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RE: Comments for the record on "Draft Supplement 1 to Nureg-0586, Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities (GEIS), Draft Supplement Dealing with Nuclear Power Reactors".

What a way to spend the day after Christmas-what a way to spend many hours of December and November-having to plow through this document - a monument to mans' arrogance, stupidity, lack of foresight and greed, if there ever was one. However, the document can be condensed into three words, namely: "DUMP AND COVER", if one wants a basic overview of what NRC put in it, as that seems to be part of the main desire of the nuclear industry/NRC (and D.O.E !), concerning what to do with the horrendous nuclear legacy of the atomic age. At the height of the Cold War, in the U.S., defense against the atomic bomb and the hydrogen bomb (which in essence uses a fission - atomic- device/bomb/reaction to trigger the fusion reaction/bomb/device which triggers etc. etc. etc. ) was an incredible defense which was called "DUCK AND COVER". They actually had the population believing that if you ducked under a door jamb, or under a desk at school, or under a table in the kitchen, you would survive nuclear war.. While this side of the Atlantic dutifully behaved like a bunch of sheep going over a precipice following the leader, the other side of the Atlantic, thousands upon thousands demonstrated against the insanity of the arms race and nuclear weapons in general. Why was there a difference in behavior? Because, just like today with this issue of nuclear waste and "decommissioning", (a word everyone swallows it seems - must be a new made up word as it is not in my huge old dictionary) - there was/is almost no discussion of the issues in the press, and no education on the issues, and this is purposeful. There is, and has been, press interference on the issues - by both industry and governments.

The nuclear issue is the most important issue facing humanity and has been since the atom was first split. The nuclear issue is the Sword of Damocles over the planet and all future generations should we survive the next decade, (as I write India and Pakistan are once again on the verge of war, only they now have nuclear

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weapons, thanks to the fact that they got both nuclear power plants and research reactors, - get those, and with enough money and infrastructure and a government willing to squander billions, just like the Soviets, the British, the US, the French, the Chinese, the Israelis, the South Africans under apartheid, did, - and sooner or later you've got yourself a bomb - THE BOMB - (that old nuclear power/atomic bomb connection no one wants to mention.) You mean NRC thought no one realized the nuclear power route was just a diversion so the public wouldn't realize they were running plants to produce extra plutonium for weapons if needed? Oppenheimer SAID so. Besides, anyone with common sense could figure that out. Just as anyone with common sense can tell this Draft Supplement 1 to Nureg-0586 will have dire consequences if implemented in its current form. It always amazes me how the Nuclear Regulatory Commission INVENTS its own laws and standards - its own regulations, its own definitions (such as "de-commissioning" see p.xii) and most of the public doesn't realize (if they did, it is safe to assume they would probably horsewhip the Commission out of town) what a sham it all is and how industry writes its own ticket. For example, p. xii, the Commission has concluded (says the Commission) that impacts that do not exceed permissible levels in the Commission's regulations are considered small. In other words, using made up regulations based a great deal on that appalling, criminally negligent outfit the ICRP, (one of the dumping grounds for Manhattan Project scientists post WWII - for anyone reading this from the younger generations, the Manhattan Project was the name of the project that built the atomic bombs dumped on Hiroshima and Nagasaki) and its <sup>THE ICRP'S</sup> early determinations that they would set allowable levels of exposure that were at levels that would allow the emerging atomic energy industry, and everything that went with it, to operate with all the releases which they knew and admitted would cause genetic damage, but they decided it would be acceptable to damage sperm and ovum. Do damage countless generations (until they die out) to cause countless birth defects, countless miscarriages, countless cases of spina bifida - look at South Carolina, nuclear power plants and the Death of the Earth squad's Savannah River Nuclear Site and the highest spina bifida rate in the US. NRC has absolutely no basis to say whether impacts will be small etc. based on that

sort of garbage. The great R.M. Sievert (after whom the unit the Sievert is named) pointed out that there was no level below which radiation did not cause damage, no threshold that must be exceeded for damage to occur, yet NRC says a threshold must be exceeded for effect to occur, I believe Sievert. The ICRP standard of 5Rem per year is based on a principle called risk/benefit that allows a one in five thousand chance of contracting cancer. In other words, the death or cancer risk is the workers and the public's, the benefits are the dollars flowing to the industry and the NRC (from the industry in return for NRC services and licenses etc.) The NCRP also pushes the 5 Rem standard - this is the same bunch of bozos who in trying to refute the world renowned findings of Dr. Alice Stewart and the famous Oxford Study accepted worldwide, that showed x-raying a developing fetus caused a major increase in childhood cancer - claimed obstetricians had x-rayed those fetuses which they somehow KNEW would get cancer, which explained why the x-rayed fetuses went on to get childhood cancer.<sup>11</sup> (See "The Woman Who Knew Too Much - Dr. Alice Stewart and the Secrets of Radiation" by Gayle Greene. Read it and learn all about the Commission and its buddies. Read it and weep for humanity, then, if you have something called a conscience at the NRC, go do something about this Draft so it is no longer an industry wish list. ) The ALARA principle that NRC uses which basically says that doses must only be kept As Low As Reasonably Achievable (ALARA) based on the state of the technology and the amount of money spent by the industry - what Dr. Gofman calls "planned deaths" as NRC knows - is referenced by NRC many times, and the Draft even says during licensing the applicants commit to implement ALARA programs. The combination of ICRP, NRC, NCRP and ALARA standards is, and has been a recipe for premeditated murder and/or illness, genetic damage and great suffering as it is, NRC saying that it has not established standards to biota other than humans on the basis that limits established (by the aforementioned) for the public would provide adequate protection for other species is outrageous and contrary to what has been established for decades. Plus, to

