

## PMSTPCOL PEmails

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**To:** STPCOL  
**Subject:** Sierra Club comments on scoping EIS  
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Please find attached in Word our comments on EIS scoping for South Texas Project, Units 3 and 4.

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February 18, 2007

Dear Nuclear Regulatory Commission,

These comments are being submitted by the Lone Star Chapter of the Sierra Club as part of the EIS scoping process for the Combined Operating License of South Texas Project Units 3 & 4 in response to Dockets Nos. 52-012 and 52-013 as published in the Federal Register on December 21, 2007. Under both the National Environmental Protection Act and the Nuclear Regulatory Commission's regulations found in 10 CFR part 51, organizations and members of the public who request or have requested an opportunity to participate in the scoping process or any person who intends to petition for leave to intervene should participate in the scoping process. While the Sierra Club has not made a final decision on whether we will petition for leave to intervene on the proposed COL of STP No. 3 and 4, by our presence at the public scoping meeting on February 5<sup>th</sup>, as well as our joint filing with other organizations a petition to suspend the deadline for intervention – a filing which was acted upon by the NRC indefinitely suspending the application – the Sierra Club has indicated its interest in the STP application process as well as the EIS scoping process as well as its likely plans to petition to intervene. We believe that the decision by the NRC to reverse its decision to accept the application indicates there are serious problems with the process designed by the NRC, and would suggest that until an EIS is completed, the clock on filing for petition to intervene should not begin so that the applicant,

NRC and potential petitioners can have the benefit of seeing what an EIS process finds out.

The Lone Star Chapter of the Sierra Club is the Texas state chapter of a national environmental organization with a long-standing interest in the nuclear power industry. With the motto “to preserve, enjoy and protect the planet,” the decisions made today about energy investments in Texas will guide the future of the state and indeed the planet. Nationally, the Sierra Club has adopted a Smart Energy Policy which calls for obtaining power from a combination of alternative energy sources such as wind, geothermal and solar, energy efficiency and demand management, and specifically advocates a transition away from power produced by coal plants and nuclear plants. During recent legislative sessions in Texas, the Lone Star Chapter of Sierra Club has actively supported legislation on increased programs to obtain power through energy efficiency and renewable energy sources. In addition, the Lone Star Chapter has been active in water policy and the need to promote those energy sources which do not rely on major volumes of water – such as that needed by the South Texas Project == in part to protect flows to the bays and estuaries.

While all 24,000 Lone Star Sierra Club members have some interest in how Texas will meet its energy demand, we do have significant membership in cities such as San Antonio which has announced their intention to obtain power from the STP No. 3 and 4 – if built – as well as Austin, which has recently announced it will not join the STP 3 and 4 application process, but is a present investor in STP No. 1 and 2, and may still contract for nuclear power if the plants are built. Finally, in Matagorda County, where the plant is being proposed, as well as the neighboring counties of Jackson, Wharton, For Bend and Brazoria, Sierra Club presently has nearly 550 members. Several of these individuals did come to the Bay City Public Scoping Meeting on February 5<sup>th</sup> in Bay City.

As a potential intervener, as a membership organization with thousands of members in Austin and San Antonio who have a direct stake in the COL application, as well as hundreds of individual members living within 50 miles of the proposed two new units, the Lone Star Chapter of the Sierra Club has an interest in an EIS process that considers the myriad of issues involved in the potential licensing of STP Units 3 and 4.

### **Importance of the EIS process**

Until the recent decision by NRC to indefinitely suspend the hearing process for STP Nos. 3 and 4, the application was the first to be published in the Federal Register (on December 27, 2007), and is thus the first new nuclear plant to seek a license in nearly 30 years. Now operating under the streamlined Combined Operating License application process – which severely curtails the ability of potential interveners to participate effectively – the proposed plants could thus be

the first new nuclear plants built in several decades. As such, the scoping process and subsequent EIS are vitally important.

