- 15 CH2M Hill Cos. Ltd.
- 16 Golder Associates Corp.
- 17 Law Engineering & Environ. Svcs. Inc.
- 18 URS Greiner Woodward-Clyde
- 19 Dames & Moore Group
- 20 Sargent & Lundy LLC
- 21 ERM Group
- 22 Hellmuth, Obata & Kassabaum (HOK)
- 23 Harza Engineering Co.
- 24 Gamp Dresser & McKee Inc.
- 25 Day & Zimmermann International Inc.
- 26 IOF Kaiser International Inc.
- 27 Skidmore, Owings & Merrill LLP
- 28 Lester B. Knight & Associates Inc.
- 29 ENSR
- 30 The Kvaerner Group

- 31 Lockwood Greene Engineers Inc.
- 32 Frederic R. Harris Inc.
- 33 Mustang Engineering Inc.
- 34 Holmes & Narver
- 35 BE&K Inc.
- 36 T.Y. Lin International
- 37 RTKL Associates Inc.
- 38 Corpro Cos. Inc.
- 39 Burns and Roe Enterprises Inc.
- 40 Daniel, Mann, Johnson, & Mendenhall
- 41 Bateman Engineering Inc.
- 42 Earth Tech Inc.
- 43 Morrison Knudsen Corp.
- 44 Wimberly Allison Tong & Go Inc.
- 45 Kohn Pedersen Fox Associates PC
- 46 Fugro Inc.
- 47 Petrocon Engineering Inc.
- 48 KTI Corp.
- 49 Metcalf & Eddy
- 50 Ellerbe Becket

what they actually need. "It's no more 'get me 25% more of the same,'" says Alexander. "Needs assessments are standard operating procedure in the U.S., but only now are they becoming common in Europe, especially in the U.K."

Many U.S. firms have found success penetrating the mature European market through local subsidiaries. "Our work in Europe is driven by power projects through our [U.K.-based] subsidiary Merz & McLellan," says Prieto. PB now is in the process of acquiring Design Pow-

er, a New Zealand-based power consultancy, which should be finalized in May. At that time, PB plans to create a new global power group, tying the skills of Merz and Design Power together.

Another firm planning to parlay its corporate relationships into a strong European presence is Lockwood Greene.

Mexico or Brazil that they get in the U.S.," says Leslie. "We have to work hard to make sure they are not disappointed, because a disappointment abroad can affect your relationship with the client in the U.S."

By Gary J. Tulacz and Mary B. Powers

Reprints of the Top 500 Design Firms are available for \$10 each. Please include payment with order. Multiple copy rates are available on request. Write: ENR Reprints, Room 4188, 1221 Avenue of the Americas, New York, N.Y. 10020, or call (212) 512-4835.

April 27, 1998  
Engineering News-Record  
Page 12  
"Fluor Picks 'Outsider' as CEO"

1433

People

# FLUOR PICKS 'OUTSIDER' AS CEO

FLUOR CORP. SURPRISED THE INDUSTRY by going outside the company and outside the construction industry to find a new chairman. But Wall Street analysts consider it good news.

As president and chief executive officer of Shell Oil Co., Philip J. Carroll is not a complete outsider. Shell is Fluor's largest client and "he will give the company a new perspective," says Chris Hussie, an analyst with Goldman Sachs.

Fluor suffered from several problems last year, including earnings that failed to meet Wall Street's expectations. Its stock has recovered somewhat from a February 1997 tumble. Goldman Sachs believes Fluor now has "a modest upside."

When longtime Chairman and Chief Executive Les McCraw was diagnosed with cancer and resigned January 1, two years ahead of plans, Fluor's board was caught unprepared and realized it had not prepared adequately for succession,

says Bobby Inman, an influential board member.

The obvious choices to succeed him within Fluor had not been trained for the job, says Inman. "The board had not paid attention, and they were not at ease with the full Fluor Corp. That's what led us outside," he says. Bringing Carroll on board will give Fluor the one attribute it does not have in-house. "It give us the client's view," Inman says.

The board also looked hard at the construction industry, but could not find anyone with the international experience needed to run Fluor. Half of its business comes from overseas. "Riley Bechtel wasn't available," says Inman.

The search was over as soon as it became apparent Fluor had a shot at Carroll, say Inman. Shell's 60-year-old mandatory retirement age is forcing Carroll to leave this year. Oil and gas insiders praise his work at Shell, where he has been president since 1993. □



CARROLL

April 30, 1998  
The Dearborn County Register  
Page 2-A  
"Fernald meeting "

1433

### **Fernald meeting**

The Fernald Health Effects Subcommittee will meet Wednesday, May 6, and Thursday, May 7, at The Plantation, 9960 Dry Fork Road, Harrison.

The May 6 meeting is from 12:30 p.m. to 5 p.m. (DST, fast time) and 6:30 p.m. to 9 p.m. The May 7 meeting is 8:30 a.m. to 5 p.m.

Topics will include proposed risk assessments for kidney and bone cancer, plans for the K-65 silo remediation, expansion of the dose reconstruction study, options for NIOSH work at Fernald and other related topics.

Questions and concerns can be mailed to Fernald Health Effects Subcommittee, c/o Steve Adams, Centers for Disease Control and Prevention, Building 101, 4770 Buford Highway, N.E., Mailstop F-35, Atlanta, GA

000034

May 4, 1998  
Cincinnati Enquirer  
Front Page  
"Catholic leader rips Chiquita"  
By: Mike Gallagher and Cameron McWhirter

# Chiquita SECRETS Revealed

'How can you take money from a corporation ... doing that kind of thing to perfectly good and totally innocent people?'

# Catholic leader rips Chiquita

## Cincinnati banana giant responds to Enquirer probe

BY MIKE GALLAGHER  
and CAMERON  
McWHIRTER  
The Cincinnati Enquirer

In response to revelations about Chiquita Brands International's overseas business practices in Sunday's *Enquirer*, a prominent Catholic bishop has called on Catholic institutions not to accept donations from Carl H. Lindner Jr. or Chiquita.

Chiquita, meanwhile, issued a statement Sunday defending itself "as a good corporate citizen notwithstanding the unfair and inaccurate assertions of the *Enquirer*."

But Bishop Thomas Gumbleton, an auxiliary bishop of De-



troit, said the *Enquirer's* findings reflect what he saw firsthand on Chiquita farms he visited in Honduras last year. A member of the U.S.

T. Gumbleton Catholic Conference's Social Justice Committee, Bishop Gumbleton is an internationally known spokesman and investigator for the Catholic Church on human rights and social justice issues. The Catholic Conference is the social policy arm of the National Conference of Catholic Bishops.

On Sunday, Bishop Gumbleton called for Catholic leaders to reject donations from Chiquita and Mr. Lindner, the company's chairman and chief executive officer. He said such gifts

involved "blood money earned off the backs of the poor peasants of Central America."

The bishop made his comments after reading the Sunday Chiquita stories on the *Enquirer* Web site.

