Concerned Citizens for Nuclear Safety
107 Cienega Street
Santa Fe, NM 87501
Phone: (505) 986-1973
Fax: (505) 986-0997

Embudo Valley Environmental
Monitoring Group
P.O. Box 291
Dixon, NM 87527
Phone: (505) 579-4076

September 29, 2006

BY HAND DELIVERY

Elizabeth Withers, EIS Document Manager
Los Alamos Site Office
National Nuclear Security Administration
U. S. Department of Energy
528 35th Street
Los Alamos, NM 87544-2201

Re: Where Do the Children Play?
Comments by Concerned Citizens for Nuclear Safety and the Embudo Valley Environmental Monitoring Group about the draft Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, DOE/EIS-0380D

Dear Ms. Withers:

Concerned Citizens for Nuclear Safety (CCNS) is a non-governmental organization that formed in 1988 to give a voice to citizen concerns about the transportation of nuclear waste from Los Alamos National Laboratory (LANL) to the Waste Isolation Pilot Plant (WIPP) through Santa Fe, New Mexico. Since the Cerro Grande Fire in May 2000, which burned over 7,700 acres of LANL property, CCNS has focused on the transport of radioactive, hazards and toxic contaminants from LANL to the Rio Grande, a future drinking water supply for Santa Fe and Albuquerque.

Embudo Valley Environmental Monitoring Group (EVEMG) is a non-governmental organization that formed in 2003 to address community concerns about the risks generated by the Cerro Grande Fire. As downwind neighbors to LANL, EVEMG focuses on air emissions generated by LANL activities and their relationship to public and environmental health and safety. EVEMG conducts independent citizen based air monitoring, soil and produce sampling throughout the Embudo watershed, which is the wind shed of LANL. We work to increase awareness of LANL's weapons research

and development, and to effect positive change as an out come of that greater awareness.

CCNS and EVEMG make the following general and specific comments about the draft Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory (draft LANL SWEIS). DOE and the National Nuclear Security Administration (NNSA) have provided the public with a very limited time to review and provide comments about the draft LANL SWEIS. In our review, we found the draft LANL SWEIS to be misleading, inadequate, incomplete and technically indefensible.

Throughout the draft LANL SWEIS, DOE/NNSA consistently uses misleading information and technically indefensible data as a basis for analysis and relies on documents which have not been finalized to make conclusions in support of the Expanded Operations Alternative. DOE/NNSA has acted in an arbitrary and capricious manner by utilizing draft documents or not waiting to release a draft LANL SWEIS until such time as pending documents were available for public review and comment. We believe that the National Environmental Policy Act (NEPA) requires DOE/NNSA to withdraw the draft LANL SWEIS until such documents are available for public review and comment. Only after DOE/NNSA releases response to public comment on these documents, may a new draft LANL SWEIS be released for public comment.

Below is a summary of our justifications for the demand that DOE/NNSA withdraw the draft LANL SWEIS. We provide comments that discuss problematic chapters and sections in greater detail, describe errors we have found and include our suggestions. CCNS and EVEMG demand that our comments and concerns be incorporated into a new draft LANL SWEIS.

CCNS and EVEMG submit Exhibits to the text, as well as links to documents, within our comments. Exhibit 6 contains two multimedia CDs that express our convictions and concerns about the LANL mission. It is an official part of our comments and requires an in-kind response from DOE/NNSA.

Many people contributed technical and non-technical analysis for the comments submitted by CCNS and EVEMG. The contributors are the following:

Joni Arends, CCNS
Matt Bishop, Western Environmental Law Center
Sadaf Cameron, CCNS
Patricia A. D'Andrea, Rio Grande/Río Bravo Project
Robert H. Gilkeson, Registered Geologist
Don Hancock, Southwest Research and Information Center
John Hoffmann, CCNS
Sheri Kotowski, EVEMG

Leah McLeroy, CCNS Supporter
Kalliroi Matsakis, CCNS
George Rice, Independent Ground Water Hydrologist

These comments are being submitted as an addendum to our comments submitted on September 20, 2006. We understand that they will be considered to the same extent as if they were submitted on September 20, 2006. Please see Exhibit 7, your email to CCNS on September 20, 2006.

General CCNS and EVEMG Comments

Throughout the draft LANL SWEIS, DOE/NNSA consistently uses misleading, incomplete and inaccurate information and technically indefensible data as a basis for analysis and relied on documents which have not been finalized to make conclusions in support of the Expanded Operations Alternative, the Preferred Alternative. For these reasons, we demand that the current draft LANL SWEIS be withdrawn. DOE/NNSA must finalize draft reports, provide accurate information/data collection and a conduct a subsequent reanalysis of data, which must all be released to the public for comment and review. NNSA/DOE must provide responses to comments to the public. Only then may a new draft LANL SWEIS be released for public review and comment under NEPA. Below is a summary of our justifications for our demand.

Air Emissions:

- DOE/NNSA proposes to process 87,000 pounds of high explosives and up to 6,900 pounds of depleted uranium (DU) for dynamic experiments and studies annually in open air burning and explosions without proper, adequate and technically defensible monitoring.

- Further, the 1979 LANL Final Environmental Impact Statement estimates that 220,000 pounds of depleted uranium were used in dynamic experiments during the history of LANL. From 1979 to present we do not know how much DU and high explosives have been used in experiments and remains in the environment.

- DOE/NNSA is hiding under the "grandfather clause," which allows for facilities existing before December 31, 1988 to emit toxic air pollutants without regulation. Many of these radioactive, toxic and hazardous air pollutants do not have any standards protective of human health and the environment.

- DOE/NNSA continues to use evaporation as a waste disposal method for tritium. DOE/NNSA must develop alternative, energy efficient technologies to handle tritium wastes other than a method which involuntarily exposes living beings.
- DOE/NNSA must evaluate increased air emissions due to increased power demand and car use by commuters.

- DOE/NNSA is not providing the best care for Bandelier National Monument, a Class 1 area under the Clean Air Act.

Waste:

- The draft LANL SWEIS does not make use of the transuranic waste numbers provided in the most recent regulatory document for the Waste Isolation Pilot

Plant (WIPP). Therefore, DOE/NNSA overestimates the amount of transuranic waste that may be shipped to WIPP.
- The draft LANL SWEIS omits that there is no disposal path for the majority of the transuranic waste which would be generated by the Expanded Operations Alternative. p. 5-197

Ground and Surface Water:
- Data is Not Representative: LANL's own Well Screen Analysis Report (WSAR) reports describe the samples as being not representative.
- The Draft LANL SWEIS reveals the emerging presence of the radionuclide contaminants neptunium-237, plutonium-239, plutonium-240, and strontium-90 in the regional groundwater resource.
- The data tables in the draft LANL SWEIS document the presence of neptunium-237 in the drinking water of Los Alamos County at levels above the Environmental Protection Agency (EPA) Drinking Water Standard (DWS).
- The water quality data in the draft LANL SWEIS show that groundwater produced from "other springs" is contaminated with strontium-90 at a level more than 13 times greater than the EPA DWS.
- Hexavalent chromium contamination is present in the regional aquifer at concentrations greater than four times than the EPA DWS.
- The draft LANL SWEIS does not make use of the most recent regulatory surface water standards or list of impaired streams.

Environmental Justice:
- The incorrect definition of "low income" was used in the Environmental Justice analysis.
- No scoping was done within the effected communities regarding the impacts to sacred sites or land use. Furthermore, the scoping done following the signing of the New Mexico Environmental Justice Executive Order 2005-56 was not used or referenced.
- Environmental Justice was omitted from the cumulative impact analysis of Chapter 5, section 5.13.
- The public comment hearings were scheduled during the Pueblo feast days.
- Tribes who use the area for ritual practices were not included in the draft LANL SWEIS analysis.

Cumulative Impacts:
- Not all communities within the limited 50-mile radius were contacted regarding the cumulative impact analysis. Furthermore, it appears that once contacted, no follow up was done.
- DOE/NNSA provided no justification for the 50-mile radius analysis. Given that LANL and Sandia National Laboratories are located within 60 miles of each other, DOE/NNSA must provide a technically defensible analysis of what other nuclear sites are not included in the draft LANL SWEIS analysis.

- Repeated references are made to a "modern pit facility" within the cumulative impacts analysis. DOE/NNSA must make no reference to this facility without proper analysis and upfront statement of intention as a primary discriminator on the Cover Sheet

LANL's Area of Influence: DOE/NNSA has limited the impacted area to a 50-mile radius around LANL in an arbitrary and capricious manner.

- We know from the smoke plume resulting from the Cerro Grande Fire that the area of influence extends beyond a 50-mile radius. There is no technically defensible scientific explanation for this choice and it appears to be only a convenient round number.
- If the impacted area were increased to a 60-mile radius around LANL, then Albuquerque, which has a population of nearly half a million, would be included in the area of influence.
- Considering the close proximity of LANL and Sandia National Laboratories, the 50-mile radius does not account for the individual and cumulative impacts of these facilities. The designation must be increased in order to analyze the impacts of the programmatic effects of both national laboratories and other nuclear facilities, including uranium mines.
- Technically defensible scientific analysis must be done to define the area of influence of the two national laboratories in New Mexico.

Documents Still Not Available or Finalized:

- **Draft Agency for Toxic Substances and Disease Registry Public Health Assessment.** The draft LANL SWEIS relies on conclusions made in the draft Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Assessment which was released for public comment last summer. In comments about the draft assessment, the EPA stated, "ATSDR may have been overly conservative in their risk assessment approach and makes a blanket statement that there is no problem. ATSDR should redo their risk assessment to reduce conservatism and not assume that there is no risk." Exhibit 17.1.
- **Safety Analysis for Area G** has not been completed. The last analysis was completed in 1997, almost a decade ago. Given that one of the greatest accident scenarios in the draft LANL SWEIS involves waste at Area G, the Safety Analysis must be released for public comment and review prior to DOE/NNSA releasing a new draft LANL SWEIS**.**
- **The Report in Preparation by the LANL Seismic Hazards Geology Team.** The draft LANL SWEIS states that the seismic hazard report will be released in the fall 2006. In the 1999 SWEIS, DOE predicted 45,000 years between seismic events. However, based on new fieldwork, the draft LANL SWEIS states that this number has been reduced to 2,000 years between events. The draft LANL SWEIS must be withdrawn until this report is released to the public for review and comment before a new draft LANL SWEIS is prepared and released to the public for review under NEPA.