It must be remembered that the recent renewed interest in nuclear power in the United States – as evidenced by the multiple applications received by NRC – is being driven in no small part by federal loan guarantees, a promised production tax credit, the renewal of the Price Anderson Act, and other direct and indirect federal subsidies that make nuclear power more economical. As such, with such a large federal investment in nuclear power, each application must be carefully reviewed, and all alternatives to the siting of the plants and indeed to nuclear power itself must be considered as part of the EIS process. There is much at stake in the decisions over the STP COL application, including potentially billions in taxpayer monies. To do anything less than a full and robust EIS would therefore be shameful.

### ***Specific Comments***

The Lone Star Chapter of the Sierra Club bases most of our comments on the Environment Report submitted by the applicant in accordance with 10 CFR 51.45 and 10 CFR 51.50, but also on different parts of the application itself. We believe there are significant deficiencies with the Environmental Report as well as with the application itself, some of which have already been noted by the NRC in letters dated to the applicant November 29, 2007 and January 30, 2008, and indeed form the basis for suspending the hearing process until further information is received. Rather than point out each deficiency page by page, to make the comments useful, we have organized our comments by issue area. Thus, the following comments are submitted and follow the sections of the application itself.

### **Failure to Provide Financial Information needed for True Alternative Analysis**

First of all, we would note that the applicant has asked for and the NRC has granted an exemption to disclosing basic financial information about the proposal. Thus, in Chapter 1 of the COL application, the following tables have been declared proprietary and thus unavailable to the public for review:

Table 1.3-1 Summary of Project Costs for STP Unit 3

Table 1.3-2 Summary of Project Costs for STP Unit 4

Table 1.3-3 Summary of Construction Funds for STP Unit 3

Table 1.3-4 Summary of Construction Funds for STP Unit 4

Table 1.3-5 Combined Funding Sources for STP 3 & 4

Table 1.3-6 STP Unit 3 Operations and Maintenance Costs for the First Five Years

Table 1.3-7 STP Unit 4 Operations and Maintenance Costs for the First Five Years

Table 1.3-8 STP Unit 3 Plant Performance  
Table 1.3-9 STP Unit 4 Plant Performance

The reason that project cost, construction funds, O & M costs and plant performance are an environmental issue is because NEPA requires an analysis of alternatives to the proposed action, and without cost figures and analysis of the construction and O & M costs, it is impossible to know if the energy demand needed could be more cost-effectively be achieved through other means, or with construction of a nuclear plant at another site. This is particularly important as this is a joint application with CPS Energy, which serves the City of San Antonio with retail electric power. If CPS Energy could achieve a better, more cost-effective and environmentally-more-friendly alternative to the proposed nuclear plant, then the EIS should examine that possibility. It is also difficult to assess whether the plant would generate the monies needed for ongoing repairs, the ability to respond to emergency situations, and the ability to provide decommissioning costs without a financial analysis. Even assuming that EPA and NRC have the needed financial information provided by the applicants to assess these issues, it will be difficult as a member of the public to add to the discussion through the draft EIS process without making at least basic financial information disclosed. Given that the applicant in the application makes it clear they will rely on the federal Department of Energy guarantees to peak interest in capital investment markets, the financing of the project would seem a reasonable area to be investigated as part of the EIS. If the financing for the project does not work, there is the potential to have the project stalled, which could have environmental impacts.

### **The Need for Power and How you Get there**

The lack of financial information – at least publicly available – also makes it difficult to assess Chapters 8, 9 and 10 of the applicants Environmental Report. Chapter 8 – the need for power – analyzes Texas-based information about the need for additional power in ERCOT, which covers the majority of Texas. While Sierra Club does not object to the use of ERCOT reports cited on 8.4-6 or 8.4-7, we would note the list is incomplete because it does not list reports which discuss other scenarios for the growth in overall and peak summer demand. Because we believe that ERCOT's evaluation of power needs in Texas in itself is incomplete, we would suggest that the EIS conduct a much more balanced full-scale independent analysis. Specifically, the ERCOT evaluations cited by the applicant do not take into account significant regulatory and statutory changes which will increase the use of load demand management and energy efficiency as a result of legislative action taken in 2007. Thus, the legislature approved HB 3693, which will strongly encourage investor-owned utilities to double the amount of energy from market-based and standard-offer energy efficiency programs from 10 percent to 20 percent of growth, while also encouraging demand response pilot and required programs. In addition, the legislature requires that political

