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Director
Office of Nuclear Reactor Regulation
US NRC
Washington, DC 20555

Members of the NRC:

I have read the DES for decommissioning Humboldt Bay Power Plant Unit #3 (Docket #50-133). I find the DES grossly inadequate to cover such a serious and far-reaching subject; vague in its analysis; and deficient in its appraisal of alternatives to the utility's proposed action.

My comments will follow the order and page numbers of the DES.

Pg. v, PP (2): Terming the proposed storage "safe" is vague and cynical. Also, in light of recent waste storage developments, "until a Federal repository is available" could be longer than the 30 years: this possibility is not engaged in the DES.

PP (3): If seismic dangers were too great to operate the plant, they are too great to use the same facility for long-term storage of waste, for which the site was not designed. Six active or potential earthquake faults are within reach of the site: Little Salmon, Bay Entrance, Buhne Point, Falor-Korbel, Cape Mendocino-False Cape Shear Zone, and the Mendocino Fracture Zone. More may be revealed.

PP (5a): There is no evidence given that this is the "sole" viable alternative. *

Also, the "generic determination" is worthless, because Humboldt Bay's seismic situation places it at the <u>extreme</u> danger end of the spectrum assessed. Humboldt does not fit into an average scenario, because of the grossly different site-specific problems. (An example of the meaninglessness of applying generic studies to vastly varying conditions are the cost estimates for decommissioning: these generic estimates were widely accepted, but have proven way off base for individual plants.)

* Why were not the following possibilities for spent fuel storage assessed?: Idaho Labs; WIPP in New Mexico; Hanford; Savannah River; or any other DOE experimental programs. The one-time high risk of transporting may be safer than the on-going, 30-year risk of seismic or ocean-front disaster.

Pg. vi, PP (e): "negligibly small likelihood" of criticality is excessively

vague. Clear evidence must be presented.

Pg. vi, PP(f): "very small fractions of the PAG levels." The upper limits of doses could well be much higher if the DES evaluated all the avenues of possible release adequately. Larger-than-expected earthquakes (of which there have been several lately in California); massive flooding due to polar cap melt (predicted by some within the 30-year time-frame); tsunamis from far-away events; terrorist attack; wartime events -- cumulatively, the risk of disastrous event happening is not minimal, but rather substantially probable. The DES neglects to assess these possibilities -- some at all, others inadequately.

Pg. 1-2, PP 1: "require a 15-year extension of the license". This is not true, since the the Federal Repository is supposed to be operational by 1998, before the current license expires. Once the fuel is then removed, the plant should be dismantled. It will have already sat idle for more than 20 years, long enough for most short-lived radioisotopes to have decayed. **

1.3.1.: "not presently feasible" -- The DECON alternative is dismissed out of hand, with no investigation of moving spent fuel assemblies to any of the above-named facilities; to Morris, Ill.; to Diablo Canyon; or to another new temporary site with fewer seismic, coastal, or population problems (for instance, the Nevada test-site, already strongly contaminated and policed.)

Pg. 1-3, PP 1: "The entombment structure may also fail as a result of seismic events with a potential for a release of radioactivity." This is the reason given for rejecting entombment; yet the non-entombed storage structure being proposed would be even more prone to earthquakes! The DES is totally illogical here.

1.3.3.: "all fuel assemblies... and radioactive fluids and wastes should be removed from the site." Is there a place to ship them?

"the most cost-effective of alternatives" -- where is the data?

"generic determination" -- strongly suspect; see above.

Pg. 1-4, last PP: "only difference" -- This totally ignores the extreme differences the coastal seismic zone at Humboldt presents, in

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** Can PG&E show that another 15 years will result in additional significant decay, or significant exposure reduction? If not, why the full 30 years?

contrast to almost any site further inland! Then the DES has the audacity to worry about the costs of "seismic considerations of the ISFSI", were it to be sited elsewhere!