Legitimate "No Action Alternative":

- CCNS and EVEMG request that a legitimate "No Action Alternative" be included in the reanalysis of the draft LANL SWEIS. Such an alternative would seriously consider ceasing active nuclear weapons operations at LANL and begin cleanup of the 63-year toxic legacy.
- CCNS and EVEMG ask for the inclusion of a "Greener Alternative," which focuses on sustainable operations and environmentally just practices at LANL. We were among many groups who requested these alternatives during the scoping session.
- CCNS and EVEMG object to the statement that the "NNSA is not evaluating a similar alternative in this [2006] SWEIS because, as stated in the *1999 SWEIS*…a Greener Alternative would not support the nuclear weapons mission assigned to LANL." It is revealing that DOE/NNSA and LANL emphasize nuclear weapons manufacturing over protecting the environment. CCNS and EVEMG believe that DOE/NNSA must seriously consider a mission for LANL that focuses on life-affirming research and the development for renewable non-nuclear energy, such as solar, wind and biomass, and clean-up technologies that support environmental and public health. Please see Exhibit 12.
- Global warming and climate change issues are of paramount importance and must be addressed with the same critical fervor as developing nuclear weapons from 1943 to 1945.

Nuclear Non Proliferation Treaty (NPT):

- Article 6(c) of the NPT states "[T]he determined pursuit by the nuclear-weapon States of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goals of eliminating those weapons, and by all States of general and complete disarmament under strict and effective international control." The Expanded Operations Alternative, the Preferred Alternative, presented in the draft LANL SWEIS calling for increased plutonium pit production violates the spirit of the NPT. DOE/NNSA must outline in the new draft LANL SWEIS exactly how a proposal to increase plutonium pit production for refurbishment of our nuclear stockpile honors our commitment under the NPT and is in accord with international efforts for disarmament.

Cover Sheet

p. iii. Cover Sheet. DOE/NNSA lists the primary discriminators between the alternatives. The list, however, does not include two primary discriminators, which are increased nuclear bomb production from 20 to 80 plutonium pits per year and construction and operation of a modern pit facility (MPF), capable of producing 450 plutonium pits per year. If DOE/NNSA does not remove all reference to a MPF, please include these two primary discriminators in the list in the new draft LANL SWEIS. CCNS, EVEMG and the City of Santa Fe object to expanded plutonium pit production, see Exhibit 10.

Chapter 1. Introduction and Purpose and Need for Agency Action

p. 1-5. LANL Support of NNSA Missions. CCNS and EVEMG object to plans for the consolidation of the nuclear weapons complex at LANL. In this section, DOE/NNSA examines the impacts from proposed actions from 2007 through 2011 while indicating that "uncertainty remains about the future work NNSA will assign to LANL to support NNSA missions." pp. 1-5, 1-11. CCNS and EVEMG are concerned that beginning new construction projects at LANL, at huge taxpayer expense, without the latest probabilistic seismic hazard calculation for LANL is absurd. As reported on p. 4-25, the LANL Seismic Hazards Geology Team will complete its seismic report and the re-calculation of the probabilistic seismic hazard in the fourth quarter of 2006. The draft LANL SWEIS must be withdrawn until such time as the draft seismic report and re-calculation are released for public review and comment. DOE/NNSA must respond to all comments before the document is finalized. Only then may DOE/NNSA use the re-calculation for analysis in the new draft LANL SWEIS.

CCNS and EVEMG note that LANL performs "advanced and nuclear materials research and development." p.1-5. Such research and development creates radioactive, hazardous and toxic materials that have no regulatory standards for air emissions, discharges to surface and ground water, nor waste treatment, storage and disposal. The draft LANL SWEIS compares LANL emissions, discharges and waste activities to known standards. Those materials, which do not have standards, are not monitored. Further, EPA is generally more than a decade behind in developing regulations for materials that are used in everyday life, let alone research and development activities. DOE/NNSA must include a calculation for the impacts on human health and the environment from these research and development materials and activities in the reanalysis for a new draft LANL SWEIS. This calculation must be included in the new cumulative impact analysis.

p. 1-6. LANL Support of NNSA Missions. The draft LANL SWEIS states "nuclear weapons pit production work takes place at LANL on a limited scale." p. 1-6. The new draft LANL SWEIS must define "limited scale." Since the shutdown of Rocky Flats in 1989, it is known that LANL is the only location within the DOE/NNSA complex where nuclear weapons pit production takes place. The draft LANL SWEIS includes a cumulative impact analysis for a modern pit facility, capable of manufacturing 450 plutonium pits per year. DOE/NNSA must remove all references to a MPF from the LANL SWEIS. In the Alternative, DOE/NNSA must explain the impacts of a modern pit facility at LANL in the individual sections of the SWEIS as well.

DOE/NNSA must explain in detail how the Los Alamos National Security, LLC (LANS) is allowed "some flexibility to perform cost-reimbursable work for other entities" in the new draft LANL SWEIS. p. 1-6. Please explain how LANS reimburses taxpayers for use of taxpayer-funded facilities, equipment, staff and overhead at LANL.

p. 1-7. Figure 1-1. Location of LANL Site. All maps and figures in the new draft LANL SWEIS must include the full length of the Rio Grande for the mapped areas. It is unrealistic and misleading to include only the Rio Grande below TA-33 and TA-70, as demonstrated in Figure 1-1. Furthermore, the new draft LANL SWEIS must include a map in this section that depicts the Rio Grande from its headwaters in Colorado to where it empties out into the Gulf of Mexico. The map must include acequias and communities along the Rio Grande that rely on the river for such purposes as recreation, irrigation, drinking, etc. from Colorado through New Mexico and into Mexico. The new draft LANL SWEIS must examine implications of LANL activities on environmental and human health for the entire length of the river. The Rio Grande is unique in the way that it crosses international borders. DOE/NNSA must analyze the potential risk for contamination to cross from the United States into Mexico in the reanalysis for a new draft LANL SWEIS.

p. 1-8. Section 1.1. Background. DOE/NNSA must provide an information box, similar to the Nuclear Facility Hazard Categorization on p. 1-10, with descriptions for Security Category I, II, III and IV and Hazard Category 1, 2 and 3. The information box on p. 1-13 describes the Security Categories, but it is titled "Special Nuclear Material Safeguards and Security." Please explain the difference between Security Categories, Hazard Categories and Nuclear Facility Hazard Categorizations in one place within the final LANL SWEIS. Please see Environmental Justice comments below regarding the need for clarity in documents provided to the public.

p. 1-11. Section 1.2. Purpose and Need for Agency Action. DOE/NNSA must cite the source that allows for the "nonnuclear aboveground experimentation" in the new draft LANL SWEIS. Further, DOE/NNSA must define the term "nonnuclear aboveground experimentation" in the new draft LANL SWEIS.

p. 1-12. Section 1.3. Scope and Alternatives in this New SWEIS for LANL Operations. DOE/NNSA must explain why "NNSA is not legally obligated to include the Consent Order impacts analysis" in the new draft LANL SWEIS. Fn. 6, p. 1-17. CCNS and EVEMG consider the environmental impacts of cleanup under the Consent Order a "major federal action" which requires NEPA analysis.

Further, it is unclear why the activities and potential impacts under the Consent Order are only included in the Expanded Operations Alternatives. DOE/NNSA is proposing a Faustian bargain with the people of Northern New Mexico by implying that increased plutonium pit production must go hand in hand with cleanup under the Consent Order.

It may be necessary to correct the deadline for the transfer of additional land by the end of 2007 as required by Public Law 105-119. In late June 2006, the U.S. Senate approved an extension of time for the land transfer as part of the 2007 Defense Authorization Bill.

p. 1-15. Section 1.3.2. Reduced Operations Alternative. CCNS and EVEMG support discontinuing all accelerator operations at TA-53 Los Alamos Neutron Science Center (LANSCE). When LANSCE is operating, over 90% of the off-site radiation dose is emitted from the facility. In order to protect public health and the environment, CCNS and EVEMG support placing LANSCE in indefinite safe shutdown mode under all Alternatives.

Further, as stated in the DOE Inspector General (IG) Audit Report on LANSCE, there is a newer facility at Oak Ridge National Laboratory. http://www.ig.energy.gov/documents/CalenderYear2004/ig-0666.pdf. The new facility makes LANSCE obsolete. Please include the DOE IG Audit Report in the new draft LANL SWEIS analysis.

CCNS and EVEMG support reducing the High Explosives Processing Facilities operations at TA-8, 9, 11, 16, 22 and 37 by 20% from the No Action Alternative level of operation.

CCNS and EVEMG support reducing the High Explosive Testing Facilities operations conducted at TA-14, 15, 36, 39 and 40 by 20% from the No Action Alternative level of operation.

CCNS and EVEMG support eliminating all dynamic experiments using plutonium at the Dual Axis Radiographic Hydrodynamic Test (DARHT) Facility. Please see the video of the September 6, 2006 RRW Hydro test that LANL recently posted on its website: http://www.lanl.gov/news/newsbulletin/QuickTimes/rrw_darht_2.mov. There is no containment of the dynamic experiments. There is no justification for dispersing depleted uranium (DU) into the environment. Through the dynamic experiments, the DU is split into smaller pieces, distributed through the air, can enter the bodies of living beings, be deposited on the soil where it can travel through surface water to the Río Grande, a future source of drinking water for Santa Fe and Albuquerque, or migrate toward groundwater on the Pajarito Plateau, the sole source of drinking water for the residents of Los Alamos County.