then cite the bozogs at NCRP again, saying that the "fate of individual non-human organisms is of less concern than the maintainance of endemic population," shows A COMPLETE LACK OF UNDERSTANDING OR COMPREHENSION OF THE WEB OF LIFE AND THE NATURAL WORLD. The effects of ionizing radiation exposure on ALL life forms includes sterility and genetic damage which can lead to extinction. (Think fruit flies and Herman Muellers experiments which gave him a Nobel Prize.. Think the effects to fish, proved years ago. ) When thinking about exposure to plants and animals and fish, one needs to take the effects to an infant and to a child in the womb to better approximate the effects to wildlife, the smaller the non-human entity (e.g. a bird, a frog) the child in utero down to embryonic level would be appropriate. We all know what happens when an embryo is exposed - namely death or severe damage. The same happens to birds eggs. The International Atomic Energy Agency is about as trustworthy on the radiation dose issue as Attila the Hun would have been on the gentleness issue - the IAEA has a charter that states its sole purpose in life is to push all things nuclear, just what does NRC expect them to say ?

Almost 50 years ago, the Georgia ecologist Eugene Odum, who did a lot of work for the Atomic Energy Commission/DOE (a fact that is not now widely known) under contract, wrote of the need to "accelerate the study of the function of intact biotic communities in order that the total radiation effects can be evaluated" of the need for "an understanding on the long term influences of low level radiations on aquatic and terrestrial environments into which the by-products may be released," and that it was conceivable "that every large atomic power plant of the future will need a radiation ecologist to work with environmental problems outside of the plant" and that there was a need to train "young men simultaneously in the fundamentals of modern ecology and radiation biology in order that this inevitable need can be met." How terribly sad - the NRC has one doctor for the entire NRC. Radiation biologists ? Stop me before I scream.. It is obvious that an inventory of all life forms on a site should be made and that they be screened for chromosome aberrations and radioactive contamination, then

a similar comparison be done at a site as similar as possible to the plant site about twenty miles away upstream and out of the predominant windpath on a thirty year wind rose. It would not be half as good as one would want, but it would be better than nothing and establish some differences and give a better idea of the contamination problems, even though a site twenty miles away will have recieved some airborne deposition from the plant. In terms of aquatic species, the record from State sources and the licensee on tests run on fish/mussels etc. can be used and compared to the fact, repeat FACT, that contaminants such as Cobalt-60, Sr-90 Cs-137, H-3 above the minute natural burden, plutonium etc. are not natural and should never be found in fish, mollusks etc. and one can look for chromosome aberrations. Diatoms can be examined for bioaccumulation of the uraniums from the plant. Centuries hence - in some cases decades - a measure of aquatic health would be the decrease in levels of contaminants found in species and decrease in aberrations etc. It is vital, that contaminated sediment found downstream (and also some upstream due to airborne deposition on water sinking down) be removed for many miles downstream. This should be done by perhaps sucking it up via vacuum type hoses as opposed to dredging which could dislodge and spread the contamination further.

With regard to plant life, microorganisms etc. one could compare plant seed production of say twenty species on site, with production twenty miles away, and number and type etc. of microorganisms likewise. as well as radioactive contamination. I don't really know why I am bothering to write all this, as the NRC will ignore it anyway, but hope springs eternal as they say. If we don't have comparisons, we can't have at least some idea of what constitutes the start of a return to a more unpolluted site, and we can't establish what needs bulldozing and taken to a radioactive waste national sacrifice area. THERE SHOULD BE ABSOLUTELY NO UNRESTRICTED USE OF THE PROPERTY EVER. THE ADDITIONAL EXPOSURE IS TOTALLY INSANE. WHEN DR. KARL MORGAN WAS ALIVE \* THE FATHER OF RADIOLOGICAL HEALTH PHYSICS, FORMERLY WITH OAK RIDGE FOR DECADES, HE SAID LESS THAN ONE MILLIREM PER YEAR ONLY WOULD BE PERHAPS ACCEPTABLE FROM ALL PATHWAYS. THERE NEVER

SHOULD BE A LACK OF INSTITUTIONAL CONTROL EITHER.

The Technical Specifications and what the facility was allowed to dump under the license are outdated and bear no resemblance to current knowledge and should be junked and the whole thing done over. Furthermore, the way the environmental and water issues were looked at during the time of plant licensing were often equally awful. It all needs reconsidering.

What is ridiculous, is the worry about messing up the environment while decommissioning the dump. For crying out loud, every second the plants are running they are contributing to ecological ruin, at the microscopic level, and impacting human health to a distance of approximately 100 miles.

This Draft 1 references MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual.) I commented on the Draft, never saw the final, never heard from anyone again on it. It was mindnumbingly awful. Put together by some people from NRC, DOE, Dept. of Defense, and EPA. Industry was represented big time. In it the DOD said how committed it was to protecting the environment - this from an entity that had left thousands of contaminated sites on and off bases, themselves requiring an estimated (govt. estimate) \$100 BILLION to \$200 Billion to cleanup worldwide. In its introduction, Draft "Marssim" did not address all sorts of things - from contamination on vicinity properties through contaminated subsurface soil, water, construction materials and on and on. All of which must be cleaned up/have the contamination removed. They showed a lack of understanding of the groundwater cycle, and groundwater issues JUST LIKE THIS DRAFT DOES (in fact I'm still looking for it to be addressed), Groundwater is used by countless communities, groundwater is eventually released to surface and other water bodies and, as groundwater onsite is usually radioactively contaminated, (At Plant Hatch they contaminated it by 1979 and that was just for starters), it is is a SERIOUS issue that MUST be dealt with, groundwater that is contaminated Must be pumped out etc. (Refer to what I said in earlier comments) THIS GROUNDWATER CONTAMINATION ISSUE IS ANOTHER REASON WHY "RUBELIZATION" MUST BE FORBIDDEN. THE CONTAMINATION IN WHAT THEY WANT TO RUBELIZE AND BURY WILL LEACH TO THE GROUNDWATER AND DIRECTLY IRRADIATE SOIL AND MICROORGANISMS. The industry just wants to save money and "dump and cover".

