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Brown and Root The Track Record



**An investigation into Brown and Root, part of
the consortium given a seven year contract from
April 1st 1993 to run the Atomic Weapons
Establishment at Aldermaston**

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Introduction

Brown & Root, a US-owned partner in the consortium which has won the contract to manage Britain's Atomic Weapons Establishments, has a dismal record in health, safety, management and employment practices, investigations by Greenpeace have revealed.

Brown & Root was fired as the designer and engineer of the South Texas Nuclear Project and later resigned its contract as builder. The nuclear power plant was \$5 billion over budget and nine years behind schedule.

Its management and safety standards were heavily criticised by the plant's owners, who listed a frightening catalogue of Brown & Root errors. Brown & Root paid them \$750 million damages in an out of court settlement.

Controversy has also surrounded Brown & Root's record at another Texan nuclear power station, Comanche Peak, a decade behind schedule and billions of dollars over budget. A Senate committee investigation found that Brown & Root paid \$35,000 to a former employee to keep quiet about safety concerns at the Comanche Peak plant.

Other whistleblowers who say Brown & Root fired them or forced them to leave their jobs after reporting safety concerns took out a string of court cases against the company.

Around 2,000 former employees are also currently pursuing lawsuits against Brown & Root and other contractors at the two nuclear power plants. They claim their health has been badly damaged by working with hazardous materials in conditions which break health and safety regulations at the plants.

David Hawkings, head of administration at the Atomic Weapons Establishments (AWE) at Aldermaston assured the public that: 'The government would obviously not award the contract to a company which hadn't already got a proven track record on safety.'¹

Yet the government has awarded the contract to Hunting BRAE, a consortium in which Brown & Root has a 31 per cent share. Hunting plc has a 51 per cent share and the remainder is held by Atomic Energy Authority Technology (formerly the government-owned United Kingdom Atomic Energy Authority).

Brown & Root, one of the world's largest engineering and construction firms, is owned by the US company Halliburton. Brown & Root Inc. in the US has a permanent presence on the board of Brown & Root Ltd in the UK. This presence on the UK board includes Thomas Elwood Knight, the President of Brown and Root Inc.

The contract, for phase two of the management of the Atomic Weapons Establishments, begins on 1 April 1993 and runs for seven years.

Hunting BRAE will manage and operate all Atomic Weapons Establishments (AWE) activities at Aldermaston, Burghfield, Cardiff and Foulness². The Ministry of Defence will continue to own AWE assets.

Hunting BRAE was previously awarded a two year contract with AWE in October 1990 to devise a long term manufacturing strategy, use existing manpower more effectively and advise the MoD on pay and conditions for skilled workers.

The following pages document Greenpeace research into Brown & Root's record. Our sources, named in each case, are respected major US newspapers and news agencies, often reporting court actions, plus Senate committee hearing records.

Brown & Root's Record

Mismanagement The owner of the South Texas Nuclear Project, Houston Lighting & Power (HL&P), sued Brown & Root for mismanagement of the plant's construction. Brown and Root paid HL&P and its partners in the project \$750 million damages - believed at the time to be the largest out of court cash settlement in US history³.

Court documents showed that HL&P had fired Brown & Root as the project's designer and engineer after cataloguing 59 construction and planning errors, reported the Associated Press⁴. They included major mistakes with potentially grave consequences including:

- Failure to establish an effective organisation and system to manage the plant
- A 'near total failure' to perform acceptable welding on a major water system that would cool the plant during an emergency
- Not designing a heating, ventilation and air conditioning system large enough to do the job
- Failure to analyse the effect of a pipe break outside a containment building, the reinforced concrete shell which surrounds the reactor pressure vessel and acts as the last barrier between radiation and the environment.
- Improper design of trays to protect electrical cables, which are essential for safety systems to work.

In another instance, voids, or air pockets, were found in the four-foot thick concrete walls of the reactor containment building.⁵ Air pockets can severely weaken the structural strength of such walls.