CCNS and EVEMG support discontinuing all TA-18 Pajarito Site operations and placing the facility into indefinite safe shutdown mode. Given the number of safety and security issues surrounding TA-18 and the materials currently stored there, CCNS and EVEMG support discontinuing all operations at TA-18. CCNS and EVEMG support relocating all Security Category III and IV materials, along with the Solution High-Energy Burst Assembly (SHEBA).

p. 1-15 Section 1.3.3. Expanded Operations Alternative. It is disingenuous and misleading for DOE/NNSA to not explicitly state that "a modern pit facility" is

included in the analysis in the draft LANL SWEIS. See comments about the Cover Sheet.

The draft LANL SWEIS is actually proposing a production rate of 530 pits [80 (expanded operations alternative)plus 450 (a modern pit facility] per year. DOE/NNSA states that "although NNSA has proposed a new pit manufacturing facility in order to meet the long-term requirements for maintaining the anticipated nuclear weapons stockpile, NNSA has not completed [the Modern Pit Facility] EIS and therefore has not made a decision whether it would build such a facility, and, if such a facility were built, where it would be located, the size and type of facility that would be built, or its production level." The draft Modern Pit Facility (MPF) EIS proposes a manufacturing facility capable of producing 450 plutonium pits per year. Further, the MPF is referenced over 60 times in the draft LANL SWEIS. CCNS and EVEMG believe that DOE/NNSA will write Record of Decision(s) (ROD) giving itself authority to construct and operate the MPF at LANL, without proper analysis.

Further, DOE/NNSA has done an analysis of the cumulative impacts for both the Expanded Operations Alternative and a modern pit facility, a capacity to manufacture 530 pits per year.

It is unclear why a high annual production rate of 80 pits per year is needed in order to produce 50 certified pits each year. Especially as the draft LANL SWEIS states, "NNSA does not believe it would need to produce 80 pits per year is needed in order to obtain 50 certified pits." p. 1-16. If we were grading the DOE/NNSA proposal to produce 80 pits per year in order to obtain 50, they would receive a "D-" for a 62.5% performance. However, given the lackadaisical production in the past, it is difficult to fathom how DOE/NNSA would actually produce 50 certified pits per year.

DOE/NNSA must explain in the final LANL SWEIS how "NNSA expects to attain [20 pits per year] production level in 2007." p. 1-16. Please give include information regarding the current pit production level in the new draft LANL SWEIS.

p. 1-17. Three types of new projects under the Expanded Operations Alternative that are addressed in this SWEIS. It is unclear why TA-18 is listed under the first type of proposed projects for new construction and operation of certain Security Category III and IV operations and, at the same time, listed under the second type for Decontamination, Decommission, and Demolition (DD&D). Please explain in the new draft LANL SWEIS how this can be so.

p. 1-18. Projects Associated with New Infrastructure or Levels of Operation. CCNS and EVEMG are very concerned about the further concentration of sealed sources as waste at LANL, including radioisotope thermoelectric generators (RTG). We are also concerned about the DOE/NNSA proposal to allow both actinide and nonactinide sealed sources to be stored indefinitely at LANL.

These proposals raise several serious concerns, which have not been adequately addressed in the draft LANL SWEIS. DOE/NNSA must not be allowed to bring additional waste to LANL before addressing the above-ground storage of 40,000 drums of transuranic waste at TA-54, Area G in fabric tents.

Further, included in the 40,000 drums are 2,000 high activity drums of transuranic waste as well as countless drums that have no disposal pathway. Further, DOE/NNSA has not properly handled the 2,000 high activity drums which were given a code name of the "Quick to WIPP" drums. Following the Cerro Grande fire, DOE/NNSA made promises to the surrounding communities that they would remove the 2,000 high activity drums to the Waste Isolation Pilot Plant (WIPP). However, due to waste characterization problems as well as the shipment of low-level waste to WIPP, the number of "Quick to WIPP" drums on the Pajarito Plateau remains basically the same.

DOE/NNSA also made representations following the Cerro Grande fire that they would build hardened, on-site storage (HOSS) facilities for the 40,000 drums. At the same time, DOE/NNSA expressed their optimism and ability to remove the drums from TA-54 prior to the time any NEPA documents were prepared to build HOSS facilities, let alone constructing the facilities. Now, more than a half a decade later, the drums are still sitting in fabric tents on the end of the mesa top, very near to the White Rock community and even closer to the proposed low-income housing units along State Road 4.

p. 1-22. DOE/NNSA must explain in the final LANL SWEIS the impact of disposal of Greater-Than-Class-C waste will have at LANL, including the sealed sources and transuranic waste.

Section 1.3.4. Preferred Alternative. DOE/NNSA explain that given the "uncertainty regarding the nuclear weapons missions that will be assigned to LANL in the future, NNSA might issue two or more Records of Decision (RODs) to implement its decisions." DOE/NNSA must explain the uncertainties in more detail in the final LANL SWEIS. From our perspective, the uncertainties may allow for one or more of the RODs to provide for the construction and operation of a Modern Pit Facility at LANL, manufacturing 450 plutonium pits per year.

DOE/NNSA must explain why closure of the Los Alamos County Landfill should be the subject of the first proposed RODs in the final LANL SWEIS. Please also explain the relationship between DOE/NNSA and Los Alamos County concerning the Landfill. DOE/NNSA must also explain the basis for monitor around the landfill site and down-canyon from the site. p. 1-25.

Section 1.4. NNSA Decisions To Be Supported by the SWEIS.

p. 1-24. DOE/NNSA must spell out in the RODs what decisions the NNSA Administrator is making regarding operations at LANL. There must not be any "de facto" decisions to implement any Alternative. DOE/NNSA must state affirmatively or negatively their plans with regard to specific LANL activities or projects at separate facilities described in the draft LANL SWEIS. Action other than what is suggested will lead to confusion, wasted time and continued ill-will between LANL and surrounding communities.

p. 1-25. CCNS and EVEMG remain concerned that when the public asks DOE/NNSA to estimate the cost of various remediation options and contrast those to the long-term monitoring costs, the federal agency claims that it is not possible. Other federal agencies provide such information to the public. DOE/NNSA at LANL must provide such cost estimates in order that the public be as informed as possible in providing comments to the New Mexico Environment Department about remediation decisions, as well as DOE/NNSA/LANS.

p. 1-26. Section 1.5. Relationship to Other DOE NEPA Documents and Information Sources. CCNS and EVEMG request that the dates for the various documents were finalized be included in the new draft LANL SWEIS.

p. 1-32. Consideration of Future Projects and Emerging Actions Affecting LANL. It is disingenuous of DOE/NNSA to state that a decision on a MPF at LANL would not be expected to "prejudice the decisions to be made based on this SWEIS." Is LANL is the only DOE site of the five proposed sites for construction and operation of a MPF which is conducting a SWEIS public process which includes analysis of a MPF in the cumulative impacts? This fact would clearly prejudice any decisions made on the basis of the draft LANL SWEIS.

p. 1-35. Summary of Major Scoping Comments and NNSA Responses. Further, DOE/NNSA states that "a decision on the construction or location of a modern pit facility has not been made by NNSA; however, the potential impacts of such a facility being constructed and operated at LANL are addressed as part of the cumulative impacts in Chapter 5, Section 5.13." This implies that the analysis done in the cumulative effects could be used for the basis of a ROD, CCNS and EVEMG oppose any construction of an MPF and state that DOE/NNSA must remove all mention of a MPF from the new draft LANL SWEIS.

Furthermore, CCNS requested that no mention be made of the MPF in our scoping comments for a supplemental LANL SWEIS. Our request must be incorporated into the new draft LANL SWEIS.

p. 1-33. Section 1.6. Public Involvement. CCNS and EVEMG question whether DOE/NNSA has followed proper procedural rules under the National Environmental

Policy Act (NEPA) for the release of the draft LANL SWEIS for public comment. Specifically, DOE/NNSA published a Notice of Intent (NOI) to prepare a Supplemental SWEIS in the Federal Register on January 5, 2005. 70 FR 807. However, it does not appear that DOE/NNSA issued a *new* NOI to prepare the draft LANL SWEIS, nor published it in the Federal Register, nor held new public scoping meetings. DOE/NNSA must issue a new NOI and hold new public scoping meetings before issuing the new draft LANL SWEIS.

p. 1-37. DOE/NNSA must explain how the draft LANL SWEIS addresses the public scoping comment about the effects of the 1999 SWEIS accident scenarios or new accident scenarios that have been reduced or mitigated as a result of the $345 million given to LANL by Congress following the Cerro Grande Fire.

DOE/NNSA must provide a table in the final draft SWEIS to demonstrate that "extending the region of influence out to 100 miles (160 kilometers) would change the calculated results only a few percent for the accidents with the highest potential for widespread impacts." We suggest showing the impacts at 50 miles (80 kilometers), 100 miles (160 kilometers) and 150 miles (240 kilometers). However, the final determination of the region of influence must be based on technical sound science.

Further, DOE/NNSA must provide a table in the final draft SWEIS to demonstrate that the results of the potential impacts to a maximally exposed individual (MEI) near the site boundary "do not indicate the need to evaluate impacts beyond a distance of 50 miles (80 kilometers)." We suggest showing the impacts at 50 miles (80 kilometers), 100 miles (160 kilometers) and 150 miles (240 kilometers).

p. 1-38. Please explain in more detail why the reports and recommendations made by the DOE Inspector General and the Defense Nuclear Facilities Safety Board are not incorporated into the draft LANL SWEIS. DOE/NNSA must incorporate these recommendations into the new draft LANL SWEIS.

p. 1-41. Section 1.7. Content of this New SWEIS. CCNS and EVEMG suggest that everyone who comments on the draft LANL SWEIS be put on a mailing list to receive the annual LANL SWEIS Yearbook. Please include those who attended the public comment hearings on this mailing list.