The fact that the Staff and the Commission have even considered rubblization shows an utter disregard for the health and welfare and safety of the public and the ecosystem upon which life depends. Anything dumped or buried from the past practices on site must also be dug up and removed.

To find out the extent of past problems, and contamination levels, IT IS VITAL THAT THE NRC, THE LICENSEE (as some are new owners/licensees), AND THE CONTRACTORS AND SUB-CONTRACTORS, GET ALL <sup>REPORTS OF</sup> ACCIDENTS, LICENSEE EVENT REPORTS, VIOLATIONS, INSPECTION REPORTS, SPILLS AND CONTAMINATION EVENTS FROM THE DOCKET FOR THE REACTOR AND SITE IN QUESTION, AND BLOODY WELL GET OFF THEIR REAR ENDS AND EARN THEIR MONEY AND READ THEM. THEY NEED THE WHOLE LOT, SINCE STARTUP, EVEN IF IT TAKES TWO MONTHS TO READ THEM. I AM SICK AND TIRED OF EVERYONE, NRC INCLUDED, REFUSING TO READ THOSE REPORTS FROM THE DOCKET AND IN THE PUBLIC DOCUMENT ROOM. THEN, AS THE LICENSEES USUALLY PUT A GOOD SPIN ON IT, PEOPLE SHOULD REALIZE THE PROBLEMS LISTED WERE PROBABLY WORSE. Another issue, which I touched on in my comments on MARSSIM, was the fact that in the real world, many people can not read or write very well, and if things are contracted out, this could have serious consequences. NRC must stipulate, that ALL CONTRACTORS AND SUB-CONTRACTORS RIGHT DOWN TO THE BACKHOE OPERATORS MUST BE HIGH SCHOOL GRADUATES. Cleanup cannot just be dished out to any contractor, all involved should not only have a stirring track record, but experience in nuclear fields. There should be a radiation biologist on site, plus a health physicist, plus a wildlife biologist with a knowledge of radiation effects, plus there must be federal and state oversight ON THE SITE at all times. I noticed that the Draft blabbers on about OSHA standards- YET FAILS TO MENTION THAT OSHA DOES NOT COME ON SITE AND IS NOT ALLOWED TO ACCORDING TO OSHA, EVERYTHING IS UNDER NRC. So let's print the truth shall we ?

The Draft says, p.1-6, that the NRC and the Commission are not considering the issue of spent fuel storage (in a pool or in one of those ridiculous casks outside in plain view for every terrorist to see) as part of decommissioning. The excuse is that it's dealt with under other license aspects. It also says that the Commission has made a finding that the DEADLY, RADIOACTIVE SPENT FUEL CAN BE STORED SAFELY.

AND WITHOUT SIGNIFICANT ENVIRONMENTAL IMPACTS FOR AT LEAST THIRTY YEARS BEYOND THE LIFE FOR OPERATION ETC. ETC. IS THE COMMISSION OUT OF ITS COTTON-PICKING MIND? Those issues are of grave concern. What happens, if during decommissioning (i.e. during "dump and cover", amidst much licensee laughter about how they stuck it to the rate payers and taxpayers and local community yet again) terrorists take out three spent fuel casks blasting them to kingdom come (the Milan anti-tank weapon would do that, as I wrote NRC before) OR two casks had a major problem and needed to be opened under shielding inside the spent fuel pool and there was either no room in the spent fuel pool or the cask came apart while trying to move it due to embrittlement of the cask from the radioactive decay heat coming off the spent fuel? What will NRC do, what will the licensee do, send for Ghostbusters?

Under Water Quality p.4-10,4-11 The NRC must stop giving the impression that it is sheer chance that nuclear reactors are located on water, when in fact they require millions of gallons of water a day to operate and that water source is considered the ultimate heat sink in the case of a meltdown - it'll ooze on down the river, hissing and sputtering like a volcano hitting water. NRC assumes compliance with NPDES discharge permits for non-radioactive contaminants (NPDES and the Clean Water Act do not cover most radioactive contaminants, this was purposeful, so industry and the armaments crowd could do what they liked, ) however, NPDES permits are often violated or bypassed - just look at the NPDES situation in Georgia as one example. Discharges should never have been allowed without prior cleanup and should not be now. Surface and groundwater quality, p.4-12, should NOT be considered a generic decommissioning issue - climate zone can also create unique problems, terrain likewise, it should be site specific. Air quality issues, p.4-12 etc., do not address the fact that HEPA filters are about as good as useless for radioactive particulate holdup and sand filters should be added as well. All workers must have self-contained breathing systems (moon-suits). The area being worked in should be covered to contain dust if it means covering the whole site with a tent with an adhesive inner surface to capture particulates - after all if flypaper is good enough for the DOE when it, like the NRC was called the AEC, to capture particulates on, a tent with