subdivisions, coop and municipal utilities come up with their own plans to reduce energy demand, which could change the ERCOT projections significantly. Finally, HB 3693 requires a series of studies on how to increase the amount of energy efficiency in the state, as well as how to increase the use of Combined Heat and Power. With no fewer than four separate legislative committees meeting this year over the interim on how to meet Texas's energy demand – including through energy efficiency and renewable resources – it is quite likely that the future of peak and load demand will look quite differently than that presented by the applicant.

The EIS must at a minimum assess this “need for power” with an independent analysis.

In addition to these legislative and regulatory changes that will affect the need for power, several studies have come out over the last 18 months which should be assessed, as they present alternative demand scenarios based on the use of increased renewable energy, increased efficiency and increased demand response programs.

Among the studies that should be assessed as part of a truly independent evaluation would be: 1) the American Council for an Energy-Efficient Economy's September 2007 study “Role of Energy Efficiency and Onsite Renewables in Meeting Energy and Environmental Needs in the Dallas-Ft. Worth and Houston-Galveston Metro Areas (Report No, E078); 2) the ACEEE's Report No. E073 “Potential for Energy Efficiency, Demand Response and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs (March 2007); the Optimal Energy study, “Power to Save: An Alternative Path to Meet Electric Needs in Texas” (NRDC, January 2007); and 4) Kema, “City Public Service Technical and Economic Energy Efficiency Potential Study” (October 18, 2004).

In particular, because CSP is an applicant, their own study, which shows the potential to economically obtain 1,220 MW of Demand Savings and Technically 1,935 MWs by 2014 alone through a suite of energy efficiency measures – approximately the energy output of one of the units and approximately 40 % of the total capacity of both plants – this ability to obtain the power they say they need through a cheaper and more alternative must be assessed as part of the EIS.

In addition, because the City of Austin hired a consultant to study the NRG and CPS proposal and found that the risk of investing in the application process outweighed the benefit because of the potential for the cost of the construction and licensing to exceed the estimates provided by the applicant by \$1 billion, this analysis must be included as part of the discussion of alternatives.

Thus, NRG and CSP base their need for the plant on forecasts from ERCOT that may overstate the need for power, and therefore the need for STP 3 and 4. Indeed, it should be remembered at the end of 2006, ERCOT was stating that

generation capacity would fall below the required reserve capacity of 12.5 percent potentially by 2008, only to later reassess this projection based on a smaller demand as well as the opening of several gas plants. The ER states that by 2016 ERCOT projects there will be a need for between 20,000 and 50,000 MWe, and that the capacity of STP 3 and 4 – as well as many other generation sources – are therefore needed.

Sierra Club believes that an EIS must more independently assess these claims, and also assess other projects currently being planned in Texas, including new wind generation, plans for solar plants, energy efficiency and demand response program, coal plants and new natural gas plants. As an example, since the ER was released, proposed power plants in Goliad County (coal) and Navarro (Natural Gas) have emerged. In addition, the development at the PUC of rules for the creation of new transmission capacity through so-called CREZ zones increase the likelihood that power generation from wind and solar from West Texas will actually be available to customers in Austin, San Antonio and Houston, which purchase the majority of the power produced by STP No. 1 and 2, and would presumably do the same for No. 3 and 4. Thus, the “need” for STP 3 and 4 rests on many assumptions which must be critically examined.