In the 18-page special section Sunday, the *Enquirer* de-

scribed the findings of a year-long investigation into the Cincinnati-based banana giant. Among those findings:

► Chiquita secretly controls dozens of supposedly independent banana companies in Latin

(Please see **CHIQUITA**, Page A5)

May 4, 1998

Cincinnati Enquirer

Front Page

"Catholic leader rips Chiquita"

By: Mike Gallagher and Cameron McWhirter

1433



**STATEMENT ISSUED BY CHIQUITA BRANDS INTERNATIONAL**

On Sunday, May 3, the Cincinnati Enquirer published a sensational and highly inaccurate story impugning the reputation and business practices of Chiquita Brands International. Chiquita is known globally as a leading international producer of wholesome and healthy foods and as a good corporate citizen — investing in local communities, building schools and improving the quality of life for tens of thousands. We are proud of the success we have had in providing benefits and wages in Latin America that far exceed those available from other jobs and protecting the environment in a manner that has earned praise from the most prominent independent environmental organizations. Chiquita is proud of its work and denies the false implications of the Enquirer's article.

The information contained in the Enquirer's story was selectively edited, incomplete and presented out of context and portrays a false and highly inaccurate image of Chiquita. Chiquita and other independent sources made extraordinary efforts to provide facts and documents which demonstrate the true record. Unfortunately, the Enquirer ignored the hundreds of pages of documents detailing the facts regarding Chiquita's sound business practices. Instead, the Enquirer has affiliated itself and worked in concert with persons having financial, political and economic motives to damage Chiquita.

Chiquita adheres to the highest standards of product quality and social responsibility, applying world-class standards regarding associate relations, product quality and environmental controls. Chiquita will continue to meet its obligations as a good corporate citizen notwithstanding the unfair and inaccurate assertions of the Enquirer.

### Chiquita Brands statement

On Sunday, May 3, the Cincinnati Enquirer published a sensational and highly inaccurate story impugning the reputation and business practices of Chiquita Brands International. Chiquita is known globally as a leading international producer of wholesome and healthy foods and as a good corporate citizen — investing in local communities, building schools and improving the quality of life for tens of thousands. We are proud of the success we have had in providing benefits and wages in Latin America that far exceed those available from other jobs and protecting the environment in a manner that has earned praise from the most prominent independent environmental organizations. Chiquita is proud of its work and denies the false implications of the Enquirer's article.

presented out of context and portrays a false and highly inaccurate image of Chiquita. Chiquita and other independent sources made extraordinary efforts to provide facts and documents which demonstrate the true record. Unfortunately, the Enquirer ignored the hundreds of pages of documents detailing the facts regarding Chiquita's sound business practices. Instead, the Enquirer has affiliated itself and worked in concert with persons having financial, political and economic motives to damage Chiquita.

Chiquita adheres to the highest standards of product quality and social responsibility, applying world-class standards regarding associate relations, product quality and environmental controls. Chiquita will continue to meet its obligations as a good corporate citizen notwithstanding the unfair and inaccurate assertions of the Enquirer.

May 4, 1998

Cincinnati Enquirer

Front Page

"Catholic leader rips Chiquita"

By: Mike Gallagher and Cameron McWhirter

E 1433

# Chiquita: Bishop blasts company

CONTINUED FROM PAGE A1

America. It uses elaborate business structures to hide its control, avoiding restrictions on land ownership and national security laws. The structures also are aimed at limiting unions on the farms.

► Chiquita's subsidiaries engage in pesticide practices that endanger the health of banana workers and nearby residents, despite an agreement with an environmental group to adhere to certain safety standards. Those practices include aerial pesticide spraying while workers are still in the fields.

► Security guards of Chiquita subsidiaries and their joint-venture partners have used brute force to enforce their authority on plantations. The violence by these guards has resulted in the death and wounding of unarmed peasants, including children.

Chiquita is "an evil institution for exploiting the poor," Bishop Gumbleton said. "I saw (people) living in a dismal situation. What I would ask the Catholic leaders of Cincinnati and elsewhere is 'How can you take money from a corporation or ... (a chairman) of a corporation who is doing that kind of thing to perfectly good and totally innocent people and depriving them of a chance to get a decent livelihood?'"

In October, Mr. Lindner and his family donated \$1.5 million to the Archdiocese of Cincinnati to provide computers for inner-city Catholic schools.

Efforts to reach Cincinnati Archbishop Daniel E. Pilarczyk and archdiocese spokesman Dan Andriacco

## On the Web



The complete text of the Enquirer's investigation into Chiquita Brands International Inc. can be accessed at the Enquirer's Web site:

[enquirer.com/chiquita](http://enquirer.com/chiquita)

were unsuccessful Sunday.

Telephone calls to Mr. Lindner and Steven Warshaw, president and chief operating officer of Chiquita Brands International Inc., were not returned. Robert Olson, Chiquita's general counsel, spoke with an Enquirer reporter but would not say whether the company would issue a statement in response to Bishop Gumbleton's comments.

Bishop Gumbleton said the 2,000-mile distance that separates Chiquita's banana farms and its Cincinnati headquarters is no excuse for allowing the problems in Latin America to continue. "It doesn't take a big effort for Carl Lindner to go down there and just find out what's going on at his plantations.

"I don't believe that a person like Carl Lindner is the only corporate leader in this country doing this kind of thing," he said. "But the evidence uncovered by (the Enquirer), and what I have personally observed, makes it clear that he and his company must make changes to protect the very lives of the people who made them so wealthy."

000037

May 4, 1998

Cincinnati Enquirer

Front Page

"Water rift runs deep in Whitewater...Project divides township"

By: Rachel Melcer

1433

# Water rift runs deep in Whitewater



The Cincinnati Enquirer/Yoni Pazner

Whitewater Township resident Gina Schwegler gets water delivered to her cistern by her father-in-law, Jim Schwegler. She opposes the cost of Hamilton County's plans to bring water lines to her neighborhood.

## Project divides township

Whether to stop or spur growth underlies split

BY RACHEL MELCER  
The Cincinnati Enquirer

For years, Whitewater Township residents have clamored for city water service.

Tired of hauling water in trucks and waiting for rain to fill their cisterns, they petitioned Hamilton County commissioners and called the Department of Public Works.

People living west of the Great Miami River demanded the same water service available to the rest of county.

By summer's end, they will have at least part of what they wished for: A water main will be extended down Ohio 128 into Miamitown, then west along Harrison Road to Buena Vista Drive.

Yet no one is happy about that.

Proponents of the water service in the 5,200-person township are mostly longtime residents who bemoan the lack

### Growing pains

► Many Whitewater Township residents worry about losing peaceful rural life. A4

of progress in their community, along with those buying into the area's newest upscale housing. But they complain the project doesn't go far enough.

Opponents, however, worry that the city water will bring a development boom and will destroy their way of life. Some

complain that the cost of installation is so high it could force them to sell their homes.

People on both sides of the issue blame the county commissioners for their woes.