Chapter 2. LANL Activities and Facilities Update

p. 2-11. Section 2.2.6. Environmental Restoration Project. CCNS and EVEMG request that DOE/NNSA include a list of the 100 potential release sites of the Environmental Restoration Project at "increased risk of contaminant release and transport either through direct burning or through vulnerability to increased surface water runoff or erosion," along with the controls that have been installed, times of inspection and maintenance as part of the LANL Storm Water Program.

p. 2-23. Table 2-3. LANL Key and Nuclear Facilities – 1999 SWEIS and 2005 Listing. What is the basis for increasing the Nuclear Hazard Category from nothing to Category 2 for the Radioactive Liquid Waste Treatment Facility (TA-50) for the Low-Level Waste Tank Farm, Acid and Caustic Tank Farm and Holding Tank?

Environmental Justice Comments

There's been a quantum leap technologically in our age,
but unless there's another quantum leap in human relations,
unless we learn to live in a new way towards one another,
there will be a catastrophe.
- Albert Einstein

All issues related to Los Alamos County and LANL are environmental justice issues.
- NMED official

The treatment of Environmental Justice in the draft LANL SWEIS is wholly inadequate. It appears that little to no analysis was actually done. This is unacceptable in a document which is required to analyze the impacts to public health and the environment from polluting facilities, such as LANL. CCNS and EVEMG find this lack of emphasis on and respect for Environmental Justice issues reprehensible.

New Mexico bears and has historically born an un-paralleled burden from DOE activities. Within its borders there are two of the nation's three nuclear weapons research facilities, the nation's only nuclear weapons waste dump, a uranium belt and now a uranium enrichment facility. New Mexico has been subjected to 63 years of nuclear weapons activities starting back when there were no environmental laws and regulations.

New Mexico has the highest minority majority population of the 48 contiguous states and is second only to Hawai'i in the nation. New Mexico has extraordinary incidences of poverty. New Mexicans demand a complete analysis of Environmental Justice impacts. Considering that a fundamental policy of the National Environmental Policy Act (NEPA) is to "encourage productive and enjoyable harmony between man and his environment," and the situation at LANL, Environmental Justice should have been one of the priorities in this draft LANL SWEIS. (42 U.S.C. paragraph 4321) As it was not, reanalysis in a new draft LANL SWEIS is necessary.

The most conscious omission of DOE/NNSA's lack of adequate analysis is that there is no mention of Environmental Justice in the cumulative impact analysis in Chapter 5. Section 5.13. Section 3-301 (b) of Executive Order 12898 states, "Environmental human health analysis. . .shall identify multiple and cumulative exposures." Land resources, geology and soils, water resources, air quality and noise, ecological resources, human health, cultural resources, infrastructure, waste management and transportation were all analyzed. DOE/NNSA must explain the basis of the decision to leave Environmental Justice out of the Cumulative Impact analysis of Chapter 5.

The decision to omit Environmental Justice from the cumulative impact analysis is reprehensible because Environmental Justice is an issue for which cumulative impacts are particularly significant. In the 63 years that LANL has been in existence, it has produced substantial toxic pollution and had a large impact on its surroundings and public health. One cannot consider the use of land, or the cultural significance of certain sites, without considering this contamination which the residents of New Mexico have been living with for three or more generations --- and will continue to live with for many more. For more on this topic, please see our comment regarding traditional land use and background radiation, regarding page 5-157 below.

A second indication of shallow analysis done for EJ issues was the short length of the chapter and the lack of reference documents cited. Other than statistics, only Executive Order 12898 and a report entitled "Environmental Justice: Guidance under the National Environmental Policy Act," were cited. Significant work has been done over the past two decades regarding environmental justice and the policies associated with it. Reports have been prepared specific to NM, following New Mexico Environment Justice Executive Order 2005-56, which will be of particular use to DOE/NNSA as they discuss LANL. DOE/NNSA must use the final report of the New Mexico Environmental Justice Committee as a basis of a reanalysis for the new draft LANL SWEIS**.** This report is available at: www.nmenv.state.nm.us/Justice/index.html.

Importance of meaningful involvement. The reference document 'Environmental Justice: Guidance under the National Environmental Policy Act' states,

> Agencies should recognize that the question of whether agency action raises environmental justice issues is highly sensitive to the history or circumstances of a particular community or population, the particular type of environmental or human health impact, and the nature of the proposed action itself. There is not a standard formula for how environmental justice issues should be identified or addressed. P.14

CCNS and EVEMG agree with the statement the there is not a standard formula for how EJ issues should be addressed. Only the communities who are affected can decide the necessary solution. Therefore, in order to follow the guidelines DOE must establish meaningful dialogue with the affected communities. There is no discussion in the draft LANL SWEIS of a future process through which DOE/NNSA and LANL will involve the surrounding low-income and minority communities in the decision making process. DOE/NNSA must include a plan for developing this dialogue, which must be included in the reanalysis for a new draft LANL SWEIS. DOE/NNSA must evaluate the level of public involvement achieved and the out reach methods used for the public comment hearings in the analysis done for a new draft LANL SWEIS.

Crucial to Environmental Justice is the early and meaningful involvement of the low-income and minority communities who are impacted by past, existing and proposed

activities. It is not something which can be assessed, awarded or achieved from the outside, but rather something which must come from an working relationship between the government agency and the impacted communities. The importance of such a process is discussed in the reference document 'Environmental Justice: Guidance under the National Environmental Policy Act', which states,

> Early and meaningful public participation in the federal agency decision-making process is a paramount goal of NEPA. CEQ's regulations require agencies to make diligent efforts to involve the public throughout the NEPA process. Participation of low-income populations, minority populations, or tribal populations may require adaptive or innovative approaches to overcome linguistic, institutional, cultural, economic, historical, or other potential barriers to effective participation in the decision-making processes of Federal agencies under customary NEPA procedures. These barriers may range from agency failure to provide translation of documents to the scheduling of meetings at times and in places that are not convenient to working families. P.13

CCNS found the methods used to foster public involvement for this draft LANL SWEIS to be very ineffective and exclusionary. Foremost, the hearings were scheduled during the Pueblo feast days, which prevented the involvement of some of the most affected people. This decision should not have been made as DOE/NNSA must know the timing as these feast days are an annual event. DOE/NNSA should be well aware of such events due to their tribal accord relations. Furthermore, even after Elisabeth Withers, the DOE/NNSA manager for this process, was informed of the scheduling dilemma, she did not re-schedule the hearings nor schedule a later hearing in order to correct this.

There were other scheduling difficulties with the comment hearings. Primarily, the hearings were only held at night. This prevented many from attending, such as those who work at night or have a second job. The tourist industry is large employer in Northern New Mexico, and it requires many to work evenings and nights. Furthermore, childcare was not provided. Parents found it necessary to pay for or arrange childcare. If the purpose of NEPA is to involve low-income populations than these matters must be taken into consideration.
Furthermore, DOE/NNSA was not effective in involving the Spanish speaking population of New Mexico. Although a translator was present at all three public hearings, his services were never used. This is was not because a significant portion of those living in the surrounding communities would not have required one, but a failure on the part of NNSA to fulfill its executive order duties to involve the community.

CCNS and EVEMG will offer two explanations for why no one requested the use of the translator. The first is that is that few or no outreach efforts were made towards those requiring a translator. The second explanation is that individuals requiring a translator

may not have felt comfortable attending or requesting that aid. These issues are in fact one and the same. Meaningful involvement of a community begins with having respect for the community you are trying to involve. One important step is establishing relationships with the organizers and leaders in these communities.

The report 'Environmental Justice: Guidance under the National Environmental Policy Act' lists "Assistance to hearing impaired or sight impaired individuals" (p.13) as one important step for encouraging early and meaningful involvement. This type of assistance was not provided for the draft SWEIS. At the hearings there was no sign language interpreter available. No versions of the document were made available for the seeing impaired. CCNS and EVEMG were informed that the digital version of the SWEIS was made to be compatible with software which could translate the document into either large print or Braille, however we do not believe that this is enough to ensure meaningful involvement. Furthermore, the translation software is quite expensive, the Duxbury Braille Translator v10.5, for example costs $569.00, if purchased from emablemart.com. Requiring a seeing impaired individual to have own this software discriminates against those who cannot afford such costly technology. The new draft LANL SWEIS must be available in large-print, Braille and audio recording at the request of individuals and groups. If DOE/NNSA decides not to provide these materials, please state your justification for denying the seeing impaired access to the document.

The Executive Order requires each agency to "ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and easily accessible to the public." (section 5-5) DOE/NNSA must take significant steps to make the new draft LANL SWEIS *concise, understandable* and *easily accessible*. Unfortunately, on a fundamental level the draft LANL SWEIS was not physically accessible to many individuals of the public nor were the reference documents. CCNS distributed the draft SWEIS to many members of the community who had not received one, including congressional staff, who only received the summery.

CCNS and EVEMG requested and had great difficulty receiving an electronic version of the reference documents. But once we received them we distributed four complete sets. Even after the documents were posted on the Nuclear Watch New Mexico website, many who did not have high-speed internet access required CD versions.

DOE/NNSA must also take significant steps to make the content of the new draft LANLSWEIS and future documents more *concise, understandable* and *easily accessible* to the public. There are two key components to doing so, the first is to ensure that the scientific discussions are written with the intention of being read by a member of the public and the seconded is to place the activities and information within a context.