### ***Look at Full Range of Alternatives***

Similarly, an EIS should not only assess the “no action”, “building nuclear plant at Bay City” or “building it somewhere else,” but assess other projects that NRG and CPS could be pursuing to meet their need to sell wholesale power in the first case, and meet the energy demands of its residents in the second. As already mentioned, the 2004 KEMA study commissioned by CPS sets out an alternative path for meeting the 40 percent of the plant that CPS has announced they are seeking a COL for. This should be assessed as part of an EIS.

In the case of NRG, nuclear power is not the only option it has as an energy provider. They could – and are – pursuing development of coal plants, but could also be examining demand response and energy efficiency – which because of incentives can earn a provider a profit, on-site and off-site solar, wind, geothermal, biomass and other ways to generate a similar amount of power.

Instead, the analysis provided by the ER Chapter 9 provides little details. For example, it states “ NRG anticipates it would not be able to provide competitively priced power if it had to retain an extensive conservation and load modification incentive program” and further implies that demand management is not a form of baseload power. Nevertheless, this two paragraph analysis is not a true analysis of the potential for baseload demand management to provide power or make up for the need for additional power. The analysis of the ability of peak demand plants to replace baseload plants is superficial and does not incorporate the

ability of different plants to be used in combination to provide power, such as the conjunctive use of solar, wind and natural gas as a way to provide power through peaking plants operating at different times of the day.

There is no analysis of energy efficiency programs, and the solar analysis is based upon 2003 estimates of a cost of 0.108 and 0.187 per kilowatt hour, which are well above recently developed solar projects in California and Nevada. Indeed, the City of Austin has been receiving bids for proposed solar off-site plants that are on the low-end of this range, and recent technological improvements forecast lower solar energy costs over the next five years. An EIS must provide a much more extensive analysis of these alternatives than that provided in the ER.

While Chapter Nine does provide some analysis of coal-fired and natural gas plants, and concludes that they are not preferable to nuclear power because largely of the air quality impacts, such a conclusion does not take into account how that compares with the long-term impacts of uranium mining and radioactive waste. Indeed, there is no real comparison between the three choices other than the conclusion that air quality impacts mean nuclear power is preferable. For example, coal, gas – and the alternatives that are never really considered such as energy efficiency, biomass, solar and wind – or some combination of all – are never assessed for the fact that they do not produce radioactive waste in large quantities.

The analysis of choosing an alternative site – such as NRG's land owned in Limestone County – concludes that the existing Matagorda County site is preferable but is based largely on the possibility that additional transmission lines would be needed at the Limestone County site. The analysis seems too simplistic.

In addition, the analysis of the Matagorda site never acknowledges or assesses the degree to which siting a new nuclear plant next to an existing plant might present potential problems. Thus, what might the impact of a leak or problem at the existing STP No. 1 and 2 present during the construction or operation of No. 2 and 4? Could a problem at the new plant lead to a shut down or problem with the existing plants? Is there an environmental impact by placing so much power, and so much waste in the same physical location, subject to an increased likelihood that a natural, operational or terrorist attack could have an even larger impact than if a nuclear plant were to be located, for example, at the site in Limestone County? Is it safer, in other words, to separate an aging and new plant?

In short, an EIS must much more robustly examine the need for power, and the alternative to the STP power – which is limited in the ER to comparing it to coal and to gas – as well as the site selection process.

## **Failure to Consider All Cumulative Impacts**

Chapter 10 of the Environmental Report fails to identify all cumulative impacts that can be expected from the investment, construction and operation of two new nuclear plants. Most importantly, it does not discuss the land that will likely be used to mine, process, enrich and fabricate uranium fuels, and the waste and air emissions that are generated in that process, nor does it discuss the longterm implications of the low-level and high-level waste generated by the operations of the plants, including their potential impact on water resources and human health. Like the nuclear industry has been doing for 50 years, Chapter 10 again fails to acknowledge that nuclear power produces dangerous and in some ways permanent –lasting 10s of thousands of years – radioactive waste that has never been successfully isolated from humans and their environment. This is a cumulative impact that must be addressed.