"My problem with the whole thing of bringing (city water) into Miamitown is that usually, majority rules. But in this case, we were just told it was coming," said Hubert Brown, president of the Whitewater Township trustees.

(Please see WATER, Page A4)

May 4, 1998

Cincinnati Enquirer

Front Page

"Water rift runs deep in Whitewater...Project divides township"

By: Rachel Melcer

2 of 2

1433

# Water: Fuels Whitewater fight

CONTINUED FROM PAGE A1

"This was never put to a vote; it was never put through the petition process. It was just, 'You're going to have it and you're going to pay for it.'"

But Val McKenzie, 49, who has spent most of his life in Whitewater Township, said there has been some sort of grass-roots effort to obtain city water service for as long as he can remember.

In the late 1980s, a "master plan" devised by Hamilton County officials identified Miamitown as the first, best spot for a water main west of the Great Miami River. But there was never any money or countywide will to get it done.

A spark came three years ago in the form of a \$6 million federal Department of Energy contribution, earmarked to provide a clean water source for residents of Crosby Township near the defunct Fernald uranium processing plant.

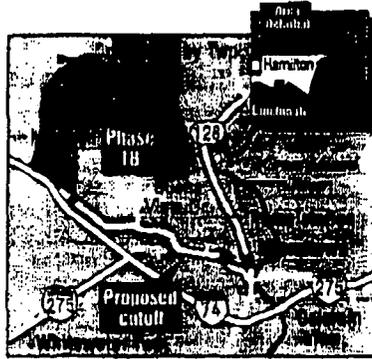
County studies showed Cincinnati Water Works would be the best supplier for the area. But waterworks officials refused to do the job without a larger customer base than that in the immediate area around Fernald, said Jeff Leedy, deputy director of Hamilton County Public Works.

So the city, county and waterworks struck a deal.

County commissioners approved extending the waterline into Whitewater Township as well as constructing a pump station and reservoir on Harrison Road, about halfway between Ohio 128 and Buena Vista Drive. They planned to run a water main west along Harrison Road all the way to Miami Whitewater Forest.

But they used up all the federal dollars on the first phase of the water-main project in Crosby Township. And they never consulted Whitewater Township residents, who are being forced to foot one-third of the bill for phase two. The county will pay the remainder.

"The sentiment we got back (after announcing the plan) is, 'We don't want this water and we didn't petition for it,'" recalled County Commission-



er John Dowlin.

After hearing the public outcry, the commissioners and waterworks engineers made changes: By including an existing water service area east of the Great Miami in the loop, they were able to scale back the waterline extension to Buena Vista Road — about 40 percent of the distance originally planned.

The project, originally budgeted at \$3 million, will now cost less than half that amount, Mr. Dowlin said. Property owners will be assessed up to \$34 per foot of frontage.

The water main will be extended only as far as needed to reach the planned pumping station and reservoir, according to Cincinnati Water Works supervising engineer Dan Schaefer.

Residents of the Blue Jay area, West Road and other side streets west of Buena Vista Road will not be able to tap in to the water supply — unless a majority of Harrison Road homeowners sign petitions in favor of a further extension.

Mr. McKenzie, who lives on West Road, and other pro-water residents are already gearing up for a petition drive. But he said he doubts their efforts will be successful.

He said county commissioners had no right to arbitrarily change the long-anticipated project.

"For five years, they said it was a done deal. And all of a sudden, they changed it," Mr. McKenzie said. Some homeowners have been putting

off repairs or upgrades to their cisterns, because they anticipated the switch to city water service, which now will not come, he said.

And he worried that the lack of easily accessible, good-quality water will continue to stunt growth and development — another issue that has residents deeply divided.

Tiny Miamitown, a Whitewater Township community that is not an incorporated municipality, is a hamlet of 1,000 people that's filled with old farmhouses and prefabricated houses on large lots.

Residents have repeatedly voted against giving zoning power to township officials, preferring the freedom to use their land as they see fit. Whitewater is the only township in Hamilton County without zoning regulations.

"We have a nice, quiet community. We have some of the very best schools. It should be a place that (officials) are proud of, not a place that they're trying to change and develop," said Gina Schwegler, 35, a vocal opponent of the waterline extension.

Mrs. Schwegler says she and her husband, Mark, will be forced to sell their home if they have to pay \$8,468 assessed on their property. Even if they qualify for a 20-year hardship deferral of 75 percent of that amount, she said it will come due at a time when they are paying for their children's college education.

And, as noted by the county's Mr. Leedy, the cost of hooking up to the water main is also substantial. Individual homeowners must pay fees to tap into the system, apply for plumbing permits and install a meter. And they have to pay for their own waterline extending from the road into their homes.

Mrs. Schwegler said the cost to her family will be nearly \$10,000.

"It's not that we don't want the water service," Mrs. Schwegler said. "We just want it at a reasonable price."

000039

May 4, 1998

The Cincinnati Post

Page 7A

*"Chiquita labels stories unfair"*

1433

# Chiquita labels stories unfair

From staff and wire reports

Chiquita Brands International officials lashed out at newspaper stories Sunday that accuse the Cincinnati-based company of questionable business practices in Central America.

The multinational company's officials released a statement to counter copyrighted stories published Sunday in the Cincinnati Enquirer.

"The information contained in (the newspaper's) story was selectively edited, incomplete and presented out of context and portrays a highly inaccurate image of Chiquita," the company said.

"Chiquita and other independent sources made extraordinary efforts to provide facts and documents which demonstrate the true record.

"Unfortunately (the newspaper) ignored the hundreds of pages of documents detailing the facts regarding Chiquita's sound business practices. Instead, (the newspaper) has affiliated itself and worked in concert with persons having financial, political and economic motives to damage Chiquita," company officials wrote in a press release.

"Chiquita is proud of its work and denies the false implications of (the newspaper's) article," they said, adding their description of the stories' assertions as

being "unfair and inaccurate."

Enquirer officials said they stand by their published stories.

The stories include assertions that:

- Chiquita secretly controls dozens of supposedly independent banana companies through business structures designed to avoid restrictions on land ownership and security laws in Central American countries.

- Chiquita and its subsidiaries are engaged in pesticide use that threatens the health of workers and nearby residents, despite an agreement with an environmental group to adhere to safe practices.

- A worker on a Chiquita subsidiary farm died in November 1997 after exposure to toxic chemicals in a banana field, according to a local coroner's report.

- Employees of Chiquita and a subsidiary were accused of involvement in a bribery scheme in Colombia that has come to the attention of the U.S. Securities and Exchange Commission. Two employees have been forced to resign.

- The SEC is probing Chiquita's business practices. In April, SEC investigators issued multiple subpoenas to Chiquita for documents.

Chiquita officials refused comment beyond their released statement.