some sort of a sticky undersurface is a step up! The point I'm getting at, is, one does not want radioactive and chemical particulate matter getting offsite if possible. If such a tent system were used, afterwards it would be disposed of as rad waste. Also, workers and the public MUST understand the fact that one can not clean up radioactive contamination, only contain it to some extent and remove contaminated materials to better sites where they can be better contained - in other words to national sacrifice areas remote from all human habitation and far from water sources, where wild life is fenced out. Regarding aquatic ecology p.4-16, as touched on earlier, the environmental impact statements originally written for the plants were often very poor, and did not mention that the discharge water would be radioactively contaminated nor that sediment would be contaminated for miles etc. In the long term, if the contaminated sediment is removed and no further radioactive and chemical releases are made to water and air, the aquatic ecology can only improve. Water quality should continue to be tested for radioactive contaminants for at least 600 years which is the full radioactive hazardous life approximately for cesium-137 which is a contaminant of concern in fish and shellfish as it migrates to muscle in particular. The aquatic ecology issue should also be site specific, for example, Plant Hatch in Southern Georgia had a massive spent fuel pool spill which contaminated not only the river and sediment but also a huge wetland area which has many creatures feeding in it and becoming contaminated, including threatened and endangered birds. And on the endangered bird subject, let me address the Migratory Bird Treaty Act of 1918 - (p. 4-20) It is a proven fact - proven by the old Atomic Energy Commission and its contractors, - that migratory birds become contaminated eating seeds, drinking water and so on at radioactively contaminated sites, wetlands areas etc. and the birds carry this contamination in their bodies worldwide. NRC, DOE and licensees violate the MBT by not protecting birds from such contamination, and by spewing radioactive noble gases out that impact passing birds. No wonder birds are declining. This is one of the reasons I suggest that netting or similar should be placed over the sites in

question, fine wire mesh set at an angle that can have leaves and other debris hosed off it, it must be small enough to keep birds out down to the size of hummingbirds. Enclosed, such an obscen~~e~~ site poses slightly less of a threat to birds and other wildlife, the utilities can pay for it all, it can come out of the salaries of the top management and company owners. NRC better set it up now, before they all pull an "Enron" - i. e., an "end run" round everyone.

I notice that the General Accounting Office has slammed the NRC for its lack of oversight of transfers and mergers in the nuclear industry and had not verified that new owners would have guaranteed access to the decommissioning charges that their affiliated utilities would collect, in some cases, plus, a host of other safety and other issues were raised, all of which are troubling. The NRC must immediately address problems, and should demand that companies provide enough money for oversight - to include security staff, maintainance staff, nuclear engineers, radiation safety officers etc. - essentially forever. Even after all fuel is removed from the site and the entire structure is removed, the site will still be radioactive forever and still need a security person, basic maintainance person (for upkeep of fences, gates, runoff detention ponds etc.) and regular visits from a radiation safety officer. It is absurd that NRC states that "decommissioning activities do not include the maintainance, storage or disposal of spent nuclear fuel, or the removal and disposal of nonradioactive structures and materials beyond that necessary to terminate the NRC license.....they are not considered as a cost impact because the licensees are not required to accumulate funds for these activities." (See p. 4-42) Why not? This is an outrage! The NRC must pass a Rule at once requiring such money be set aside, some of it perhaps in form of gold and silver bullion at bank deposit in case of financial collapse. The fact of the matter is this: the licensees must be held responsible and accountable for everything about and on the site and generated by the site past, present and future. As NRC states (p.43) local jurisdictions may impose stricter "cleanup" or waste or contamination containment and this will cost more. The NRC should add a 10% surcharge to any calculated fees for decommissioning to help cover those costs.

that are unforeseen which may arise. And of course they must pay for the "spent" deadly radioactive fuel storage at the sites, whether in pools or casks at ISFSI's and the maintainance and upkeep and security and waste handling and fire prevention and similar. This MUST be addressed as part of this decommissioning, it must be incorporated. THE COSTS MUST NOT BE PASSED ON TO THE RATEPAYERS as NRC says they are currently. Furthermore, the most expensive estimate should always be assumed for everything as a wise precaution. NRC lists the decommissioning costs in MILLIONS as estimated by the utilities - however, NRC WELL KNOWS THE COSTS ARE IN THE BILLIONS WHEN EVERYTHING FROM SPENT FUEL ON DOWN IS FACTORED IN, AND THAT MUST BE REFLECTED, PLUS THE NRC INSPECTOR GENERALS OFFICE SHOULD GO OVER ALL ESTIMATES MADE BY UTILITIES TO SEE HOW TRUSTWORTHY AND ACCURATE THEY ARE. Inflation must also be added to costs.

Regarding the loss of local tax revenues due to "decommissioning". The utility ~~also~~ must be required to notify the local government as far in advance as possible that they will lose taxes. The fact that the local government should never have allowed such nuclear dumps, posing as power plants, into their communities is another issue. They need to understand that they better diversify their tax base in a hurry. HOWEVER, the nuclear industry - the entire industry - (from nuclear plant owners to uranium enrichment plants to users of radiation for medical experiments posing as "therapy" etc) should have a tax levied on it by NRC to be paid into a special account to go towards compensating the communities. An additional tax can be levied on them yearly in the form of a small, flat fee which would help pay for the NRC and the EPA to do quarterly inspections at facilities, in perpetuity.

Before I forget : NRC MUST MAKE LICENSEES, CONTRACTORS, SUBCONTRACTORS AND ANYONE WHO WORKS ON DECOMMISSIONING TAKE THE EFFECTS OF RADIOACTIVE "DAUGHTER" PRODUCTS INTO CONSIDERATION AS THEY MAY HAVE VERY DIFFERENT PHYSICAL, CHEMICAL AND RADIO-ACTIVE PROPERTIES THAN THE RADIOACTIVE "PARENT". THIS MUST BE PART OF DECOMMISSIONING STANDARDS. MARSSIM basically ignored that, another reason their Draft was so awful. NRC seems to have ignored it in this Draft also. This is an important health and also environmental issue that cannot be ignored.