In order to ensure that the scientific writing is accessible to the public DOE/NNSA must hire a member of the public to read through and comment on the entire document

with the intention of making it accessible. This should be done for both the English, Spanish and Braille versions of the final SWEIS. For clarity and ease in reading it is essential that scientific terms are defined the first time they are used in each chapters, as well as in a cumulative glossary at the end. This can be done either in the text or in a text box on the side

One example is the definition of a 'pit'. DOE/NNSA defined the 'pit' as "the central core of a primary assembly in a nuclear weapon typically composed of plutonium-239 and/or highly enriched uranium and other materials." (8-23) This definition does not give the full meaning of a 'pit'. There is no discussion of the use of nuclear weapons to put expanding plutonium pit production into perspective. CCNS requests the definition of a pit be expanded to something more like, "the trigger of a nuclear weapon such as the one the United States government dropped on Nagasaki Japan on August 9th 1945. A pit is typically composed of plutonium-239 and/or highly enriched uranium and other materials."

The draft SWEIS uses phrases which hide the significance of what they are discussing and does not connect proposed or current operations to their eventual outcome and purpose. One example from the Environmental Justice section in chapter 5 is the phrase "special pathways receptor." (5-157) No definition was given for this term in the draft LANL SWEIS. This phrase is speaking of a human being who has been exposed to radionuclides, but to one inexperienced with the technical language employed by DOE/NNSA it appears that this is discussing a mechanical instrument. It is of paramount importance that it is understood that human beings is being discussed.

In order to make the document *understandable* and *easily accessible* the principle of adding context must be applied to all terms or phrases that have reference to weapons activities. DOE/NNSA must ensure that the purpose of the projects are clearly stated and include the full ramifications of what is being discussed. Nuclear weapons activities cannot be hidden within vague scientific descriptions. Furthermore the health effects of all toxic, radioactive and hazardous materials must be clearly listed whenever the first time these materials are mentioned in a chapter, regardless of amount, without diluted qualification of greater or lesser amounts.

Furthermore DOE/NNSA must include a cost analysis or estimate for proposed actions within the document. Monetary sums put the projects proposed into a type of perspective that is *concise, understandable* and *easily accessible* to the general public.

The assessment of Environmental Justice issues must take place internally within LANL as well as outside of it. LANL has recently been sued for discriminatory practices in its employment policies. Please see attached article, from the Associated Press, entitled 'Lawsuit accused LANL of discrimination against women, Hispanics' dated August 6, 2006 in Exhibit 9.1. This is only the most recent in a long line of discrimination practices

at LANL. DOE/NNSA must include a discussion of the social impacts of its internal policies in the reanalysis of Environmental Justice for a draft LANL SWEIS.

The discriminatory practices at LANL raise the issue of DOE/NNSA's sensitivity to gender both within and outside the laboratory. DOE/NNSA must give special consideration given to women in this section. Although women are not a minority, it is a population for whom the health effects of LANL are exaggerated. Furthermore women are a disempowered portion of the community whose voice must be sought out and heard if a significant discussion of the internal policies and impacts of LANL activities on the surrounding communities is to be had.

Specific Comments about Environmental Justice

Chapter 4: Affected Environment, Section 4.11 Environmental Justice

[4-150] Please note that the following comment is referenced several times below. "Persons whose income is below the federal poverty level are designated as low income." CCNS and EVEMG find DOE/NNSA's analysis to be misleading and inaccurate. The term 'low income' is not defined as, nor conventionally used interchangeably with, 'below the federal poverty level.' The United States Department of Education webpage, states, "the term "low-income individual" means an individual whose family's taxable income for the preceding year did not exceed 150 percent of the poverty level amount," at http://www.ed.gov/about/offices/list/ope/trio/incomelevels.html. Below is a table taken from the same page:

(Effective February 2006 Until Further Notice)

Size of Family Unit	48 Contiguous States, D.C., and Outlying Jurisdictions	Alaska	Hawaii
1	$14,700	$18,375	$16,905
2	$19,800	$24,750	$22,770
3	$24,900	$31,125	$28,635
4	$30,000	$37,500	$34,500
5	$35,100	$43,875	$40,365
6	$40,200	$50,250	$46,230
7	$45,300	$56,625	$52,095
8	$50,400	$63,000	$57,960

For family units with more than 8 members, add the following amount for each additional family member: $5,100 for the 48 contiguous states, the District of Columbia and outlying jurisdictions; $6,375 for Alaska; and $5,865 for Hawaii.

The term "low-income individual" means an individual whose family's taxable income for the preceding year did not exceed 150 percent of the poverty level amount.

The figures shown under family income represent amounts equal to 150 percent of the family income levels established by the Census Bureau for determining poverty status. The poverty guidelines were published by the U.S. Department of Health and Human Services in the Federal Register, Vol. 71, No. 15, January 24, 2006, pp. 3848-3849.

Using these numbers from the Federal Registry, the average income for a family of four in New Mexico would be $30,000 a year rather than $17, 029 as the analysis in

the draft LANL SWEIS currently states [4-154]. This would include a far larger low-income population than is analyzed the draft LANL SWEIS. It is unacceptable for DOE/NNSA to determine a private definition for 'low-income' when the us department of human health and services has already done so.

The following is a list of the percentage of the population in the affected counties that earn less that $34,999 a year per family and per household. This information was taken from the 2000 United States Census data. Please note that the Census data is not presented in such away as to allow us to calculate the percentage of the populations which earns 30,000 or less annually with out great difficulty. For that reason CCNS and EVEMG determined to raise the cut off point to $34,999. What is provided below is intended to serve as an indication of the increase in affected population if the correct definition of low-income is used.

Los Alamos County: 8.2% of families, 16.4% of the households [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35028&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on]

Mora County: 59.2% of families, 66.4% of households [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35033&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-_sse=on]

Rio Arriba: 52.5% of families, 58% of the households. In Espanola City alone: 45.6% the households earned under $35,000 a year. [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35039&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-_sse=on]

Sandoval County: 30.6% of families, 36.7% of households http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35043&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on]

San Miguel County: 55.8% of families, 62.7% of households [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35047&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on]

Santa Fe County: 34% of families 40.6% of the households [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35049&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on]

Taos County: 51.6% of families, 60.9% of households [http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US35055&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on]

It is crucial when assessing the above data to note that Los Alamos County has a vastly different demographic from the surrounding area, both in income and in race/ethnicity. DOE/NNSA must ensure that the statistical analysis is not weighted by the large population of affluent Anglo individuals living in Los Alamos County. It is unacceptable for DOE/NNSA to use the Anglo scientists who have chosen to come to LANL and receive good salaries to weight the scale when assessing the Environmental Justice issues in the surrounding area. For this reason it is crucial that analysis also be done excluding the residents of Los Alamos County.

Although LANL makes mediocre contributions to the surrounding communities, the positive economic impact of its presence is also called into question by the income disparity. When working with the surrounding communities to develop future plans for operations at LANL, DOE/NNSA must also receive input as to ways in which LANL could contribute in a more positive fashion. Members of the public who came to the public comment hearings for the draft LANL SWEIS discussed this topic at length. Such discussion must be fostered.

4.11.1 Region of Analysis

4-151 Please cite the scientific justification behind the NNSA methodology of using a 50-mile radius for assessing the potential risks to populations. Precedent is not adequate scientific justification.

Expanding the radius to 60 miles would include Albuquerque and Sandia National Laboratories. Including Albuquerque is important for ensuring Environmental Justice. Albuquerque has a population of 448, 607 people. The 2000 Census found that 39.9 % of the Albuquerque population is Hispanic or Latino, and the sum of other non-white population is 28.4%. http://factfinder.census.gov/servlet/QTTable?_bm=y&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-_sse=on&-geo_id=16000US3502000

A significant portion of the Albuquerque population is low-income, 35.3% of the families and 45.6% households have an annual income of less than $34,999.

The state of affairs is similar in the whole of Bernalillo County, the 2000 census data shows that in 1999, 36% of families and 45.1% of households had an annual income of less than $34,999. http://factfinder.census.gov/servlet/QTTable?_bm=y&-context=qt&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-tree_id=403&-redoLog=true&-all_geo_types=N&-_caller=geoselect&-

geo_id=05000US35001&-geo_id=16000US3502000&-search_results=01000US&-format=&-_lang=en

Expanding the radius would also include the Laguna Pueblo lands. DOE/NNSA must include Canoncito Pueblo within the Environmental Justice analysis for a new the draft LANL SWEIS because of its proximity to the circumference of the affected area.. Further more DOE/NNSA must include the tribes which use the land and natural resources surrounding LANL for sacred purposes, such as the Hopi who use the water.

Furthermore, section 3-301 (b) of the Federal Executive Order states, "Environmental human health analysis. . .shall identify multiple and cumulative exposures." The draft LANL SWEIS states that "cumulative impacts for this SWEIS includes . . . a review of past, present, and reasonably foreseeable actions for other federal and non-federal agencies in the region." (5-180) Although DOE/NNSA failed to include analysis of the cumulative impacts as they pertain to Environmental Justice, the Executive Order requires such analysis. DOE/NNSA must include these impacts in the assessment for a new draft SWEIS. Please see our comments regarding the cumulative impacts to Laguna lands.

Other sites which DOE/NNSA must assess include, but are not limited to Sandia National Laboratories (which fall within the 60-mile radius of LANL) WIPP, NEF, the Nevada Test Site and past present and future uranium mining sites.

The Environmental Justice repercussions of the alternatives for waste storage and transportation were not analyzed in the draft LANL SWEIS. The draft LANL SWEIS states that if expanded operations, a modern pit facility and full cleanup are to be implemented it would require over 100,000 shipments to WIPP. S-87 This statement begs the question of how these communities through which the waste is transported, would be impacted. Furthermore, it demands the question as to which communities the WIPP route passes through. The trucks pass through land that is sacred to many tribes. They pass through San Ildefonso, Pojoaque and Tesuque lands. Furthermore, the trucks pass through many low-income and minority communities in central and southeastern New Mexico. See CCNS comments about the National Enrichment Facility Permit Application in Exhibit 9.2 for more information about the demographic of these communities. DOE/NNSA must include the Environmental Justice issues associated with waste transportation in the reanalysis for a new draft SWEIS.