000040

May 5, 1998

Cincinnati Enquirer

Page B2

"Cuts could slow Fernald cleanup"

By: Katherine Rizzo

# Cuts could slow Fernald cleanup

## Energy Dept. agrees FRESH's concerns valid

BY KATHERINE RIZZO

The Associated Press

WASHINGTON — An activist who fought to get a firm timetable for cleaning up decades' worth of contamination at the Fernald uranium processing plant in Crosby Township warned Monday that a smaller cleanup budget could render that timetable worthless.

"The people who live near Fernald will not tolerate this and will seek to

enforce all legal requirements," said Lisa Crawford of Fernald Residents for Environmental Safety and Health.

Ms. Crawford said the Department of Energy (DOE) had signaled its intent to ask for less money in its 1999 compliance budget than is needed to meet its cleanup obligations, including those laid out in legal agreements.

For fiscal 1999, the department is seeking \$479 million to meet environmental-compliance requirements at the Fernald complex and the other four sites managed by the DOE's central Ohio field office.

The estimated cost of meeting compliance-agreement milestones during that fiscal year is \$533 million.

"The choice is between canceling legal commitments and massive cost overruns," Ms. Crawford said during a news conference convened to draw attention to a lobbying effort by grass-roots environmental safety advocates from around the country.

The Energy Department said Ms. Crawford's criticism was valid.

"We believe that it would be very difficult for us to stay on schedule with the \$479 million," said spokesman Ken Morgan. "Even at \$533 (million), it had already been cut considerably and would have been tight."

If Congress provides that level of funding, he said, "we would see likely slippages in how fast we can clean up

various sites."

So far, most cleanup managed by the field office has been ahead of schedule, and "even at Fernald, we're very pleased with how we're doing," he said.

That's despite the failure of a test project of a process called vitrification, which converts radioactive wastes to glass pellets for long-term storage, and despite criticism from the General Accounting Office — the investigative arm of Congress — of contractor Fluor Daniel's financial management of Fernald.

The field office also manages sites in Miamisburg, Ashtabula and Columbus, Ohio, and West Valley, N.Y. The 1999 budget figures Ms. Crawford cited were for the field office as a whole.

000041

05/05/98 20:42 PUBLIC AFFAIRS → DOUG SARRNO

NO. 907 P010/013

1433

May 5, 1991  
Journal-News  
Front Page

"FRESH: Cutbacks will slow Fernald cleanup"  
By: Katherine Rizzo

# FRESH: Cutbacks will slow Fernald cleanup

By Katherine Rizzo  
The Associated Press  
WASHINGTON

An activist who fought to get a firm timetable for cleaning up decades' worth of contamination at the former Fernald uranium processing plant warned Monday that a smaller cleanup budget could render that timetable worthless.

"The people who live near Fernald will not tolerate this and will seek to enforce all legal requirements," said

Lisa Crawford of Fernald Residents for Environmental Safety and Health.

Crawford said the U.S. Department of Energy had signaled its intent to ask for less money in its 1999 compliance budget than is needed to meet its cleanup obligations, including those laid out in legal agreements.

For fiscal 1999, the department is seeking \$479 million to meet environmental-compliance requirements at the Fernald complex and the other four sites managed by the DOE's Central Ohio field office.

The estimated cost of meeting compliance-agreement milestones during that fiscal year is \$533 million.

"The choice is between canceling legal commitments and massive cost overruns," Crawford said during a news conference convened to draw attention to a lobbying effort by grass-roots environmental safety advocates from around the country.

The Energy Department said Crawford's criticism was valid.

"We believe that it would be very diffi-

cult for us to stay on schedule with the \$479 million, said spokesman Ken Morgan. "Even at \$533 (million) it had already been cut considerably and would have been tight."

If Congress provides that level of funding, he said, "We would see likely slippages in how fast we can clean up various sites."

So far, most cleanup managed by the field office was ahead of schedule, and "even at Fernald we're very pleased with how we're doing," he said.

000042

141433

"European official calls for Chiquita probe"  
By: Cameron McWhirter and Mike Gallagher

# European official calls for Chiquita probe

BY CAMERON  
McWHIRTER  
and MIKE GALLAGHER  
The Cincinnati Enquirer

BRUSSELS, Belgium — A member of the European Parliament on Monday called on a European Union commission to look into *Enquirer* reports that Chiquita Brands International Inc. is involved in a wide range of questionable business practices in Latin America.

The EU's Commission on Agriculture is the 15-nation European Union's lead agency in dealing with the banana industry. On Sunday, the *Enquirer* published an 18-page section detailing the

## Chiquita SECRETS Revealed

► \$1.5 M donation defended: Archbishop Daniel Pilarczyk defends Lindner donations to Catholic Church. A8

overseas operations of Cincinnati-based Chiquita. Those operations include secret control of supposedly independent banana companies, a bribery scandal in

Colombia and the buying of political influence with campaign contributions.

"It just makes me very angry," said Glenys Kinnock, member of the European Parliament for Wales. "We've just been to the commission now and met with the director general about this. They are very keen to see these stories. They are not very happy with Chiquita."

Mrs. Kinnock has been a longstanding opponent of Chiquita's efforts to roll back EU banana protections. Those protections, in place since 1993,

(Please see CHIQUITA, Page A8)

### Chiquita criticizes use of tapes

The following statement was issued Monday by Chiquita Brands International:

Yesterday, Chiquita denied the highly inaccurate account in the May 3 *Cincinnati Enquirer* regarding the Company's business practices. In so doing, the *Enquirer* virtually ignored Chiquita's record of providing among the most competitive wages and benefits of any major employer in Latin America, of being a major engine of progress, building roads, schools and hospitals and, and of being singled out for praise

by independent environmental groups for its progressive policies.

The *Enquirer* based its article on selective, out of context voice mail messages that were stolen from private voice mail boxes of Chiquita employees.

Steven G. Warshaw, Chiquita's President and Chief Operating Officer, said: "We at Chiquita are shocked by the *Enquirer's* admission that it obtained more than 2,000 messages containing confidential, privileged and proprietary information that was stolen from the private voice mail boxes of Chiquita employees. This behavior raises serious moral and legal questions. We doubt that any citizen of

Cincinnati is comfortable with a newspaper thinking it appropriate to obtain stolen private voice mail messages, much less selectively and inaccurately publishing them. Newspapers are supposed to guard against Big Brother, not be Big Brother."

### Enquirer responds

In response, *Enquirer* President and Publisher Harry M. Whipple issued the following:

As explained in Sunday's package of stories, the *Enquirer's* investigation into Chiquita's business practices was supported by multiple sources inside and outside the company, and

by extensive documentation.

The documentation includes the executives' own words contained in copies of taped voice-mail messages. Copies of these tapes were provided to *Enquirer* reporters by a high-ranking Chiquita executive, who was one of several with authority over the company's voice-mail system. These voice-mail messages were essentially internal memoranda.

The source, who requested confidentiality for fear of retribution, also provided the same tapes to the Securities and Exchange Commission, which has launched its own investigation.

The *Enquirer* stands by its stories. We are proud of them.

