by malfunctions either of the plant itself, or of the monitoring instruments which signal malfunctions. The plant has been a serious source of radioactive contamination to its downwind environment, including an elementary school which is located nearby. According to the U.S. Environmental Protection Agency, during 1965 and 1969 leakage of liquid and gaseous radioactive wastes from the plant exceeded those for any other plant operating in the U.S. The Humboldt plant has earned the reputation of being the "dirtiest" reactor in the country.[32] One employee at the Humboldt plant, Robert Rowan, was fired by PG&E after he formally complained to the Atomic Energy Commission about PG&E's continued violations of radiation release standards at the Humboldt plant. One incident included "Rowan's discovery that radiation dosimeters near the elementary school just south of the plant site were registering contamination levels higher than the instruments could accurately measure."[31] Active earthquake faults were found near the plant about 10 years after it opened. Recent studies of these faults found them to be capable of "surface rupturing", and the NRC in July 1977 ordered the plant permanently closed.[33] PG&E, however, feels the plant can be operated and should be re-opened.

In 1957, PG&E and General Electric built the small experimental Vallecitos reactor near Pleasanton, California. That reactor has been retired, but another General Electric reactor on the same site was ordered closed in October 1977, because of the earthquake danger. The Verona earthquake fault which was originally thought to run 1½ miles from this site on which PG&E also operated its reactor, was found to be only 200 feet away.[34]

Beginning in 1958, PG&E tried to site a nuclear plant on Bodega Head, about 50 miles north of San Francisco. A six year battle ensued before PG&E gave up. Even the AEC expressed doubt about the earthquake safety of the site. The site was only 1000 feet from the San Andreas fault which caused the 1906 San Francisco earthquake. This quake caused a 20 foot shift of the earth in places along the fault. The west side of the fault was found to be two feet to three feet higher than the east side after the quake. PG&E experts strongly defended the Bodega Head site as being located on solid granite, but a subsequent geological boring showed the site consisted of 60 feet of silt, clay, and sand. USGS geologists actually found a "zone of weakness" in the bottom of the plant's excavation site that could undergo movement.[35] After this finding, one highly regarded PG&E consultant, who was brought in to testify on earthquake-resistant design, became so emotionally involved in the future of the plant that he said he would "make it work if I have to put the thing on ball-bearings".[36]

Almost exactly the same events took place again at Point Arena, 100 miles north of San Francisco. After a furious battle, centered around the earthquake issue, PG&E decided in 1972 to abandon plans to site a nuclear plant there. They had initially pooh-poohed the potential hazard of the nearby faults.

In the presence of growing scientific evidence that the earthquake hazards in this state make it very difficult to safely locate nuclear plants, and that the economic picture for nuclear power grows worse as time passes, PG&E announced plans to build a $4 billion two-unit nuclear plant in Stanislaus County in the near future.[37] They have also prepared the Diablo Canyon site to facilitate locating four more reactors there.

NUCLEAR PLANTS AND HUMAN RIGHTS

Nuclear workers at plants like Diablo Canyon are discouraged from pointing out poor quality work or mistakes on the job. Because the press and the public have become increasingly aware of the serious implications of errors in nuclear plant construction and operation, the nuclear industry tries harder and harder to cover the errors up. Welders at Diablo who told their bosses of poor welds or cracks in critically important pipes were fired and were blackballed from future jobs in the nuclear industry.[38] The presence of the alleged cracks was initially denied by construction officials. Much later, the presence of the cracks has been admitted and the pipes involved have required re-xraying and re-welding.[39] Because of this defensive attitude by their bosses, most workers would rather shut up and keep their job, than point out even the most glaring errors. This makes for a poorly done job and a dangerous power plant.

Diablo workers were threatened with firing if they didn't espouse strong pro-nuclear views. On October 8, 1975, J.R. Bell, a construction supervisor for the M.W. Kellog Co. at Diablo, wrote a memo threatening to fire any worker not having a "We Need Diablo Canyon" bumper sticker on his car. The memo said, "Bumper stickers are very few, possibly one out of every ten cars. Give license plate numbers of car in front of you to the writer and I in turn will get the owner of the car from PG&E. Those that don't like their job will get a chance to work for Mothers for Peace, who would like to shut the job down."

Most nuclear workers know little about the health effects of radiation. Yet, federal regulations allow nuclear workers to receive 30 times more radiation exposure per year than a member of the general public.[40] As a result, the incidence of radiation-caused diseases such as cancer is much higher among nuclear workers who receive radiation.[41] This country is potentially creating for nuclear workers the same problems that plague Japanese persons who were irradiated by the Hiroshima and Nagasaki bombs. Those Japanese people (Hibakusha) have become socially isolated because of the public reaction to the large amounts of radiation they received. Unexposed people are hesitant to marry the "Hibakusha" because of the increased chances for genetic defects when the irradiated person produces children. In the U.S., there is currently a growing national controversy to reduce again the allowable radiation exposures to radiation workers. Recent research findings show many radiation-caused diseases occurring in people who received far less radiation than was previously thought to be harmful.[42] [43] [44] This includes not only industry workers, but also persons who were either accidentally or purposely exposed to atom bomb tests.

Police informants were placed at the Abalone Alliance, a statewide California anti-nuclear group, to spy on the group's plans and activities. The presence of the informants continued after the August 1977 non-violent action at Diablo Canyon at which 47 persons (including the two informants) from the Abalone Alliance were arrested. An informant was present during closed attorney-client meetings of the group of Abalone Alliance defendants. The lawyer for the Abalone Alliance argued that the presence of the police informant during the planning of the group's legal defense strategy violated the civil rights of the group and the California Supreme Court has agreed by a six to one vote to hear the case.[45]