Commenting on internal memos which came to light when the City of Austin later sued HL&P for breach of contract, Attorney for the City of Austin, Wayne Porteer, said that HL&P had not picked up early enough on Brown & Root's sloppy work. 'From the beginning [HL&P] failed to recognise it was dealing with an immature firm. Brown & Root's engineering was rotten to the nuclear core', he said.

The City of Austin won its case against HL&P but no damages were awarded. The decision is now being appealed in the Texas Supreme Court.

Lack of Nuclear Expertise Other court documents revealed that when Brown & Root won the contract to design and build the South Texas plant, the company's top management knew that it did not have the nuclear expertise to do the job.⁶

Halliburton, which owns Brown & Root, tried to buy up Ebasco, a company with experience in nuclear engineering, but the US government forbade it on anti-trust grounds.⁷

Halliburton argued that Brown & Root did 'not possess a substantial nuclear engineering capability' and that unless it had Ebasco it 'had no prospect of acquiring such capability in the foreseeable future.'⁸

According to a memo written by government lawyer Jerome Hochberg, he was told by a Brown & Root official that the company had decided it would 'go ahead anyway and take the gamble' on the South Texas project.⁹

John P Harbin, former chair of Halliburton, later admitted that his company failed to tell HL&P that Brown & Root did not possess a substantial nuclear engineering capability.¹⁰

Project records showed HL&P was critical of Brown & Root's performance by 1973, before construction had even begun, reported the Austin American-Statesman¹¹. In a letter, HL&P's project manager criticised Brown & Root for what he termed a 'serious deficiency' in capabilities, particularly in planning, scheduling and status reporting. Other managers made similar criticisms.¹²

In 1977 an HL&P official described a series of 'critical problems' with Brown & Root (B&R). He stressed that they were 'not prepared to engineer and construct a nuclear project when they took the job'. And, 'instead of admitting to their organisational inadequacies and doing something about them, B&R has spent too much time covering up B&R mistakes and looking for B&R profit.'¹³

Court documents filed by HL&P alleged that Brown & Root made \$80 million from the contract to build the plant.¹⁴

X **Cheap Labour** Brown & Root is reportedly an anti-union company. In its bid for the South Texas plant it predicted that its open shop policy and non-unionised labour would 'make substantial savings' in the construction costs.¹⁵

Safety Alarminglly, Brown & Root has been accused and on a number of occasions convicted of:

- X
- failure to provide adequate quality assurance
 - dangerous sloppiness and confusion over safety inspection
 - ignoring or taking short cuts with workers' health and safety
 - unlawfully firing employees who reported safety problems
 - attempting to silence whistleblowers

Failure to provide adequate quality assurance During the late seventies and early eighties Brown & Root was the prime contractor for construction of the Comanche Peak nuclear power plant and was delegated quality assurance (QA) and quality control (QC) functions by Texas Utilities, the principal owner of Comanche Peak.¹⁶

In May 1986 the Nuclear Regulatory Commission (NRC) fined Texas Utilities \$250,000 for numerous safety violations and quality assurance (QA) problems which occurred during Brown & Root's construction of Comanche Peak.¹⁷ Specifically, \$200,000 of the NRC fine was for significant weaknesses in the implementation of quality assurance programs, an additional \$50,000 was for weaknesses in the cable tray reinspection programme and the procurement and installation of electrical penetration assemblies during construction conducted by Brown & Root.¹⁸

Also in May 1986, the NRC proposed a \$120,000 fine against Texas Utilities based on several incidents involving intimidation that interfered with the ability of quality control/quality assurance personnel to identify safety concerns.¹⁹ Each of the incidents occurred during the time Brown & Root was responsible for QA and QC functions at Comanche Peak.