000043

1433

# Chiquita: Official calls for probe

CONTINUED FROM PAGE A1

avored small banana growers from former European colonies in Africa and the Caribbean. But those protections have hindered sales for Chiquita, the largest banana provider to Europe.

Mrs. Kinnock made her remarks on the opening day of the International Banana Conference, a gathering of banana producers, environmentalists, governments and union groups concerned about problems in the industry. The three-day gathering in Brussels, capital of the EU, has drawn more than 300 delegates from 44 countries to discuss issues from pesticide use, to market protections, to corporate codes of conduct.

Delegates also include scientists, major banana distributors, industry consultants and a representative of a chemical company. Most of the world's major banana companies have sent representatives, including Dole, Del Monte and the Irish banana company Fyffes. Chiquita sent no delegate, though a public relations firm that has represented the company in Europe has sent an observer.

Government representatives are here from the United Kingdom and several other members of the European Union and Costa Rica. The U.S. trade representative's office was invited to send a delegate, but as of Monday, no U.S. representative had registered.

Ralph Ives, deputy assistant U.S. trade representative and point man on banana issues for the Clinton administration, did not return calls Monday seeking comment on the United States' absence from the conference.

Mrs. Kinnock told the *Enquirer* she wants the European Union Parliament's legal services division to in-

vestigate the newspaper's findings. The issues are of interest here because the U.S. trade representative's office, in support of Chiquita, has led efforts to overturn the EU banana restrictions.

Among the *Enquirer* findings:

► Chiquita acquired land in Latin American countries for expanded banana production — even though those nations' laws prohibit and/or limit Chiquita from directly buying property.

► Employees of Chiquita and a subsidiary were involved in a bribery scheme in Colombia that has come to the attention of the U.S. Securities and Exchange Commission.

► Chiquita Chairman and Chief Executive Officer Carl H. Lindner Jr., his family and associates made legal, but controversial contributions to political figures at a time the company desperately sought U.S. backing in the trade dispute over the EU banana restrictions.

European and Caribbean critics of President Clinton's support for Chiquita's position have pointed to large campaign donations that Mr. Lindner has made to the president and the Democratic Party. The United States, working closely with Chiquita, has carried the case to the World Trade Organization (WTO), an international body set up to mediate trade disputes.

The WTO has ruled that the EU protections run counter to the principles of global free trade, and must be altered.

The EU Council, a body of ministers that serves as the organization's executive branch, is expected to submit an alternative plan to the

WTO in June.

In addition to Mrs. Kinnock, Philip Lowe, the EU's director general for development, said he also was looking into the newspaper's findings. Claire Godfrey, policy adviser of Oxfam International, a British charity organization concerned with hunger in the developing nations of the world, has long been a supporter of the EU protections and said the information published in the *Enquirer* puts the U.S. trade office on shaky ground" in the EU trade dispute.

"If the U.S. or the Latin Americans want to take the case back to the WTO in June, I think their credibility is going to be weakened," she said.

Ron Oswald, secretary general of the Geneva-based International Union of Food and Agricultural Workers, which represents more than 3.6 million dues-paying members worldwide, said the findings provide insight into how some global companies operate in the 1990s.

"The concept of trying to create virtual companies, that control only marketing and strategy, and therefore can wash their hands of all responsibility of what happens on the ground, is becoming quite common," he said. "The structure of ownership is obviously extreme in the Chiquita case."

He said his union takes the position that companies should not be able to hide ownership at the expense of employees in the developing world. "I think that as soon as a company makes money out of an arrangement, I don't care how complex or clever the ownership structure they set up, they have a social responsibility."

000044

1  
A  
I  
4  
3  
3

May 3, 1998

Cincinnati Enquirer

Front Page

"Chiquita: An empire built on controversy"

By: Mike Gallagher & Cameron McWhirter

1433

**Chiquita  
SECRETS  
Revealed**

*Enquirer* investigation finds questionable business practices, dangerous use of pesticides, fear among plantation workers

# Chiquita: An empire built on controversy

May 3, 1998

Cincinnati Enquirer

Front Page

*"Chiquita: An empire built on controversy"*

By: Mike Gallagher &amp; Cameron McWhirter

1433

BY MIKE GALLAGHER  
AND CAMERON McWHIRTER  
(C) 1998, THE CINCINNATI ENQUIRER

A year-long investigation by *The Cincinnati Enquirer* has found that Chiquita Brands International Inc., the world's largest banana company, is engaged in a range of questionable business practices.

Chiquita, based in Cincinnati at 250 E. 5th St., has disputed suggestions that any of its practices are improper.

The *Enquirer* investigation took reporters to the sweltering lowlands of Central America, where bananas are grown, as well as to Canada, Belgium, New York and Washington. Findings are outlined in a special 18-page section in today's *Enquirer*.

These findings include:

► Chiquita secretly controls dozens of supposedly independent banana companies. It does so through elaborate business structures designed to avoid restrictions on land ownership and national security laws in Central American countries. The structures also are aimed at limiting unions on its farms.

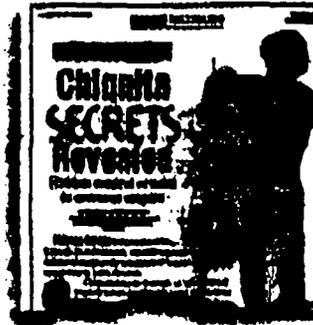
► Chiquita and its subsidiaries are engaged in pesticide practices that threaten the health of workers and nearby residents, despite an agreement with an environmental group to adhere to certain safety standards.

► Despite that environmental agreement, Chiquita subsidiaries use pesticides in Central America that are not allowed for use in either the United States or Canada, or in one or more of the 15 countries in the European Union.

► A worker on a Chiquita subsidiary farm died late last year after exposure to toxic chemicals in a banana field, according to a local coroner's report.

► Hundreds of people in a Costa Rican barrio have been

Special section,  
Pages C1-18



exposed to a toxic chemical emitting from the factory of a Chiquita subsidiary.

► Employees of Chiquita and a subsidiary were involved in a bribery scheme in Colombia that has come to the attention of the U.S. Securities and Exchange Commission (SEC). Two employees have been forced to resign.

► Chiquita fruit-transport ships have been used to smuggle cocaine into Europe. Authorities seized more than a ton of cocaine (worth up to \$33 million in its pure form) from seven Chiquita ships in 1997. Although the company was unaware and did not approve of the illegal shipments, problems were traced to lax security on its Colombian docks.

► Security guards have used brute force to enforce their authority on plantations operat-

(Please see CHIQUITA,  
Page A12)

000046

May 3, 1998

Cincinnati Enquirer

Front Page

"Chiquita: An empire built on controversy"

By: Mike Gallagher & Cameron McWhirter

1433



The Cincinnati Enquirer

A worker pulls a line of bananas through a packing plant at a Chiquita subsidiary plantation in Costa Rica.