Further multiple impacts that must be considered are the way that increased LANL activities will affect those at sites, which perhaps remote in location, are directly implicated by LANL operations. Please see CCNS and EVEMG comments below regarding Section 5.13 Cumulative Impacts, for further comment on these multiple impacts.

4.11.2 Changes Since the 1999 SWEIS

Non United States Citizen Population. How are non-citizen residents accounted for in the draft LANL SWEIS Environmental Justice Analysis? No mention is made of this group, nor their land uses. CCNS and EVEMG have knowledge of many immigrants fishing, gathering plants for medicinal purposes and hauling water for many activities. This population and their use of the land, water and wildlife must be addressed in the reanalysis for a new draft LANL SWEIS.

Furthermore, there is no discussion of undocumented residents in this section. The fact that this community is undocumented does not mean that they do not exist, nor are they impervious to the impacts of LANL's activities. DOE/NNSA must include an estimate of that population, its income and demographic, in the Environmental Justice section of the reanalysis for a new draft LANL SWEIS. DOE/NNSA must make efforts to include the immigrant and undocumented communities in the discussions regarding Environmental Justice issues. Although difficult such efforts are not impossible.

4-153 It is not adequate to look simply at those individuals below the poverty level. As stated above in reference to page 4-150, a 'low income individual' by federal definition is one who's family income is less than 150% of the federal poverty level, not below it. See above comment in reference to p. 4-150

4.11.4 Low-Income Population in 2000

4-154 It is not adequate to look simply at those individuals below the poverty level. As stated above in reference to page 4-150, a 'low income individual' by federal definition is one who's family income is less than 150% of the federal poverty level. It is not adequate to look simply at those individuals below the poverty level. See above comment in reference to p. 4-150.

4-155, 4-156 Figure 4-33 Minority Population and Figure 4-34: DOE/NNSA must add a joint figure which shows both the overlap of minority population and low-income population at the same time. As previously stated, by low-income, CCNS does not mean those individuals living below the federal poverty level, but rather those who qualify as low income individuals under the Federal Registry regulations cited above. DOE/NNSA must include an additional figure to indicating the portion of the affected environment which overlaps with Sandia National Laboratory's affected environment. Please see the attached image of the multiple if the effected area were extended to 60 miles, Exhibit 13.1.

Chapter 5: Environmental Consequences

5.11 Environmental Justice

5-156 DOE/NNSA must expand the Environmental Justice analysis to include not only "the potential for disproportionately high and adverse human health and environmental effects on minority and low-income populations," but also the social and psychological impacts to minority and income populations. Further, DOE/NNSA must explain their efforts to foster meaningful involvement of these populations in the development and implementation of activities at LANL and the impacts of this process on their health, environment and communities. DOE/NNSA must include analysis of the psychological impacts both of being involved and of being neglected. DOE/NNSA must access the impact to and role of women in the Environmental Justice assessment of a new draft LANL SWEIS.

CCNS and EVEMG object to the definition: "*Low-income population:* Low income populations in an impacted area are identified with the annual statistical poverty thresholds from the Census Bureau's Current Population Reports, Series PB60, on Income and Poverty." As stated above in reference to page 4-150, a 'low income individual' by federal definition is one who's family income is less than 150 percent of the federal poverty level, not below it. See above comment in reference to p. 4-150.

See above comment regarding CCNS and EVEMG's objection to use of a 50-mile radius for the Environmental Justice analysis on page 4-151.

CCNS and EVEMG object to the following sentence and it's conclusion: "Based on the analysis of impacts for other resource areas, DOE expects few high and adverse impacts from the continued operation at LANL under any of the alternatives, and, to the extent impacts may be high and adverse, DOE expects the impacts to affect all populations in the area equally." This conclusion is impossible when most of the population has limited to nonexistent recourses and/or resources to mitigate the damage caused by LANL.

Foremost CCNS and EVEMG object to the analysis of impacts for other areas. Especially as the analysis does not account for the health of women. And as the analysis does not account for psychological factors, which are of particular concern to Environmental Justice analysis. Please see above discussion of the importance of meaningful involvement.

5-157 There is no information about the traditional, current or cultural significance of consumption of fish and wildlife, subsistence farming, the soil and water used in religious ceremonies in the text. Cited references, such as the 1999 LANL SWIES are inadequate as they do not describe current nor past uses nor the cultural and psychological import of the land. How can DOE/NNSA make conclusions without any information? CCNS has witnessed subsistence based people fishing for dinner at Cochiti Lake. DOE/NNSA must include a detailed discussion on the cultural consumption of fish and wildlife in the reanalysis for new draft LANL SWEIS and use this to make a determination.

In gathering this information, it is important to foster meaningful involvement of the community. In order to address this, DOE/NNSA must initiate a dialogue with those living in the surrounding area before coming to a conclusion. Please see above discussion regarding the importance of meaningful involvement. Please include alternative sources of information such as mythology, oral histories and interviews to see what minority and low-income individuals dream and aspire to using the land for. DOE/NNSA must involve women, as life-givers, in this discussion and decision making process.

"Special pathways were considered that took into account the levels of contamination in native vegetation (. . .), crops, soils and sediments, surface water, fish and game animals on or near LANL." However, 'special pathways' are not defined here in this document. DOE/NNSA must define 'special pathways' in the new draft LANL SWEIS.

DOE/NNSA must broaden its list of special pathways. It is very possible that a hiker or camper, especially children, may drink the water flowing from springs, for this reason springs as a source of drinking water must be included in the reanalysis for a new draft LANL SWEIS. Children have a tendency to ingest dirt while playing. Have DOE/NNSA accounted for the impacts of ingesting soil? If not, then DOE/NNSA must consider soil ingestion as a special pathway in the reanalysis for a new draft LANL SWEIS. Please see the attached comments by IEER about the clean up of the South Fork of Acid Canyon.

"Additional exposures. . . from the ingestion pathway." The BEIR VII report found that the risks from radiation exposure should be assessed using a linear non threshold model. This means that each additional exposure, no matter how small leads to an increase in risk. DOE/NNSA must not dismiss even the smallest exposure in this way. Furthermore, DOE/NNSA must consider all health impacts from radiation exposure, see CCNS comments on the health analysis in the draft LANL SWEIS.

Background Radiation Levels "This included natural background, weapons testing fallout, and previous radiological releases from LANL. The actual contribution from recent operations at LANL is only a small fraction of this value. The overall risk to the special pathway receptor would not differ between the alternatives considered in this new SWEIS, because most of the risk is attributed to the existing low-levels of radiological contamination in water and soils in the area"

The 1979 LANL SWEIS states, "summing the cosmic and terrestrial components, the average expected total yearly dose is about 135 mrem/year." 3-58 The June 2006 draft LANL SWEIS places the background radiation at 450 mrem/year. 5- 91 DOE/NNSA's calculation of background radiation has grown by a three fold increased since the 1979 LANL SWEIS. The background radiation estimate has absorbed, no

doubt, the contamination generated by past LANL activities. However, the environmental crimes of LANL do not belong to nature and cannot be attributed to her.

Before the Manhattan project began and LANL's establishment in 1943, the Pajarito Plateau was pristine. Much of the land and water was used for traditional and subsistence farming, as well as sacred rituals. The draft LANL SWEIS manipulates scientific data to makes it appear as though the contribution from 'weapons testing fallout, and previous radiological releases from LANL' are the same as natural background, which they are not and must not be treated as such. DOE and NNSA must use 135 mrem/year as the background for reanalysis in a new draft LANL SWEIS. While doing so, DOE/NNSA must acknowledge that the contribution of background radiation may have been lower in 1943.

The BEIR VII report found that the risks from radiation exposure should be assessed using a linear non threshold model. This means that each additional exposure, no matter how small leads to an increase in risk. Based on the determination of the BEIR VII, CCNS objects to the conclusion that "consequently, no disproportionately high and adverse human health impacts would be expected in the special pathway receptor populations in the region as a result of subsistence consumption of fish and wildlife." The linear non threshold model would indicate that adverse human health impacts would result from subsistence consumption, and further that the impact grows higher with each addition release from LANL activities. Based on this evidence it appears that any further release would lead to significant harm. DOE/NNSA must address these concerns in a reanalysis for a new draft LANL SWEIS.

There are significant health impacts from toxic, chemical and hazardous contamination in native vegetation, crops, soils and sediments, surface water, springs, fish and game animals on and in the area surrounding LANL. In February of 2006 New Mexico governmental agencies issued a "no eat advisory" for fish in the Rio Grande and Rio Chama watersheds for polychlorinated biphenyls. The New Mexico Environment Department, Health Department, State Parks and Department of Game and Fish advised against eating channel catfish and common carp caught from Abiquiu and Cochiti reservoirs and from the Rio Grande below LANL. The fish advisory is based on do-not-eat guidelines for various contaminants established by the Environmental Protection Agency. This is the first advisory for fish caught from the Rio Grande. The contamination was linked to LANL through PCB fingerprinting. See NMED advisory in Exhibit 9.4.

One example of a significant step in developing a meaningful relation with the surrounding communities would be for LANL to post warnings to the public of such contamination. These warnings should be posted on the LANL website and alerts should go out to impacted communities both upstream and downstream, grocery stores that will potentially sell local produce and game, and to local media.

5.11.1 No Action Alternative

5-157 CCNS objects to the conclusion that there would be no disproportionately high and adverse impacts because we object to the analysis done in other parts of chapter five. DOE/NNSA must incorporate CCNS comments regarding on going activities at LANL for the reanalysis of a new draft LANL SWEIS. This reanalysis must be used to draw new conclusions regarding the No Action Alternative.

5.11.2 Reduced Operations Alternative

LANL Site-Wide Impacts

5-158 CCNS objects to the conclusion that there would be no disproportionately high and adverse impacts because we object to the analysis done in other parts of chapter five. DOE/NNAS must incorporate CCNS comments regarding activities at LANL.