A.B. 

Regarding Occupational Dose and nuclear power plant exposure data (p.G 12, etc)

The regulatory limits for exposure were not set based on medical reasons but were set in order to enable the industry to operate - that is historic FACT - because what people are being exposed to is either not found in nature (i.e. it is man-made) or found in nature at far, far lower levels. The exposure allowed by regulation is, in fact, slow death, and furthermore, worker doses can't always be trusted because of faulty measuring equipment, horror stories of workers being told not to wear their dosimeters periodically, and so on. The dose received also has a different effect on each person depending on age, sex, current and past health status and many other factors, plus each organ is affected differently. The fact that the ICRP, DOE, NRC etc. didn't know what on earth they were doing - other than guesswork - regarding exposure levels set, is shown by the fact that they had to keep adjusting the "allowable" regulatory limits downward. A sort of continuous "Oops, we screwed up ! But don't worry, this time we've got it right." All the blather on "Risks" from radiation exposure, can't hide the fact that it kills - not just cells here and there - such as cells about to form the septum of a baby's heart so the child is born with a hole in it's heart, because a bunch of murderers at the ICRP decided the risk was acceptable - but it kills people. To KNOWINGLY ALLOW PEOPLE TO BE EXPOSED TO SOMETHING THAT WILL KILL A CERTAIN PERCENTAGE OF THEM, HAS A NAME, PRE-MEDITATED MURDER \* JUST BECAUSE A REGULATION WAS WRITTEN SAYING IT'S OK, DOES NOT CHANGE IT. Further, the ICRP does not consider effects manifested after the second generation in assessing the genetic risks to workers offspring (p.G 5) again showing they don't give a damn about the workers and their families and whether or not workers great grandchildren are born deaf, or with learning disabilities, or unable to reproduce. For the Draft to take the attitude of "well, the doses at plants being decommissioned are generally only a small fraction of doses at operating plants " p. G.13 is no comfort, and all the charts show, concerning Occupational doses (page G 14 and on), is thousands upon thousands of contaminated workers. It is obvious that this contamination of workers (and the environment)

must be massively reduced.

I noticed that it said cutting methods included abrasive water G-17, but in any case where there is plutonium contamination or depleted uranium metal, that all is meant to be cut under heavy oils and ~~much~~ else besides. Since many of the components will have been contaminated with plutonium, or were made of depleted uranium (when is the NRC going to tell the public that DU is NOT radioactive waste?) it is obvious that the reactor vessel should NEVER be cut up, but do what was done with the Trojan vessel (p. G-18, remove the whole thing offsite). However, the vessel should have additional shielding placed around it prior to placement on the heavy haul trailer, and upon arrival at the disposal site it should be further encased in what would amount to a giant burial cask. Removing the vessel offsite massively reduces worker doses, water contamination and the contamination to the local community and the environment. Obviously, the spent fuel is /has been removed from the reactor vessel and all liquid radwaste etc. too ! UNDER NO CIRCUMSTANCES SHOULD A FACILITY BE ALLOWED THE OPTION OF CHOOSING THE METHOD OF DECOMMISSIONING IT WANTS, AS IS THE CURRENT CASE. Combinations of DECON and SAFSTOR would be the best, however, under no circumstances should SAFSTOR continue past five years (the regulation should be changed, as to expect that oversight will continue for 60 years at such sites is ridiculous) that would enable workers familiar with the plant to be still available, but at the same time allow for the decay of some of the radioactive contaminants which have shorter full hazardous radioactive lives prior to removal, thus lowering worker exposure etc.. NO WAY THIS SIDE OF HELL SHOULD ENTOMB I OR ENTOMB II BE ALLOWED. BOTH STAFF AND THE INDIVIDUAL COMMISSIONERS SHOULD BE CHARGED WITH CRIMINAL NEGLIGENCE - ALONG WITH THE LICENSEE - IF THEY PUSH THAT THROUGH, AND I AM CONFIDANT THAT MANY WOULD ENSURE SUCH CHARGES ARE FILED. THERE IS INDIVIDUAL RESPONSIBILITY CONCERNING THESE MATTERS, AND IF NRC CANNOT UNDERSTAND WHY THE ENTOMB OPTIONS ARE AN ABSOLUTE NO-NO, THOSE WHO CAN'T GRASP THE "WHY" PART SHOULD RESIGN AND STICK TO SOME EMPLOYMENT WHERE THE USE OF THE BRAIN IS NOT HIGH ON THE

## LIST OF JOB REQUIREMENTS.

It appears that the nuclear industry has written its own ticket, as usual, on the issues in the Draft. P. E-5 notes the help from the Nuclear Energy Institute in gathering information. HOW ABOUT THE NRC ACTUALLY READING THE INSPECTION REPORTS AND VIOLATIONS ETC. ON THE DOCKETS OF EACH FACILITY AS I SAID EARLIER. HOW ABOUT TESTS BEING RUN BY THE NRC ON THE SITE. HOW ABOUT INTERVIEWS WITH LONG TIME STAFF CONCERNING PAST PROBLEMS THAT COULD BE ENCOUNTERED? NRC should take its own independent samples of offsite water and sediment and soils, as well as onsite.