000047

May 3, 1998  
Cincinnati Enquirer  
C2

"Editor's note: Stories pierce veil of secrecy"  
By: Lawrence K. Beaupre

## Editor's note

# Stories pierce veil of secrecy

Two thousand miles from its banana plantations in Central America, Chiquita Brands International Inc. is one of Cincinnati's most prominent corporations. It is also one of its most secretive.

Controlled by financier Carl H. Lindner Jr., whose aversion to the press is legendary, Chiquita nevertheless has been thrust prominently into the public realm in recent years.

As the stories on A1 and in this section describe, Chiquita is involved in political, environmental, legal and labor controversies in many parts of the world.

A year ago, *The Cincinnati Enquirer* decided to look beyond the company's press releases to gain a better understanding of how the Cincinnati-based banana giant operates.

Reporters Mike Gallagher and Cameron McWhirter undertook a wide-ranging investigation into Chiquita's business practices. After conducting scores of interviews in the United States and reviewing numerous public and internal documents, Mr. Gallagher and Mr. McWhirter traveled late last summer to Costa Rica, Honduras, Panama, and the Caribbean islands of St. Lucia and Dominica. They also traveled to Brussels, Antwerp, Vancouver, New York and Washington, D.C.

They spoke to a wide range of sources, including farm laborers and managers, environmentalists, government officials, financial experts, lawyers, professors and others.

They interviewed numerous Chiquita executives, who spoke on the condition of anonymity for fear of retribution. Extensive documentation also was provided by sources or obtained elsewhere.

Those records included more than 2,000 copies of taped voice mail messages. These were provided by a high-level source who was one of several Chiquita executives with authority over the company's voice mail system.

The source also provided copies of the same tapes to the U.S. Securities and Exchange Commission, which has launched its own investigation into Chiquita.

Chiquita executives often used voice mail as internal memoranda, often "copying" other executives, sometimes as many as five or six, with the same message. Many of the messages were highly detailed.

Chiquita executives refused repeated requests for interviews. Instead, they designated lawyers from the Washington, D.C., office of Kirkland & Ellis to take questions and provide company answers in writing. There was none of the give-and-take of a normal interview.

Chiquita, through its lawyers, provided hundreds of pages of comments and documents, though some of it was not responsive to the actual question asked. In several cases, Chiquita chose not to provide any response at all.

We are confident that thorough reporting for more than a year has resulted in an accurate and eye-opening portrait.

Readers with information or comments may contact us by e-mail at [enterprise@enquirer.com](mailto:enterprise@enquirer.com) or write to me at *The Cincinnati Enquirer*, 312 Elm St., Cincinnati, OH 45201.

*Lawrence K. Beaupre*

— Lawrence K. Beaupre  
Enquirer Editor

## About the staff



Mike Gallagher, 40, investigative reporter, joined the *Enquirer* in 1995. He reported and wrote the *Enquirer's* award-winning series in 1996 on problems with the

cleanup of the uranium-processing plant at Fernald. E-mail: [75057.3062@Compuserve.com](mailto:75057.3062@Compuserve.com)



Cameron McWhirter, 34, has been an investigative reporter with the *Enquirer* since 1994. His award-winning projects have included an examination of dangerous flaws in

the nation's interstate parole system. In 1996, the newspaper sent him to Bosnia to report on the war's impact. E-mail: [cmcwhirter@enquirer.com](mailto:cmcwhirter@enquirer.com)



David Wells, 46, local news editor at the *Enquirer*, has been with the newspaper since 1974. He oversees the local news department and personally directs the investigative team.

Designed by Ron Huff and John Humenik. Graphics by Randy Mazzola. Maps by Ron Cosby.

All photographs in this report by Mike Gallagher, Cameron McWhirter or taken from *Enquirer* files unless otherwise noted. Photo of Sam Zemurray by Elliot Elisofen, *Life Magazine*, copyright Time, Inc. Historic photos on C18 were taken from *The Story of the Banana* (United Fruit Co., 1921).

Due to production limitations, Spanish grammatical markers have not been included in the text.

000048

May 4, 1998  
Cincinnati Enquirer  
Front Page

Chiquita Brands International statement issued May 3

## Text of a statement Issued May 3 by Chiquita Brands International

"On Sunday, May 3, the Cincinnati Enquirer published a sensational and highly inaccurate story impugning the reputation and business practices of Chiquita Brands International. Chiquita is known globally as a leading international producer of wholesome and healthy foods and as a good corporate citizen -- investing in local communities, building schools and improving the quality of life for tens of thousands. We are proud of the success we have had in providing benefits and wages in Latin America that far exceed those available from other jobs and protecting the environment in a manner that has earned praise from the most prominent independent environmental organizations. Chiquita is proud of its work and denies the false implications of the Enquirer's article.



**Chiquita Brands  
statement**  
(68K image)

"The information contained in the Enquirer's story was selectively edited, incomplete and presented out of context and portrays a false and highly inaccurate image of Chiquita. Chiquita and other independent sources made extraordinary efforts to provide facts and documents which demonstrate the true record. Unfortunately, the Enquirer ignored the hundreds of pages of documents detailing the facts regarding Chiquita's sound business practices. Instead, the Enquirer has affiliated itself and worked in concert with persons having financial, political and economic motives to damage Chiquita.

"Chiquita adheres to the highest standards of product quality and social responsibility, applying world-class standards regarding associate relations, product quality and environmental controls. Chiquita will continue to meet its obligations as a good corporate citizen notwithstanding the unfair and inaccurate assertions of the Enquirer."

Comments? Questions? Criticisms? Talk to us:  
[Questions](#) | [Suggestions](#) | [News](#) | [Letters](#) | [Web ads](#) | [Classifieds](#) | [Subscribe](#) | [Delivery](#) | [Survey](#)

Copyright 1998 The Cincinnati Enquirer, a Gannett Co. Inc. newspaper.  
Use of this site signifies your agreement to the [Terms of Service](#) (updated Feb. 26, 1998).

000049

1433  
NO. 917 P002/006

May 6, 1998  
Journal-News  
Opinion Page A6  
"Keep Fernald cleanup on track"

05/06/98 10:44 PUBLIC AFFAIRS → DOUG SARNO

IN OUR VIEW

# Keep Fernald cleanup on track

**L**ocal legislators and interested observers should keep up the pressure on the federal government to meet its requirements regarding the cleanup of radioactive sites such as the former Fernald uranium processing plant.

Word that the Department of Energy will ask for less money in its 1999 budget than appears necessary to keep the Fernald cleanup on schedule is disquieting.

The federal government helped create these environmental blights and has an obligation to remediate them in a timely fashion.

It's true that, where Fernald is concerned, the government has already accelerated the cleanup schedule from a 20-year, \$12.2 billion project to one that would cost \$4.8 billion and be completed by the year 2005.

That timetable was fashioned in the wake of close cooperation

between government, corporate and public interests — and we don't believe that the government should now test public patience by diverting financial resources away from its cleanup commitments.

It already seems clear that the 2005 due date will be overly optimistic, but that's more a matter of technical concerns than of a financial shortfall.