In addition, the decision of investors and the federal government through loan guarantees and tax subsidies to spend money on nuclear power must be assessed against the potential to spend that same amount of money on other energy resources – such as wind, solar and energy efficiency – which might have more benefits and less cumulative impacts.

## ***Water Use, Climate and Global Warming***

A true EIS must examine the relationship between the water needs of the proposed plants, its water use, water availability as well as how climate might impact those uses.

First of all, Sierra Club agrees that the applicant has secured rights to use water through an agreement with the Lower Colorado River Authority as well as access to groundwater which assures water availability for the plant in the near term under most situations. Thus, the settlement agreement between LCRA and STPNOC of 2006, and its related “Amended and Restated Partial Assignment and Transfer of Water Permit” and “Amended and Restated Contract” assure the South Texas Project of the right to up to 102,000 acre-feet of river flow if flows are sufficient, and also up to an additional 40,000 acre-feet if the levels of the cooling reservoir dips below 35 feet. Data provided by STP indicate that the applicant has only been using about 37,000 acre-feet per year to fill the cooling reservoir, and conservatively even when operating No. 3 and 4, only 75,000 acre-feet approximately would be used. However, there are several situations which warrant additional assessments.

First of all, the LCRA still has an ongoing assessment of the flow needs of Matagorda Bay. The 2006 Inflow Needs Study has been regarded as perhaps

the most comprehensive bay study performed in Texas. Still, state agencies such as the Texas Parks and Wildlife only recently have submitted comments on the Draft Flow Report that suggest that the inflow needs for certain species may be greater than anticipated. The Inflow Needs Study has yet to be finalized and integrated into any management decisions of the LCRA and has yet to be incorporated into any water rights requirements. An EIS must assess the inflow needs of the Matagorda Bay and its potential impact on the South Texas Project. We would specifically suggest that an EIS examine the comments submitted by TPWD on the Matagorda Bay Inflow Criteria Report on January 22<sup>nd</sup>, 2008.

In addition, any EIS must address the proposed water rights permit being sought by LCRA for the so-called “excess” flows. This proposed water right is presently being contested by the Sierra Club in part because of our concern that existing and proposed water use – such as the South Texas Project – as well as the proposed permit would impact the flows into Matagorda Bay. The permit being sought by LCRA is intimately connected to the so-called LCRA –SAWS water project to provide the City of San Antonio with surface water through construction of an off-river reservoir not far from the proposed South Texas project. How construction of such a reservoir might impact water quality, water availability, water temperature and other parameters that could impact the South Texas plant must be considered.

The impacts of global warming on the proposed plant must be assessed. Thus, when the first STP site was assessed, normal historic drought and water availability were a concern, and today, the flow of the Colorado upstream of STP is a real concern during summer months, when flows are often lower and evaporation is higher. Nonetheless, the recent IPCC Assessments on the impacts of global warming, as well as independent assessments in Texas – such as the 1995 Gerald North study – suggest that global warming is likely to affect climate and water availability, including in Central Texas.

It would seem any EIS must assess the impacts of global warming and the likelihood that droughts in coming decades could be more severe than droughts in the 1940 and 1950s which are traditionally used as the “drought of record” to determine likely flows. Contingencies must be added for flows that are 20 percent or more less than historic drought levels. The EIS should rely in part on studies being conducted by the LCRA on the issue of the impact of climate change on flows as part of the assessment.

As evidenced in the Environmental Report itself, low-flow conditions move the line of salinity upstream from Matagorda Bay, leading to more entrainment and entrapments of estuarine species, as well as the likely movements of bird species such as pelicans which feed on such aquatic species. Thus, the relationship between the salinity line, aquatic species and climate must be examined. It should be noted that the ER relies heavily on monitoring data of aquatic species and water levels from the initial application of 1973 which must

be updated to reflect a much more saline, lower flow regime which typifies the region today.

Climate change can also be associated with increased air and water temperature which could impact the ability of the cooling system and intake to operate sufficiently. Thus, temperature change must be assessed more accurately.