The NRC must not go by the original Offsite Dose Calculation Manuals as <sup>what</sup> ~~went~~ was allowed in them, went out with the ARK - i.e. the levels were terrible, a recipe for radioactive pollution. I cannot stress enough that the groundwater issues are not adequately addressed. The use of high pressure water sprays is obscene. WHAT IS WRONG WITH THE NRC? DOESN'T NRC UNDERSTAND THAT ONE CANNOT DECONTAMINATE SOMETHING RADIOACTIVELY CONTAMINATED IN THE TRADITIONAL SENSE, UNLIKE WITH A CHEMICAL OR OTHER CONTAMINANT, WHATEVER IS DONE TO SOMETHING RADIOACTIVE DOES NOT CHANGE THE CHARACTER OF THE RADIATION, IT CONTINUES TO EMIT ITS DEADLY ALPHA, BETA, GAMMA, NEUTRON ETC. RADIATION THROUGH THE FULL RADIOACTIVE HAZARDOUS LIFE. YOU CAN'T BURN IT/ INCINERATE IT, IT GOES OUT THE STACK AND POLLUTES THE STACK, YOU CAN'T WASH IT, IT WINDS UP ALL OVER THE PLACE AND IN THE WATER, IT IS ALWAYS THERE, THE DEADLY, INVISIBLE KILLER. AT MOST YOU CAN TRY AND CONTAIN IT. The Tritium can't even be contained.

The original site maps and drawings and photos made during construction should be consulted (some building techniques may have changed) all modifications and revisions should be tracked down. All vent systems should go through both HEPA (for the chemicals) and sand filters. Additional containment should be added around spent fuel pools including over the top and beneath it, extra supports, new liners. They will suffer serious embrittlement and activation, same goes for the casks. Such issues must be addressed. Again THERE MUST NEVER BE A PARTIAL OR FULL SITE RELEASE. ALL PROPERTY DEEDS MUST STATE THE SITES ARE

NOT ONLY RADIOACTIVE, BUT SUPERFUND SITES, AS THAT IS WHAT THEY ARE. THE RIVER, LAKE, OCEAN BEACH STRETCH OR WHATEVER IS NEXT TO THE SITE SHOULD BE POSTED AS RADIOACTIVE ALSO, EVEN IF THE SEDIMENT IS REMOVED, AS IT IS IMPOSSIBLE TO GET EVERYTHING.

Security must be upgraded, not downgraded.

No structural remains should be sent to local landfills - the landfill will be radioactively contaminated more than at present. As all landfills leak, it will go to the groundwater and migrate offsite. None of the mixed-waste should be dealt with as mixed waste (i.e. a combination of chemical/hazardous and radioactive) because MIXED WASTE FALLS THROUGH ALL REGULATORY CRACKS, BUT IT SHOULD BE TREATED AS RADIOACTIVE WASTE. WASTE OILS SHOULD NOT BE SENT TO VENDORS FOR INCINERATION OR RECYCLING OR REUSE AS THEY ARE CONTAMINATED.

EVERY SITE, OPERATING OR NOT OPERATING, IS A PRIME TERRORIST TARGET AS I HAVE SAID FOR DECADES. THE SPENT FUEL IS THE ULTIMATE IN TERRORIST TARGETS.

Years ago, when people spoke of some type of monitored, retrievable spent fuel storage, they meant monitored, so repairs could be made by remote control if needed, and retrievable so problems could be addressed - no one in their worst nightmares with any sense, ever imagined that a bunch of nuclear bozos would be allowed to stick the most deadly stuff known to humanity in a cement and metal barrel and stick it outside in plain view. Spent fuel is the stuff (ALL TOGETHER NOW...) that the Department of Energy has been charged with trying to contain for approx. 10,000 years removed from the biosphere, after which it becomes the radioactive blob from hell under whatever piece of dry land they stick it. That assumes they can contain it for 10,000 years, which I doubt. I have many concerns with the Yucca Mountain site I will not elaborate on here, but will mention that the "dump it on the Native Americans" idea is odious and immoral in the extreme. Yucca Mountain is sacred to them. That having been said, the site is already contaminated due to fallout from the weapons tests, and Nevada's belated concern about radioactive issues is hypocritical and distasteful, as this is the state that did not give a damn that hundreds of nuclear tests were conducted on Indian

land (The Western Shoshone Nation, AKA the Nevada Nuclear Test Site) that blew radioactive fallout across the nation causing serious illness, birth defects and cancers, besides doing the same to some nearer the site in Nevada. The only thing Las Vegas worried about, was if the tests shook their gambling tables according to press reports. When the wind blew towards Las Vegas they tried not to test. For Nevada to now whine that they don't see why they should get the spent nuclear fuel as they have no reactors - power reactors - is obscene, considering that a huge Curie quantity of the spent fuel was generated making/creating the plutonium and the tritium for the nuclear weapons most of them supported and didn't care that the fallout dumped on their fellow planetary citizens. The fact that there were, and are, some small groups who were, and are, against the weapons and the testing and the horrors of nuclear power does not <sup>AFTER</sup> the fact that the State didn't protest. The States' current protests, even if valid for other reasons, ring hollow against that history of nuclear collaboration, when they use the "no power reactor" excuse to keep the waste out. It is time history was set straight. The NRC in this Draft says p. D-2 that the temporary storage or future permanent disposal of spent fuel at a site other than the reactor site is not within the scope of this Supplement. Why the hell not? It MUST BE, OTHERWISE THIS DRAFT IS EVEN MORE MEANINGLESS. THE SPENT FUEL IS THE MOST SERIOUS ISSUE THERE IS. ANYONE WHO DOES NOT UNDERSTAND THAT SPENT FUEL CANNOT BE LEFT WHERE IT IS ON SITE, IN POOLS OR ~~XXXX~~ ISFSI'S BEYOND A VERY LIMITED NUMBER OF YEARS, BUT MUST BE PLACED DEEP UNDERGROUND, IN A DRY LOCATION, GEOLOGICALLY AS SOUND AS POSSIBLE, MONITORED FOR ETERNITY, DOES NOT UNDERSTAND RADIATION OR THE NUCLEAR ISSUE AND SHOULD NOT BE WORKING FOR THE NRC. NRC MUST BITE THE PROVERBIAL BULLET AND SET THE TIME WHEN THE SPENT FUEL SHOULD ALL BE REMOVED OFFSITE AS NO LATER THAN TWO YEARS AFTER THE LAST CORE OFFLOAD HAS SPENT TEN YEARS IN THE SPENT FUEL POOL, I.E. FROM SPENT FUEL REMOVED FROM THE REACTOR INTO THE SPENT FUEL POOL AND THEN THE TEN YEAR "COOL DOWN" PLUS TWO YEARS, (A SAFETY MARGIN), AFTER WHICH IT MUST BE MOVED. IF SUCH A DEADLINE IS NOT DECIDED, AND SET, COMMUNITIES ARE GOING TO BE STUCK WITH