One incident, for which Texas Utilities ultimately paid \$40,000 in civil penalties,²⁰ involved a Brown & Root QC inspector at Comanche Peak who alleged that she was forced by her supervisors to falsify QC inspection documents.²¹ The NRC specifically noted that "in early 1983, the Brown & Root QA Program did not provide QC Inspectors sufficient organizational freedom to identify quality problems....." ²²

Another incident involved the holding of eight electrical QC inspectors in a room at Comanche Peak in retaliation for raising safety concerns.²³ While the eight employees were locked up for several hours their supervisors and two security guards searched their work areas and confiscated documents and personal effects which belonged to the eight isolated inspectors. The NRC concluded that this incident "was one of intimidation" that was "reasonably likely to dissuade QC inspectors from reporting safety concerns."²⁴

Confusion over safety inspection A special Nuclear Regulatory Commission inspection team found that Texas Utilities and its prime contractor, Brown & Root, was in a state of confusion over inspection paperwork at Comanche Peak.²⁵ The team had confirmed 300 of the 1,000 allegations of construction problems.

But in other cases the paperwork was not in order and the utility found it cheaper to tear work out and replace it rather than prove it was installed correctly in the first place. The Atomic Industrial Forum cited other nuclear power stations where similar confusion had contributed to billion dollar plants being scrapped.

In 1980 the NRC investigated reports that quality control inspectors were not finding co-operation from workers or support from management at the South Texas plant.

The NRC confirmed the reports and fined HL&P \$100,000, the largest fine ever at the time. It said the inspector-worker 'condition's have gone unchecked by HL&P and Brown & Root to the point that the quality of work at the South Texas project could be affected.'²⁶

The chair of the Atomic Safety and Licensing Board, Peter Bloch, also voiced concerns over Comanche Peak nuclear power station, reported the Associated Press.²⁷ More than a quarter of the 226 pipe supports inspected were declared potentially unstable and had to be replaced as they could lead to 'a domino-like collapse of plumbing'.

Ignoring health and safety Since 1989, about 2,000 men and women who worked as contract painters, labourers, electricians, welders, insulators and heavy equipment operators at South Texas and Comanche Peak have filed personal injury lawsuits against Brown & Root and other companies.

Court documents and interviews with the Houston Chronicle²⁸ painted a picture of high pressure working conditions where respiratory protection was poor or non-existent. Employees who asked too many questions or complained said they were intimidated or laid off and health and safety laws were ignored.

Brown & Root and other defendants have denied that their negligence and actions caused former plant construction workers to suffer cancer, debilitating respiratory and neurological ailments, and recurring rashes, as the lawsuits allege.

Former workers contend that:

- Sandblasting in confined areas produced thick clouds of silica dust inhaled by the blasters and those working nearby.
- Coatings containing silica, asbestos, zinc and other contaminants were ground and mechanically chipped away, creating more hazardous dust. Linda Porter, who worked for four years as a painter for Brown & Root at Comanche Peak said it took her two years of persistent questioning to find out that the coatings contained silica and asbestos. 'Sometimes you'd be lying on your back on pipes with your hands up removing the paintings, said Porter, who is now perpetually hoarse. 'The dust fell on you and you were eating it.'
- Ineffective, disposable masks were issued for dust conditions that demanded higher quality filter respirators or tightly sealed hoods with independent sources of air.

- In other cases, even disposable masks were not given to those working around sandblasting and grinding operations.
- Employees were told to work with solvents and other products which gave off potent fumes, making them throw up.
- Pressure to finish the plants, both behind schedule and massively over budget, caused contractors to compromise health and safety.

The Occupational Safety and Health Administration (OSHA) cited Brown & Root in 1988 for improperly training workers who were exposed to lung-damaging silica dust released while grinding a coating. OSHA proposed to fine Brown & Root and Texas Utilities but dropped the fines after the companies promised to put right the problems.

But in a rare admission, in letters and in an interview with the Houston Chronicle, Gil Saulter, OSHA Dallas administrator, admitted that OSHA's investigations had been flawed and that 'additional citations would have been appropriate', given that 'employees were exposed to excessive concentrations of silica' while grinding.