Pg. 1-5, PP1: "it would have greater environmental impact than onsite fuel storage." -- Not if there's a release of radioactivity caused by seismic movement at the proposed site!

last PP: "not proceeding with a decommissioning plan could introduce uncertainty...eventually the residual radioactivity would have to be removed.." -- By the same logic, SAFESTOR provides more uncertainty than DECON, and leaves residual radioactivity for a longer time. This was not addressed in evaluating the earlier alternatives.

Pg. 2-1, PP 3: "A cover will be installed" -- When? What kind of cover?

PP 4: "This leakage was attenuated" -- but apparently will continue, at a reduced rate, for thirty years? The California Coastal Commission, in commenting on this paragraph, said: "There is a greater risk for a higher level of soil contamination than has been indicated in the DES."

Pg. 2-5, PP 2: "The water from the liner gap is pumped to the radwaste system." -- These pumps will have to operate flawlessly for 30 years to maintain the proposed level of leakage. What provisions have been made to insure this?

2.2 (1): "until DOE has a permanent Federal repository" -- This might be a <u>very</u> long time, what with recent lawsuits filed by <u>all</u> of the proposed siting states' governors. The DES doesn't address the impacts of a longer-than-expected wait; why?

Pg. 2-6: "set aside and accrue funds for DECON activities." -- Only 1% of the current estimated cost ($600,000 out of $60 million) has been set aside to date. The actual cost will probably be much higher, due to inflation and regulations which are becoming steadily stricter and more expensive each year. Where are the funds to be kept? Who controls them? What if the company fails during the 30 years? Will the money then exist to cover the real dismantlement? Is there any guarantee that the total necessary funding will be available even if the company is "solvent" in 2015? What will be left on Humboldt Bay's shores if not?

Pg. 3-1, PP. 3: "of which 0.22 million dollars is allocated for Unit 3.." Is this not an unrealistically low figure? Where is the supporting data?

Pg. 3-2, PP. 3: "Because of the long time that has elapsed..." -- The fuel was removed from the reactor in 1984, not even two years ago!

3.1.5: "No mechanism for impacting... is evident." This is unpardonably vague. A DES is properly supposed to evaluate impacts which may become evident during the length of the proposal. Any of the many accidents which could happen during SAFEST3R would provide ample "mechanism for impacting"...

Pg. 3-3, 3.1.7: "occasional release from the liquid waste treatment system." -- What liquids will remain in the Unit? Isn't the plan to have it flushed at the outset?

"diluted with the cooling water flow from the two fossil-fueled units." -- What guarantee does PG&E make that these two units will remain operational throughout the 30 years? What will do the diluting if not?

"some metallic products... not expected to occur at toxic levels." There will obviously be some radioactive effluent here; how much? and how hot? This isn't data! And "expected" is very vague when we're dealing with toxicity to health.

3.2: : "releases of liquid and gaseous radioactive effluents." -- What releases? How much?

Pg. 3-4, PP 1: "small quantities of radioactivity...will be released to the environment." -- Why will these releases happen? How much is "small"?

PP 2: "Little transportation of radioactive waste from the site.." What will be transported? How will it travel? How much is "little"? These statements are too vague.

PP 3: What will the radiation inventory be in 2000 versus 2015? Versus now?

PP.6: What was the basis of these estimates?

PP 7: There is still much room for debate in the medical community about estimating health effects of radiation exposure. There is no generally accepted threshhold under which exposure is "safe".

Pg. 3-5, PP4: "2 chances in 100..." -- When? How does the probability differ between now and 2015. If the difference is negligible, why wait the 30 years?

Pg. 3-6, PP3: "wastewater from ongoing decontamination activities..." --

What activities are these? Be specific.

Pg. 3-6, PP 5: "If contamination is ...suspected in a batch" -- Does this reveal that not every batch of waste will be tested?

"After processing" -- How clean is clean enough? Specify.

PP 6: "stored in a shielded area" -- With what degree of protection? For how long?

PP 7: "packaged for shipment and stored..." -- For how long? Indefinitely? Specify.