5.11.2 Expanded Operations Alternative

LANL Site-Wide Impacts

5-158 CCNS objects to the conclusion that there would be no disproportionately high and adverse impacts because we object to the analysis done in other parts of chapter five. Please see and incorporate out comments about the other subsections of this chapter.

In order to fully address the impacts of the expanded operations alternative DOE/NNSA must include an analysis of the psychological and spiritual impact of having sacred land used in support of nuclear weapons production. This discussion of sacred land must take into account the Hopi's use of water from the LANL area, and the salt formations of WIPP, which are the Great Salt Mother to many of the Northern Pueblos. In the scientific considerations of Environmental Justice issues at LANL DOE/NNSA must consider science that was not developed to support the nuclear weapons complex but developed to protect public health and the environment.

Air Issues in the draft LANL SWEIS

Open Air Burning and Explosions using Depleted Uranium and High Explosives. DOE/NNSA proposes to process 87,000 pounds of high explosives and up to 6,900 pounds of depleted uranium (DU) for dynamic experiments and studies annually in open air burning and explosions. The No Action Alternative and the Expanded Operations Alternative are the same for the High Explosives Testing Facilities to conduct approximately 1,800 experiments per year using the 6,900 pounds (3,130 kilograms) of DU.

While we oppose these experiments, within the DOE/NNSA complex, facilities exist where similar experiments are conducted in enclosed, double-walled facilities with extensive air filtration systems. The particulates and toxic air pollutants are collected as opposed to the activities at LANL where the materials are dispersed into the open air to be deposited on the land and flow during rain and melting snow events through the watersheds to the Rio Grande and into other downwind watersheds.

DOE/NNSA must monitor and implement comprehensive sampling programs, including but not limited to, air at all open burning and open detonation sites and for all activities using high explosives and depleted uranium. DOE/NNSA have reduced the number of air monitoring stations surrounding the sites where these burning and explosive activities continue to take place. Specifically, AIRNET stations 77, 78 and 79, which were located in the downwind direction from the Dual-Axis Radiographic Hydro Test Facility (DARHT) have been turned off and possibly removed.

DOE/NNSA propose to conduct 100 major hydrodynamic tests annually. S-41. CCNS and EVEMG oppose the claim that there will be no harm form these tests. Please see the video of the September 6, 2006 RRW Hydro test that LANL recently posted on its website: http://www.lanl.gov/news/newsbulletin/QuickTimes/rrw_darht_2.mov. It is clear from this video that there are releases from experiments at the DARHT facility. DOE/NNSA cannot be allowed to continue stating that there will be no harm from these activities simply because they have no data to prove otherwise.

CCNS and EVEMG have been involved in a long process requesting that AIRNET stations 77, 78 and 79 be turned back on. These AIRNET stations are located on the firing sites and near DARHT. The highest measurements of DU on the LANL site were recorded at these stations. We demand that these AIRNET stations be turned back on and that bi-weekly sample collection and analysis take place. We demand that the data be posted in a timely manner on the Internet as well as included in the annual Environmental Surveillance Reports.

Further, the 1979 LANL Final Environmental Impact Statement estimates that 220,000 pounds of depleted uranium were used in dynamic experiments during the history of LANL. From 1979 to present we do not know how much DU and high explosives have

been used in experiments and remains in the environment. In order to understand what remains in the environment, extensive soil sampling on lands downwind and downstream of LANL is required and must be implemented immediately, with citizen oversight.

Toxic and Hazardous Air Pollutants. DOE can no longer hide under the New Mexico "grandfather clause," which allows for facilities existing before December 31, 1988 to emit toxic air pollutants without regulation. For instance, "the amounts of toxic materials used and the amounts emitted to the air continue to show considerable variation. Although the actual quantities and chemicals vary from those analyzed in the 1999 SWEIS, the concentrations to which the public is exposed continue to be below levels of potential consequences." S-30. Yet, there are many of these toxic material emissions for which there are no federal and state standards. Further, DOE's sister agency, the Department of Defense continues to work towards removing already listed chemicals from the toxics lists in spite of known harmful effects.

The DOE must support the regulation of toxic and hazardous air pollutants from its facilities. This holds true for LANL as it is a research and development facility, which creates new toxic and hazardous materials in order to further its national security mission. If DOE/NNSA is going to continue to release these toxic and hazardous materials into the air, water and soil, then it has the additional responsibility to name them. In the alternative, DOE/NNSA must stop all toxic and hazardous air pollutant emissions from LANL facilities and activities. Any new toxic or hazardous material created by LANL must have a proposed air emission limit, as well as discharge to surface water limit and soil concentration limit.

Further, the Expanded Operations Alternative would result in an increase of hazardous air pollutants by "up to 2.5 percent from the higher level of High Explosives Processing." S-58.

In all cases of emissions of toxic and hazardous air pollutants and DU, the cumulative and synergistic impacts must be considered.

Evaporation of Tritium as Waste Disposal. DOE/NNSA states "the possible elimination of the RLWTF outfall to Mortandad Canyon if the auxiliary action to evaporate treated effluents were implemented." We understand this to mean the continuation of using evaporation of these treated effluents into the air at TA-53. Given the reduction of air monitoring at TA-53, can DOE/NNSA state with certainty that these emissions are being monitored? When will evaporation of treated effluents, including tritium, as a waste disposal method end? When will DOE/NNSA develop a waste treatment method for effluents that does not result in the involuntary exposure to humans and other living beings? This method of waste disposal is unacceptable. DOE/LANL must pursue an alternative method that imposes zero harm to humans and the environment.

Maximally Exposed Individual (MEI). DOE/NNSA recognize the need to move the LANL site-wide maximally exposed individual (MEI) under the Reduced Operations Alternative to near the firing sites at TA-36. The Reduced Operations Alternative provides for the shutdown of LANSCE, the largest emitter of radionuclides to the air. Regardless of which option is chosen, CCNS and EVEMG maintain the necessity for LANL to calculate and report a MEI for both LANSCE (generally at East Gate) and TA-36. Because of increasing public concern about the open burning and open detonation activities at the firing sites, as well as the recent leak at LANSCE, CCNS and EVEMG support the MEI being calculated at both places. We understand that the regulations only require one MEI, but given the diverse topography of the LANL site, the different emissions and concern about air quality over Bandelier National Monument, a Clean Air Act Class 1 area, two MEIs are needed at LANL.

Air Emissions Due to Increased Power Demand. DOE/NNSA must evaluate the increased air emissions due to the increased power demand under all the Alternatives. We find it ironic that the Department of **Energy** generates energy at LANL in old, inefficient and wasteful facilities. DOE/NNSA must include to option of using clean renewable energy sources such as wind and solar in the reanalysis for the new draft LANL SWEIS.

Air Emissions Due to Increased Commuting. DOE/NNSA must evaluate the increased air emissions as a result of the proposed hiring of more employees, contractors and subcontractors. The regional efforts for public transportation are commendable, however, DOE/NNSA must provide incentives so that people will get out of their cars and utilize the public transportation system, including Park and Ride and shuttles in Velarde, Dixon, Ojo Caliente and other rural areas where LANL employs concentrations of the population.

Bandelier National Monument. We remain concerned about LANL emissions impacting Bandelier National Monument, a Class 1 area under the Clean Air Act, and question the decision making process which would lead to proposing to operate a modern pit facility on the doorstep of a National Monument and historic treasure.

Water Issues in the draft LANL SWEIS

Past, present and future LANL activities jeopardize both water quality and quantity for surface and ground water on the Pajarito Plateau as well as for the downstream users along the Río Grande watershed. New Mexicans and others downstream rely on surface and groundwater for many uses, including drinking, farming, ranching, recreating and for cultural practices. Water is essential for a healthy ecosystem that supports life in its many diverse forms.

In the past few years, contaminants, such as tritium, PCBs, perchlorate, hexavalent chromium and 1, 4-dioxane, have been found in surface water and the regional aquifer on the Pajarito Plateau. For many of these contaminants, the source is known to be from LANL activities. These activities include discharges to surface water and the continuing practice of burying toxic, hazardous and radioactive waste in unlined pits, trenches and shafts, which provides direct pathways for contaminants to travel to groundwater. Further, DOE/NNSA is not monitoring 1,405 sites that have the potential to release contaminants during storms and when the snow melts.

For these reasons, in May 2006, a diverse network of non-governmental organizations sent a 60-Day Notice of Intent to Sue DOE/NNSA for violations of the Clean Water Act at LANL ("60-Day Notice"). The 60-Day Notice details the Clean Water Act violations at LANL, including failure to conduct adequate monitoring, failure to report violations, failure to have pollution controls in place and unauthorized discharges. The 60–Day Notice is available at www.nuclearactive.org. We request that the detailed 60-Day Notice be included as part of our comments to the draft LANL SWEIS.

Further, Amigos Bravos and CCNS recently released a report about LANL water issues. The report is entitled, "Historic and Current Discharges From Los Alamos National Laboratory: Analysis and Recommendations" ("Discharge Report"). This report concludes that the movement of pollutants in stormwater at LANL is an issue of grave concern. Specifically, stormwater samples taken by the New Mexico Environment Department (NMED(in Los Alamos, Pueblo, Sandia, Mortandad, and Water Canyons show contaminant levels that are well above water quality standards that protect human health and wildlife habitat. In Los Alamos Canyon, PCB levels in stormwater have been detected at 25,000 times above the standard that is protective of human health. In addition, the Discharge Report identifies numerous problems with non-stormwater related discharges, such as toxic impacts to aquatic life and inadequate monitoring. The Discharge Report is available at www.nuclearactive.org. We request that the Discharge Report be included as part of our comments to the draft LANL SWEIS.

We refer to both the 60-Day Notice and Discharge Report as references which support and enhance our comments.

In order to ensure that water quality and quantity is protected now and in the future, DOE/NNSA must adopt the Removal Option for all clean up activities at LANL. All cleanup must be done to a pregnant subsistence farmer standard.