In addition to the likely increase of drought due to climate change, climate change has already been associated with an increase in sea rise and the formation of hurricanes. Thus, how sea rise level would impact the operation of the plant, and how increased sea surge and hurricane activity might impact the proposed plant should be assessed. The ER simply assesses the number of hurricanes in the area, but fails to address their impact on the proposed plant.

In terms of the assessment of water contained in the ER, there are multiple sections which continue to rely on dated aquatic monitoring of the Colorado River which must be updated and specified as part of an EIS. Thus, as an example, relying on histograms of sediment levels in the Colorado River from 1957 to 1973, as is done in Section 2.3.1.1.5 is clearly incomplete. As already mentioned, the assessment of ecology in the area is heavily dependent upon information from the first application in the 1970s and because of the change in sediment and salinity must be updated and also assessed for the impacts of climate change.

### ***Radioactive Waste: A Fantasy?***

The ER is short on details on how the proposed plant will deal with thousands of curies and tons of low-level and high-level waste to be generated by the plant. Radioactive waste management in the U.S. has been and continues to be nightmarish and difficult. Thus, in terms of low-level waste, the ER will generate about 950 cubic meters of waste per year and that that waste will be shipped to commercial low-level waste disposal facilities that are “sited and operated consistent with 10 CFR 61. (ER 5.5.3).” Any impact of these well-run, properly operated facilities would be SMALL suggests the report.

The siting of low-level waste disposal facilities has been controversial and difficult for years. While at one times there were six facilities operating in the U.S. that had authorization to take low-level waste, three of them shut down years ago. All three of these facilities had well-documented problems, in large part because the assurances that the waste would not leak outside the boundary for perhaps thousands of years were, well, false, and instead within a few years, high levels of tritium and other substances were being found in the waters (see for example,

Donald Bartlett and James Steele's *Forevermore: Nuclear Waste in America*, 1985).

There are now only three facilities which are taking low-level waste from nuclear plants in the States of South Carolina, Utah and Washington. However, none of the three will currently take all types of low-level radioactive waste from Texas power plants. Thus, the ER must address how much of which kinds of low-level radioactive waste will go to which facilities must be addressed. In addition, because there is the real possibility that no facility will be found in the short-term for the most radioactive of low-level rad waste, an EIS must address the possibility and impacts of permanent disposal of low-level rad waste on-site.

For example, while the private company WCS has an application to take low-level radioactive waste, that application has yet to be acted upon by the Texas Commission on Environmental Quality, and the EIS should address certain scenarios, including both the likely impacts of transporting wastes across Texas highways to WCS, or alternative locations, or near permanent storage on-site.

If the ER fails to adequately assess the generation, storage and disposal of low-level waste, the oversights in terms of high level radioactive waste are much greater. First of all, the ER assesses the transport of spent fuel (high level waste) to a depository, using Yucca Mountain as an example. Yet both the NRC and NRG know that even if Yucca Mountain were to open sometime in the first years of operation of STP No. 3 and 4, storage of spent fuel would be taken up by existing nuclear plants. There has yet to be, and does not appear to be any resolution of the question of how to dispose of high level radioactive waste.

Fifty years after the first nuclear power plants opened, the government and nuclear industry has failed to locate, study and license a radioactive waste depository. The agreements between the government and nuclear industry to take the "spent" fuel rods continue to allow the lie that there is a solution to radioactive waste. Yet even if that agreement were honored, there is no agreement on taking waste from new nuclear plants, meaning resolution of that issue is decades away at the least.

An EIS must assess the much more likely scenario that radioactive waste will be stored on-site well.... Forever. That assessment must include an assessment of any potential leaks, accidents or gases escaping from the containment zone. Because nuclear plants are consistently having to reshuffle the fuel rod assemblies and spent fuel racks, the EIS must provide a structural analysis of the spent fuel racks, procedures for and training to makeup water to the spent fuel pool, a description of the dynamic and load drop impact analyses for the new fuel storage racks and spent fuel racks. While NRG has promised such an analysis as part of the FSAR, it has not yet been developed. In addition, considerable more information is needed as part of the EIS to address the structural changes anticipated at the radioactive waste building. The EIS

should also address existing waste generated by STP 1 and 2 since presumably the LLRW and spent fuel rods would be managed jointly by all units.