"The handling of activated components will be similar ... as appropriate." This is extremely vague; elaborate. Activated waste is pretty nasty stuff. What plans are there for transuranics? Will anybody take them?

Pg. 3-7, PP1: Will Richland take all the solid waste, or do new quotas preclude that? Where else?

Pg. 3-9, PP 2: There has been some evidence of deterioration over time of these neutron-absorbing blankets. What surveillance does the licensee propose to monitor this over 30 years?

"to insure sub-criticality after any event..." Is this "insurance" realistic in the event of a truly major earthquake?

Pg. 3-10, 3.2.3.4: "Criticality potential of stored spent fuel.." Cynthia Pollock, author of Worldwatch Paper 69, "Decommissioning: Nuclear Power's Missing Link", asserts this matter to be "the most severe threat" of all of the dangers posed by SAFESTOR. All of the speculations in this section of the DES are moot in the event of an unusually large earthquake near Humboldt Bay. Most experts are predicting such a quake somewhere in California within the next 20 years.

Pg. 3-11, PPs 3-7: "tacit assumption", "very unlikely", "negligibly small" -- These are too vague. The fact is that noone can guarantee the sub-criticality of the stored spent fuel array in the event of an earthquake registering over 8 on the Richter scale. "Negligibly small likelihood" is an ominous-sounding reassurance in light of the "impossible" accidents that have been happening at nuclear plants world-wide. There is too great a seismic risk present at Humboldt Bay to warrant 30 years of high-level waste so close to so many faults.

Pg. 3-12, PP 1: In an earthquake rupture, new rock fractures may increase groundwater velocity, reduce the rate at which radionuclides

precipitate out, and cause greater and more rapid flush into the Bay. This must be analyzed in the DES.

Pg. 3-12, PP3: What is the staff's worst-case release scenario? Why did the staff use the licensee's estimates, instead of independent sources?

PP 4: "the radionuclides were assumed to remain in Humboldt Bay for 1 year." Why this assumption? Where will they "go" after 1 year is up?

Pg. 3-13: "Thus an average individual consuming finfish and/or shellfish..." What about the risk to a family which relies mostly on this seafood for its sustenance, as do many fisherfolk in the Bay region? "Average consumption" is based on general population -- but consumption in a fishing economy, such as Humboldt Bay, would be obviously many degrees higher. This impact is not adequately addressed in the DES.

Pg. 4-1, PP 3: "Decon is not feasible..." -- This is weak analysis: Morris, Ill. is not even given passing consideration. The example of Elk River is discounted.

"DECON would result in greater occupational radiation exposures... and more radioactive waste than other alternatives." -- There is no evidence presented in the DES to substantiate this conclusion.

PP 5: "SAFESTOR ...occupational radiation exposures would be the lowest." -- Again, there is no evidence presented in support.

In Japan, nuclear utilities are advised to wait no longer than 10 years after closure to dismantle their plants. Humboldt Bay Plant has been closed now for ten years. It was built in the wrong place, using technology from the 1950's, when little was known about the true nature of nuclear safety, or about seismic volatility. Unfortunately, this DES has no chapter entitled "Common Sense".

Common sense dictates that it's foolish to leave highly radioactive materials sitting on three earthquake faults in leaky pools right next to the Pacific Ocean! The risk over thirty years is too great.

This DES appears to have been written with a pre-conceived goal in mind: to bail PG&E and the NRC out of the mistakes they have been compounding for years. It won't wash. It is incomplete, vague, and in its generic evasiveness of critical seismic issues ,a travesty. This is not an acceptable environmental statement. Its conclusions appear to be only its premises,

and should be rejected or completely reassessed.

Obviously, there is no "safe" way out of the decommissioning dilemma. At best, we have a choice of bad choices. But the choice proposed in this document is possibly the worst of all. Back to the drawing boards, and let's be honest this time!

Sincerely,

for the Acorn Alliance for Safe Energy,

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