Slowing the money pipeline will obviously — and deliberately — disrupt the schedule, and people like Lisa Crawford of Fernald Residents for Environmental Safety and Health are quite right to want some answers.

We ought to be informed about the financial priorities that are knocking the Fernald cleanup off track. And the feds should be reminded that they are obligated to meet various legal compliance agreements with respect to the project.

000050

1433

May 6, 1998

Cincinnati Enquirer

Front Page

"Scrutiny of Chiquita widens"

By: Cameron McWhirter and Mike Gallagher

000051

# Scrutiny of Chiquita widens

BY CAMERON McWHIRTER and MIKE GALLAGHER  
The Cincinnati Enquirer

BRUSSELS, Belgium — The president of the union representing banana workers in Honduras said Tuesday his union will investigate *Enquirer* findings that Chiquita Brands International Inc. set up secretly controlled companies in Honduras to undermine union membership and pay lower wages.

In separate actions, representatives of Costa Rica and

## Chiquita SECRETS Revealed

France said their governments have begun looking into findings contained in an *Enquirer* report that was published Sunday.

Additionally, the director of a coordinating group for all of Central America's banana

unions said he was calling on the Honduran government to investigate Chiquita's secret business practices "that have now been exposed by *The Cincinnati Enquirer*."

The new calls for investigations of Chiquita echo that of European Parliament member Glenys Kinnock. Mrs. Kinnock, a member of the European Parliament from Wales, on Monday called on the European Union commission to investigate Chiquita.

On Sunday, the *Enquirer*

published an 18-page section detailing questionable business practices of Cincinnati-based Chiquita. Those included secret control of supposedly independent banana companies, the cover-up of a bribe in Colombia and the buying of political influence with campaign contributions.

Chiquita has challenged the *Enquirer* findings, saying the reports were based on "selective editing" and were "inaccurate and misleading."

The government and union

officials made their statements while attending the International Banana Conference, a gathering of banana producers, environmentalists, governments and union groups concerned about problems in the industry. The three-day gathering in Brussels, capital of the EU, has drawn more than 300 delegates from 44 countries to discuss issues from pesticide use, to market protections, to corporate codes of conduct.

(Please see CHIQUITA; Page A12)

1433

May 6, 1998  
Cincinnati Enquirer  
Front Page

"Scrutiny of Chiquita widens"

By: Cameron McWhirter and Mike Gallagher

000052

# Chiquita: Scrutiny of company widens

CONTINUED FROM PAGE A1

Chiquita and the U.S. trade representative's office have not attended the conference despite being invited. Ralph Ives, deputy assistant U.S. trade representative and the administration's point man on banana policy, said he was not attending because of a scheduling conflict.

"There will be a major reaction to this," said Juan Funes Estrada, 40, president of Sindicato de Trabajadores de la Tela Railroad Company (SITRATERCO), the union representing Chiquita workers in Honduras. The Tela Railroad Co. is Chiquita's main subsidiary in Honduras, though the company is incorporated in Delaware. The union is the largest in Honduras and one of the largest in Central America, with 5,600 members.

"We have always suspected that the company wasn't being fair with us, but now we have the confirmation," Mr. Funes said, speaking through a translator. He was referring to Chiquita documents and quotes from Chiquita officials in internal voice-mail messages that were provided to the *Enquirer* by a confidential source.

German Edgardo Zepeda, director of Coordinadora de Sindicatos Bananeros de Honduras (COSIBAH), a coordinating group for all of Central

America's banana unions, said that the Honduran government will have to take some kind of action on the *Enquirer* findings. He said his organization will demand investigations by the Honduran government.

"The government is bound to react," he said through a translator. "It has to clarify these issues to get to the bottom of this."

Meanwhile, a Costa Rican delegate here said his government is going to review the *Enquirer* findings as well.

Carlos Rojas, a member of the Costa Rican delegation and a former minister of agriculture, said he did not want to comment yet on the *Enquirer* stories until the review is concluded.

Jean Louis Bonicel, who heads the agricultural department for the French government's Ministry of Overseas Territories, said his office had also begun a review of the findings.

The French government has long opposed U.S. efforts on behalf of Chiquita to overturn European trade protections. These protections benefit small banana growers in Africa and the Caribbean, but hurt Chiquita, which is Europe's largest importer.

Chiquita officials did not respond to *Enquirer* requests for comment Tuesday.

According to the *Enquirer* report,

Chiquita set up structures to avoid the restrictions of Honduran land ownership and national security laws as well as to limit or eliminate unions on its plantations.

This system included trusts being set up in the Channel Islands and Liechtenstein, two well-known European tax and trust havens, and in Honduras with the involvement of large Honduran banks.

Another form of control was the formation of farm companies involving five trusted Honduran citizens with ties to Chiquita subsidiaries. These Honduran citizens were made shareholders of the farm companies. But once those companies were established and shares issued, the shares were signed in blank and then given to Chiquita.

Chiquita has used similar legal structures in other Latin American countries, including Colombia and Guatemala.

One company involved in these schemes was Compania Bananera Limitada S.A., (COBALISA) which is based in La Lima, Honduras, headquarters of Chiquita's Honduran banana operations.

"The truth is, we didn't know about COBALISA," said Mr. Funes, who also lives in La Lima. "We knew it existed as a company, but (COBALISA officials) kept it very secret and

said they were independent and said they had nothing to do with Chiquita."

Mr. Funes said he thinks Tela may have violated its contract with the union. "I plan to discuss this with my board as soon as I get back (to Honduras)," he said.

Mr. Funes said SITRATERCO could take several actions, including calling for national strikes, lawsuits or public campaigns with the help of other unions around the world.

He said the union, if it determines the *Enquirer* findings are true, will lodge a complaint with the United Nations and the International Labor Organization (ILO), a world body dealing with employees' rights.

He also said the issues will be raised at the union's contract negotiations with Tela, set for August.

Mr. Funes said Tela had launched a program several years ago with the slogan that translates from Spanish "Together is Better," a plan that is supposed to promote company/union cooperation.

These latest findings, he said, make it clear Tela and Chiquita are not interested in doing anything "together with the union."

"We don't trust them at all," he said.

1433

May 6, 1998  
 Cincinnati Enquirer  
 Readers' Views Page A17  
 "Readers respond to Chiquita story"

000053

# Readers respond to Chiquita story

I speak for a large percentage of *Enquirer* readers that unless you work for Chiquita, are a lawyer for Chiquita or your last name is Lindner, no one read your 18-page report on bananas. In a society where we don't care what our president does in his personal life as long as the economy is good, we feel the same way about bananas. As long as I can continue to get my bananas at the local store, who cares where they came from and what the conditions are in Costa Rica? I'm sure strawberries, apples and melons have a sad story, too.

**STEVE KOESTERMAN**  
 Oakley

## Chiquita series took courage to publish

I have lived in Cincinnati for 16 years, and over that time I've come to regard the *Enquirer* as the uncritical house newsletter for the Chamber of Commerce. I often use the *Enquirer's* election endorsements to help me decide how to vote. If the *Enquirer* likes a candidate, I know I better think about supporting the opponent.