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IT , WITH AWFUL CONSEQUENCES.

The "Mobile Chernobyl" issue - the dangerous moving of the spent fuel to a REPOSITORY , can be somewhat alleviated by addressing the concerns people have, instead of ignoring them, as follows : The Draft shows the awful DOT and NRC regulations for transport and radiation levels allowed p. 3-14, these should be changed to be massively lower, this can be done by better shielding and more shielding and the transport of fewer assemblies per cask or fewer rods per cask, and shielding that is thick enough that anti-tank weapons would not penetrate through to the fuel. Disguising the shipments is not an option due to the size of the casks, therefore far stricter security i.e. military escorts and the sealing off of roads ahead of transports would be a must. The NRC needs to pass rules on these issues, and put out orders for more and better transport casks and vehicles. All shipments of LLW should also fall under these better packaging and shielding standards. If the NRC does not address all these issues as part of decommissioning, future generations (that means YOUR children and grandchildren) are going to die due to NRC's lack of actions today. It is murderous that potential radiological impacts following license/termination that are related to activities performed during decommissioning are not in the Supplement - this allows the licensee to slowly murder a community as the radiological criteria for license termination by NRC was woefully inadequate anyway. The NRC must continue to monitor sites FOREVER after license termination in case of sudden increases in radiation levels from a source on the site no one had either considered or knew was there. All sites should have audible(sirens) alarms that are triggered during decommissioning , and after decommissioning, when monitors exceed the EPA levels EPA allows, but reduced below what EPA allows to give an advance warning.

Such audible alarm systems are absolutely vital also during the the time radioactive spent fuel is still on the site, these alarms should be at various locations onsite, including next to the spent fuel pool and one above it, and next to an ISFSI/cask area and suspended on a wire or pole above it. The alarms should be audible miles offsite via relay loudspeakers.

Under "Dose to members of the public" p. G-19, and following pages, the doses to the public are listed in the usual deceptive and inaccurate manner. The radioactive material releases is not released in stringently controlled conditions, technical specifications are often violated, monitoring is only done at select locations and frequently monitors don't work, emissions are allowed to be averaged out to make them appear less, and there is no independent monitoring and utilities do and say whatever they please. Tritium can't be contained. The direct gamma radiation coming off the plants to the public is the equivalent of a continuous X-ray emanating from their midst. No X-ray is "negligible". (This sort of garbage was probably written by someone who is not a medical professional) . Often the plants DO NOT HAVE TO REPORT THEIR RELEASES UNTIL THOSE RELEASES REACH A CERTAIN LEVEL, IT DEPENDS WHAT THEIR LICENSE STATES. FOR THE NRC TO HAVE USED DATA FOR SOUTHERN COMPANY'S PLANT HATCH IS SICKENING \*\* WHEN HATCH HAD THEIR DISASTROUS SPENT FUEL POOL SPILL, DID ANYONE ADD THE EXTRA DOSES AND CONTAMINATION IN ? THIS IS THE SAME HATCH WITH OVER 1200 WORKER CONTAMINATION EVENTS IN ONE YEAR. WHEN YOU CALCULATED THE RADIO-IODINES, DID YOU ADD IN THE HUGE RADIO-IODINE RELEASE OFF PLANT FARLEY THAT WENT OVER GEORGIA ?

The point is, that no one asked to be exposed to ANY dose of radiation, and most people in surrounding communities don't even know they are being exposed, or if they know, they think they are being protected because they think there is a safe level of radiation, when of course even the NRC admitted back in the late '70's that there was no safe level.

Perhaps most disgusting is that under "Consequence of Potential Accidents" p. I-16 the impression given is that spent fuel pool accident risks are low, when in fact NRC's own cited document shows, hundreds upon hundreds would die and also many spent fuel pools were highly vulnerable to catastrophic accident due to earthquakes and a lot more besides - spent fuel pool accidents would have terrible consequences. The fact that licensees determined that basically even if the damned site was hit by a meteor and a nuclear bomb and a

and a hurricane all at the same time (obviously I am being sarcastic) nothing would happen and there would be "no dose consequence" is to be expected as the licensee analyses are a bad joke.

THE NRC SHOULD READ ITS OWN DOCUMENTS AND THE FAMOUS "CRAC-2" REPORT DONE BY SANDIA LABS, THE NRC AND THEN CONGRESSIONAL OVERSIGHT BECAUSE TO PRESENT DATA TAKEN FROM LICENSING-BASIS DOCUMENTS WHICH HISTORICALLY HAVE DOWNPLAYED ANYTHING THAT COULD HAPPEN IS OUTRAGEOUS, AND IF THERE IS STILL FUEL IN THE REACTOR AND A LOSS OF WATER COOLANT HAPPENS, EVEN IF THE REACTOR HAS BEEN SHUTDOWN RECENTLY, THERE WILL BE A MELTDOWN.