Thus, an EIS must consider and address the long-term storage of both low-level and high-level waste on-site, and not assume the fantasy that commercial and government-sanctioned depositories will be available.

### ***The Whole Uranium Cycle***

In Section 5.7, the applicant attempts to assess the impacts of the whole uranium cycle on the environment. As already indicated, Sierra Club finds the discussion here and in other parts of the ER to be lacking in terms of the likely scenario for dealing with the waste issue. In addition, the uranium cycle discussion fails to mention the global warming impacts of the uranium cycle. While the ER takes credit for the emissions reduction that would be made by investing in a nuclear plant as opposed to a coal or natural gas plant (see discussion above), it does not discuss the global warming emissions resulting from the mining, processing, enrichment and fuel fabrication of uranium needed for the plant.

In addition, there is no discussion of where uranium is likely to be mined as a result of the potential additional nuclear plants. Thus, while the ER suggests that uranium is a resource that is mainly imported and that the uranium mining industry in the U.S. has been depressed in recent years, the Sierra Club notes in Texas, there are currently 19 exploratory permits for uranium mining that have been granted or are being processed by the Railroad Commission of Texas since mid-2006, that four uranium mines are currently operating in Kleberg and Duval Counties, and that two new applications are being processed by the Texas Commission on Environmental Quality for mines in Duval and Goliad Counties. The EIS should assess different scenarios and the likely impacts, including in South Texas on water resources and health impacts.

If NRC is to license a new nuclear plant, it must be based on the impacts from the whole uranium cycle that will result. For 50 years, nuclear power has been presented as a clean energy source, even as communities at Three Mile Island, Pennsylvania in West Valley, New York, in Sheffield, Illinois, Hanford, Washington, Barnwell and a myriad of other locations were impacted from the generation and waste disposal, in some cases leading to deaths. Any EIS must address the full impacts so more communities do not suffer.

### ***Terrorism and its Impacts***

It is surprising that after 9/11 proved the U.S. is vulnerable to terrorist attacks that an ER would ignore the issue of security and potential terrorist attacks. The NRC is supposedly finalizing rules on consideration of aircraft impacts for new nuclear power reactor designs, under 10 CFR Part 52. Nonetheless, under the most likely proposed rule, the STP No 3 and 4 would not have to submit an analysis on whether an airplane might impact their proposed plant because it is using a pre-certified design, the ABWR. Sierra Club has already submitted comments indicating our serious concerns with this approach of assuming that any design that is pre-certified and has undergone some initial analysis should not be required for a full analysis of the potential impacts of an airplane attack. We believe an EIS should examine this possibility, including an attack both on the reactor vessel but also on the radioactive waste building.

Other terrorist attacks on the reactor or waste and security in general should be examined fully as part of the analysis.

### ***Health Effects***

For 50 years, there has been denial of the real impact of radioactive gases and wastes on public health. Ranchers near radioactive waste fall-out sites were lied to about the impacts on their sheep, Hanford workers were lied to about the deaths of workers at the disposal facility. The ER analyzes likely dosages to the population and resulting from moderate or severe accidents. It predictable finds that all resulting dosages meet NRC requirements and guidelines. What is lacking, however, is any analysis of the potential health effect impacts of STP 3 and 4 in combination with STP 1 and 2. There have been numerous cancer studies and infant mortality studies involving nuclear plants that should be examined as part of the EIS. While some of these studies have been contradictory, a true ER and EIS process must assess the latest studies to estimate the actual damages in cancer incidence and death due to the opening of more nuclear power plants.

The Lone Star Chapter of the Sierra Club appreciates the opportunity to comment on the Environmental Report and to be part of the EIS scoping process.

Sincerely,

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