The story on Chiquita has forced me to reevaluate the *Enquirer*. I applaud the time, effort and determination expended to bring this important story to light. For the first time in 16 years, I feel that

## READERS' VIEWS

Cincinnati actually has two hometown daily newspapers which can be counted on to investigate all aspects of life in our town. Thank you for having the courage to run the series. I hope that this is just the first in what will be a long line of hard-hitting stories about Cincinnati's major corporations.

**CRAIG RAMSDELL**  
 Madeira

## Don't drag our city down with attacks

The May 3 *Enquirer* greeted me with your one-year-in-the-making investigative report of Chiquita ["Chiquita: An empire built on controversy"]. I have no ties, either business or personal, to Chiquita or its executives. What I fail to understand, however, is why a local newspaper such as the *Enquirer* feels compelled to attack and drag down one of our locally based businesses. As a person who pays to subscribe to your paper, I would much prefer to see you address the numerous positive aspects of our community and the contributions many businesses — including Chiquita — make to improve the quality of life for all us who call Cincinnati home.

Has investigative reporting now so overcome the *Enquirer* and other newspapers that you feel the need to drag down

rather than promote and serve your own local community? If we want our community to continue to grow and be vital, including being a place businesses will want to call their home, may I suggest you focus less on the negative and look for more positive news coverage to greet your Sunday morning readers.

**MATTHEW J. SMITH**  
 Symmes Township

## Investigation is important function

I really appreciate your coverage and professionalism in conducting the investigative report about Chiquita.

It is very important for all of us that we have a "watchdog" on corporate America.

**MIKE SHRYOCK**  
 Madeira

## A desperate ploy to sell newspapers

When I saw the *Enquirer* May 3, it reminded me of the main reasons I subscribe to your publication. They are as follows, in order of highest priority to lowest: Walter Williams' column; Dear Abby's column; the Sports section; Peter Bronson's column; and Jim Borgman's cartoons. Please note the conspicuous absence of your "investigative reports" or any reference to your newspaper reporters' ability to accurately and objectively report on daily and current events.

The story that, of course, prompts my letter is in regard to Chiquita Brands International

May 6, 1998  
Cincinnati Enquirer  
Readers' Views Page A17  
"Readers respond to Chiquita story"

NO. 917 P006/006

1433

PUBLIC AFFAIRS → DOUG SARNO

05/06/98 10:45

Travel Sampling Wisconsin's Treasures

# THE CINCINNATI ENQUIRER

Poll: Most oppose Issue 2

Chiquita Enquirer investigation facts questionable  
SECURITY business practices, dangerous use of pesticides  
Prevalent fear among politicians & voters

## Chiquita: An empire built on controversy

Inc. The front-page article was shallow, vague, exaggerated, overstated, overdramatized and specious in nature. The same applies to what little I was able to skim (and stomach) of the whole 18-page section you decided to devote to this nonsense. The whole thing smacks of an organization that is desperate to sell newspapers.

As in most of your stories, investigative and otherwise, your headlines are sensational but the stories' contents are not. I would love to take this thing apart point by point, but your editorial policy of letters to the editor being limited to 200 words or less limits fair rebuttal to this drivel which you like to call "investigative reporting."

ROBERT D. JOHNSON  
Sharonville

### Good business strategy highlighted

I found the "gee whiz" coverage by general beat reporters of the business aspects of Chiquita to be analogous to a society page editor chastising the Reds

for having the moral turpitude to steal bases. The use of trusts, business structuring and other legitimate tools to optimize results is simply good business strategy employed by most companies every day (see *Enquirer* vs. its independent home delivery carriers, although I don't recall you using such pejorative descriptions in that coverage as you applied to the Chiquita story).

HENRY E. DORFMAN  
Colerain Township

### We should promote our local businesses

Regarding the recent investigation of Chiquita, the *Enquirer* had to lower its own standards considerably to publish such an article. Reading the *Enquirer* daily, I see that Cincinnati is always trying to lure business to downtown.

We are always trying to better Cincinnati, whether building two new stadiums, an entertainment complex or a park. Why must the *Enquirer* take a year and investigate a company that

is based in Cincinnati? Shouldn't we be thankful that Chiquita is in Cincinnati and not Columbus, Cleveland or any other city? It's a shame that the *Enquirer* has to beat up one of its own friends.

ERIC DENTON  
Milan, Ind.

### Using phone tapes abuses freedom

I was shocked to see that your Chiquita investigative team used confidential lawyer-to-lawyer voice mail communications as a primary source.

Your editor apparently not only defended the practice but expressed his pride.

If, indeed, this practice is ethical, then you certainly shouldn't have any problem with sending me all of the *Enquirer's* internal voice mails, together with written notes and internal memorandum pertaining to the investigation. You see, I am writing a story about how print journalists intentionally disregard information favorable to the target of the investigation in order to sensationalize a story.

Does the *Enquirer's* arrogant abuse of the First Amendment really carry with it a license to disregard all morality and ethics?

Do I need to fear that you will pay my cleaning woman to steal my personal and confidential files as retribution for this letter? You are a self-appointed, for-profit sentry over the public; who watches over you?

JOHN A. SCHUH  
Hyde Park

### Assertions seemed to be left unproven

I was embarrassed for the *Enquirer* by the publication of the story, "Chiquita: An empire based on controversy." The grandiose assertions made by the headline and text seemed unsupported by the facts you presented.

So what if a court-ordered eviction had to be enforced by law officers? That happens every day in Cincinnati by landlords evicting nonpaying tenants.

One worker died, and the coroner said it was due to exposure to pesticide. Is that a trend among thousands of employees, or a fluke?

Chiquita was the victim of drug lords using its ship without Chiquita's knowledge. You implied it was Chiquita's fault, because its security could have been tighter on the dock.

The media have been criticized for publishing images or information that is too offensive or personal. On the flip side, you must also decide if an article has enough merit in fact to publish — especially if it is an article attacking the integrity of individuals or companies. The real news I gleaned is that you spent a year and a lot of money trying to find dirt on a Cincinnati company, sending employees all over the world. But, you did not have the honesty to admit you came up empty (or, you might say fruitless).

JOHN W. KIRBY  
Hyde Park

000054

May 5, 1998  
The Journal-Press  
Page 14-A  
"Fernald plan available"

1433

### Fernald plan available

The Draft Transportation and Disposal Plan for Operable Unit 1 is available for public inspection in the Fernald Public Environmental Information Center, 10995 Hamilton-Cleves Highway, near Harrison.

The plan describes how Fernald will conduct rail transportation and disposal operations to ensure safe transportation of waste pit materials to an off-site disposal facility, said U.S. Department of Energy spokesman Gary Stegner.

The plan was submitted for a 60-day review Monday, April 27, said Stegner.

For more information, call 1-513-648-3153 or 1-513-648-7480.

000055