I challenge any licensee and any NRC staffer, to walk into the area where the spent fuel pool is after the water has drained from the spent fuel pool, and try and refill the spent fuel pool with a garden hose (that is what they thought they'd do at the Georgia Institute of Technology Reactor) and see how well they can "mitigate" the situation before "offsite dose consequences could occur" - they'd be dead before they could pick up the hose. To say that such an accident could be mitigated is the height of deception.

On p. M-2 it says, under the glossary, under Background Radiation, that "the typically quoted US average individual exposure from background radiation is 360 mrem per year!" It may be typically quoted, but it is a blatant LIE. For example, typical background radiation in Georgia is 42 mrem year according to the State (which recently upped it a notch probably due to the radioactive fallout on the State from nuclear power plants and the Savannah River Nuclear Site on its borders.) The definition of CONTAMINATION is also a LIE, in that it states that something is contaminated if it's in excess of "acceptable levels". There are no "acceptable levels" - the public does not accept any level of radioactive contamination - plutonium, cobalt-60, Strontium-90 etc. or tritium, radioactive iodine and so on and on - Contamination means: that something/someone etc. has been brought into contact with something that defiles or pollutes it etc. - go look the word up - NRC must stop redefining words and lying about their meaning.

What the NRC decides to do concerning decommissioning, is what the following

generations of children, women, men, plants, animals, insects, birds, fish - all life, is going to suffer from, and die by. A small bunch of (mainly) men in an office complex in Washington, along with a few cohorts elsewhere, plus an immoral multinational polluting industry (in the business for money only) are seemingly setting a set of criteria that will impact the whole world to no good end and cause great misery, in this Draft. Have you all no shame?

The radioactive components, parts, liquids i.e. anything part of or to do with or emanating from the structures and the site MUST NEVER BE RE-CYCLED, OR RE-USED. NRC MUST IMMEDIATELY CEASE ALLOWING, OR THINKING OF ALLOWING, RADIOACTIVELY CONTAMINATED SOIL TO BE RE-USED FOR ANYTHING. IT MUST FORBID THE MELTING, SMELTING OR RE-USE OF RADIOACTIVELY CONTAMINATED METALS, PIPING, PLASTICS, WOOD, (INCLUDING FORBIDDING THE BURNING OF WOOD), ASPHALT, AND SO ON. IF NRC, EPA, THE DOE AND OTHERS DO NOT STOP THIS INSANE RUSH TO RE\*USE, RECYCLE, DUMP AND COVER ETC. NUCLEAR MATERIALS, RADIOACTIVE MATERIALS, ACTIVATED MATERIALS ETC., WITHIN FIFTY YEARS NO LIVING BEING WILL BE BORN WITHOUT SOME TYPE OF DEFORMITY, GENETIC ABNORMALITY, CHROMOSOME ABERRATION ETC. AND THE IMMUNE SYSTEMS OF EVERY LIVING BEING WILL BE SERIOUSLY COMPROMISED DUE TO RADIATION SUPPRESSING THE IMMUNE SYSTEM RESPONSE, AND ALL BECAUSE WE WILL BE COMPLETELY ENGULFED IN A MIASMA OF MAN\*MADE, OR MAN ENHANCED, RADIOACTIVE CONTAMINATION.

I have written this on and off over a series of days after finding out the comment period had been extended. I recognize that it has probably been a waste of my time and will be ignored, as usual, therefore I am not bothering to write it again with every paragraph in the right place. In any event I speak, read and write three languages and the grammar and spelling in all of them suffers somewhat - but it is the content that matters. The fact is, wherever this radioactively contaminated refuse winds up - from spent fuel to contaminated rags - it can't be contained forever and will reach the environment, which is why it must go to a remote location, below ground (none of this idiot parking lot out in Utah or Nevada cask storage either) in <sup>or</sup> dry, geologically sound (as far as possible in a moving planet) location where monitoring could alleviate problems that arise prior to reaching the public and wildlife. NRC must recognize that this "solution" -

while not a perfect solution, as there is no perfect solution to the nuclear waste issue, is the solution that has been gone back to repeatedly over the decades, after thousands of studies contemplating what to do with the waste failed to identify anything better, or safer. What NRC and industry are proposing in this Draft, flies in the face of the thousands of prior studies by some of the worlds most renowned people who understand the horror of the dilemma, <sup>of</sup> and their conclusions. Leaving all this contamination on sites around the nation to contaminate and kill hundreds of communities is simply barbaric and must be stopped at all costs. Furthermore, no new nuclear plants should be allowed or built as they will just add to the existing contamination, and all operating plants should be shutdown to stop further "waste" - such as plutonium-generation. None should be re-licensed - the NRC should be ashamed of relicensing. This Draft is an absolute horror - for future generations who will suffer if this goes through as proposed, I would point out that on pages C-1 and C-2 are the names of those responsible for this abomination for reference in case of future lawsuits, so the public should make a note of that (this is, after all public record, what I have written) . Plus the Utility in question and the ever helpful nuclear pushers at the NEI, should be remembered too, for their contribution to the nuclear nightmare.

There is still time to correct all the serious problems in the Draft, still time for the NRC to turn from the path of wickedness and ruin the Draft Supplement and Geis will lead to if passed as is. Remember the Creator. Do not allow the further desecration of the world, the NRC will also be accountable to God one day for what it allows to be done to <sup>God's</sup> Creation. Think on that, and correct this Draft to the better.

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