Brown & Root was also accused of contravening environmental regulations by depositing wastes containing 58 hazardous chemicals and heavy metals in landfill sites not permitted to take toxics.²⁹

Firing employees who reported safety violations During the eighties, a number of former employees of Brown & Root who had been working in responsible jobs at Comanche Peak nuclear plant, began to go public and take court actions, claiming they had been victimised and fired or pressured into leaving their jobs after pointing out errors or safety violations in the building work.

We include here reports from the court cases in some detail, as they appear to cast light on Brown & Root's approach to inspection, safety and employees who seek to maintain safety standards. The cases include:

- Meddie Gregory, a former document reviewer, who said she was fired for criticising safety conditions at Comanche Peak. Brown & Root settled with her out of court.
- Seven former inspectors and document reviewers at Comanche Peak who claimed they were also fired or forced to leave after voicing concerns about safety

Meddie Gregory

Meddie Gregory, aged 53, told a Dallas Court that she had been fired by Brown & Root from her \$800-a-week job as a document reviewer for the Comanche Peak nuclear power plant because she had twice met with Nuclear Regulatory Commission investigators.

She had also written an anonymous letter to the Atomic Safety and Licensing Board, criticising the plant's safety conditions, reported the Fort Worth Star Telegram.³⁰ Gregory had been scheduled to testify as a secret witness before the Licensing Board.

Brown & Root plant officials denied that she had been treated unfairly. However, they offered to settle the case out of court with an undisclosed cash payment and help with medical insurance bills.

Gregory said she accepted because she was suffering from terminal cancer and could not meet mounting medical expenses. Her medical insurance had been stopped when she was dismissed from the plant. She called the settlement 'blackmail'.

The Comanche Peak Seven

Charles A Atchison and six other former employees at the Comanche Peak nuclear power plant sued Brown & Root, alleging they were fired or harassed for reporting safety violations. Atchison, a former quality control inspector, was fired after reporting possible construction defects and poor procedures, reported the Fort Worth Star Telegram.³¹

He had complained of widespread welding problems which he said caused serious safety threats. The law suit claimed he was 'intimidated and

subjected to other discriminatory treatment' by Brown & Root and his supervisor. The law suit also said that the Nuclear Regulatory Commission substantiated many of Atchison's complaints. Brown & Root contended that he was fired because of incompetence.

Three of the other former employees taking the joint action with Atchison were fired and the others claimed they were pressured into leaving.

Sue Ann Neumayer and Linda Barnes said they were pressured into quitting after refusing to sign off unacceptable plant safety documents. Ronald Jones and Donald Nisich said they were transferred and laid off after identifying shoddy electrical and welding work. William Dunham was fired in 1983 after complaining of improper paint coating and Dobie Hatley was fired in 1984 after refusing to issue control documentation. Brown & Root offered damages and the case of all seven was settled out of court.

Silencing whistleblowers

An electrical foreman at Comanche Peak nuclear plant, Joseph J Macktal Jr, was paid \$15,000 by Brown & Root to keep quiet and not tell Federal officials about his concerns over safety problems at the plant. His lawyers were paid \$20,000 in the deal, reported the Washington Post and the New York Times.³²

The secret deal was made a few months after the then president of Brown & Root, Lewis Austin, met with Macktal in a motel room and allegedly made a similar proposal.³³ The deal forbade Macktal to testify at licensing hearings for Comanche Peak, and required him to resist subpoenas. Macktal at first refused but eventually agreed due, he said, to economic stress as he was unemployed after leaving the plant.

The NRC was aware of the deal when it gave the go-ahead for licensing the Comanche Peak plant, but it made no objection until the payment was investigated by a Senate subcommittee. The NRC then outlawed 'hush money' settlements at all atomic energy facilities across the USA.³⁴