Surface Water

DOE/NNSA discharges approximately 163,000,000 gallons per year, which is more than 500 acre-feet a year, of treated industrial waste and sanitary effluent into the canyon systems at LANL. DOE/NNSA proposes to increase that amount to 822 acre-feet per year, an increase of 61%. Please note that the proposed increase of discharge of 322 acre-feet of water per year could sustain a small rural community in Northern New Mexico for 20 years.

Unfortunately, DOE/NNSA did not use the most current state water quality standards when assessing impacts in this draft SWEIS, nor did DOE/NNSA use the most current data about the number of streams that are impaired on the Pajarito Plateau from LANL activities. DOE/NNSA must withdraw the draft LANL SWEIS and conduct a re-analysis of LANL's impacts to surface and ground water based on the latest state water quality standards and the current impaired stream information and then submit a new draft LANL SWEIS.

Our comments are limited in this area because DOE/NNSA did not use the most current water quality standards in the analysis. As a result, many of the tables and figures presented in the draft LANL SWEIS are incorrect, including information presented in Tables 4-4 and 4-6. There are a number of glaring errors and omissions in Chapter 4.3.1, including the statement "Most surface water on the Pajarito Plateau is designated for use as wildlife habitat and livestock water." p. 4-34. In fact *all* surface water on the Pajarito Plateau is designated for use as wildlife habitat, livestock watering, some form of human contact (either secondary or primacy) and some form of aquatic life. Given the amount of federal tax dollars that were spent in preparing this document, please provide an explanation why these substantial errors were allowed. Please describe the quality assurance standards applied to preparing the draft LANL SWEIS.

Surface Water Quality – Impacts from Storm Water and Construction Sources.

DOE/NNSA states that it "still requires Storm Water Pollution Prevention Plans and best management practices to protect surface waters from pollutants from industrial storm water sources and construction projects." S-28. Please see the 60-Day Notice and Discharge Report for our comments about the lack of adequate monitoring and Storm Water Pollution Prevent Plans at LANL. The draft LANL SWEIS does not mention or address the increase of impacts to water resources due to the substantial increase in construction activities at LANL in 2005 and 2006. In early 2006, the number of construction activities permitted was more than 50, which is a substantial increase from

the last cited level of 34 projects in 2004. p. 4-47. Given LANL's poor track record of controlling stormwater on their property, this increase of potential discharge poses a threat to water quality on and downstream from LANL. In addition, DOE/NNSA states "impacts from storm flows and construction or excavation projects were within 1999 SWEIS projections." S-28. However, information presented in the 60-day Notice and Discharge Report show that these flows represent numerous violations of the Clean Water Act.

Further, DOE/NNSA states "the number of industrial facilities requiring individual Storm Water Pollution Prevention Plans has ranged from 15 to 22. Storm Water Pollution Prevention Plans and best management practices are now required for all projects disturbing greater than 1 acre (0.4 hectares) of land." S-28. Please see the 60-Day Notice and Discharge Report for our comments about the impacts from the lack of adequate Storm Water Pollution Prevent Plans at LANL.

Surface Water Quality – Contaminant Transport.

DOE/NNSA states, "Several actions and best management practices were implemented to manage, control, and minimize storm water and sediment transport." S-28. The draft LANL SWEIS does not provide detailed information about these actions. However, the evidence indicates otherwise. Please describe in detail "several actions and best management practices."

Further, "As a direct result of the Cerro Grande Fire, storm water runoff increased (2 to 4 times for average flow, and 10 to 100 times for peak flows), increasing the potential for contaminant transport. Storm events in 2001 and 2002 were found to accelerate the transport of legacy contamination (radionuclides) from Pueblo Canon into lower watersheds and canyons." S-29. Please refer again to the New Mexico Environment Department DOE Oversight Bureau report about the increased transport of plutonium through the Pueblo Canyon system since the Cerro Grande fire. Draft LANL SWEIS reference section.

More plutonium and other contaminants have been transported through the canyon systems toward the Rio Grande since the fire, than before. This fact is alarming given the congressional response to the Cerro Grande fire - an additional $345 million to address remediation and restoration on the Pajarito Plateau. Please describe in detail the actions implemented for the $345 million with line-by-line accounting.

Nevertheless, the high priority sites with the most contaminant load, including Pueblo Canyon, were not adequately and promptly addressed with best management practices. As a result, plutonium, and other contaminants, mobilized in the Pueblo Canyon environment is traveling through surface water toward the Río Grande and discharging above the intake for the proposed drinking water diversion projects for Santa Fe and Albuquerque, two of the largest cities in New Mexico. Additionally, plutonium

discharge from LANL is a very real threat to international waters, flowing to our southern neighbor, Mexico, via the Río Grande.

"On average, outflows to individual watersheds have been within projections, and trends show that outfall flows per watershed have been declining, thereby reducing the potential for contaminant transport. The number of watersheds receiving outfall flow has been reduced from 8 to 6**.** The annual flow discharged to the individual watershed exceeded 1999 SWEIS projections 10 times from 1998 to 2000 and 0 times since 2000." S-28. DOE/NNSA must further reduce the discharges to the watersheds.

"While radionuclides at or above background levels have been detected in sediments on- and offsite, the overall pattern of radioactivity in sediments has not greatly changed since the 1999 SWEIS. Concentrations of metals, radionuclides, polychlorinated biphenyls, and high explosives residue above water quality standards have been detected during storm flows, however, these events are infrequent and short-lived." S. 28-29. Please review the data. These infrequent and short-lived storm events are the events which carry legacy contamination towards the Río Grande and existing and future drinking water supplies.

Groundwater

"Monitoring of the quality and quantity of the regional aquifer would be needed to evaluate the rate and direction of contaminant movements, as well as to track the amount of water available for use." S-69. What is the status of the effort to determine the amount of water in the regional aquifer? The Hydrogeologic Workplan effort has been an on-going, very expensive, project of LANL for almost a decade. Please explain why a determination of the amount of water in the regional aquifer has not been made through the Hydrogeologic Workplan, an effort expending more than $100 million.

CCNS and EVEMG submit detailed technical groundwater comments in Exhibits 1 through 4.

Summery of Exhibits: The past and present operations at LANL have caused great contamination to the groundwater resources that are not addressed in the Draft LANL SWEIS. The data tables in the Draft LANL SWEIS reveal the emerging presence of the radionuclide contaminants Neptunium-237, Plutonium-239, Plutonium-240, and Strontium-90 in the groundwater resource. The data tables document the presence of Neptunium-237 in the drinking water of Los Alamos County at levels above the Environmental Protection Agency (EPA) Drinking Water Standard (DWS). The water quality data in the Draft LANL SWEIS show that groundwater produced from "other springs" is contaminated with Strontium-90 at a level more than 13 times greater than the EPA DWS. In addition, Hexavalent Chromium contamination is present in the regional aquifer at concentrations greater than 4 times the EPA DWS. What is the scientific basis for determining that there is no disproportionate adverse effect from

contamination that is above the EPA standards? DOE/NNSA must issue a new draft LANL SWEIS following a thorough review of the data included in the June 2006 draft LANL SWEIS.

The above mentioned contamination in our drinking water is evidence that there is higher contamination away from the wells, at the source, beneath LANL. Unfortunately, we do not know the extent of this contamination because DOE/NNSA, LANL and New Mexico Environment Department (NMED) have constructed all of the monitoring wells over the past ten years with methods that mask the contaminants of concern. DOE/NNSA, LANL and NMED stated that the difficult geologic setting below LANL requires the drilling of monitoring wells with fluid assisted methods. The organic and clay based drilling fluids that were used for all LANL wells for the past ten years have well known properties that will mask the contaminants generated during the production of plutonium pits. The regulations of National Environmental Protection Agency (NEPA), Resource Conservation and Recovery Act (RCRA), DOE orders and the NMED consent order require accurate monitoring of laboratory operations. Therefore expanded activities to produce plutonium pits is prohibited.

A LANL report referenced in the Draft LANL SWEIS describes the great uncertainty in the knowledge of the travel pathways of contaminants from LANL past, present, and future nuclear weapons research and plutonium pit production to the regional aquifer and the travel of contamination in the regional aquifer to the drinking water wells, the property of the San Ildefonso Pueblo, and the Rio Grande. Below are excerpts from the recent LANL report by Keating, Elizabeth, B.A. Robinson, and V.V. Vesselinov, 2005, "Development and Application of Numerical Models to Estimate Fluxes through the Regional Aquifer beneath the Pajarito Plateau," Vadose Zone Journal, Volume 4, August, 2005:

> "Data concerning the spatial distribution of anthropogenic [LANL] contaminants in the regional aquifer has been inconclusive because of the exceptionally thick and complex vadose zone which makes it impossible to define the location and timing of contaminant entry to the regional aquifer" [page 658, Keating et al., 2005].
>
> "Finally, local recharge does occur along canyons that cross the LANL property – this recharge has important water quality implication in locations where contaminant effluent discharges have been released" [page 668, Keating et al., 2005].
>
> "Travel times through the regional aquifer are poorly understood because of the lack of tracer tests and *in situ* measurements of effective porosity" [page 658, Keating et al., 2005].

"The implication of this work for contaminant transport issues is that because of parameter uncertainty, predicted fluxes and velocities are quite uncertain. Uncertainties in permeability and porosity values lead to additional model uncertainty. These uncertainties can be reduced meaningfully with more data collection, including multiwell pumping and tracer tests" [page 668, Keating et al., 2005].

Exhibits 1 through 5 present a detailed discussion of the deficiencies in the Draft LANL SWEIS to address the requirements of the National Environment Protection Act (NEPA) to assess environmental impact of past, present and future LANL operations on contamination of groundwater resources. Because of the deficiencies with the assessment in the June 2006 draft LANL SWEIS, DOE/NNSA must withdraw it and perform a reanalysis for the new draft LANL SWEIS. In the alternative, the information in the **five** exhibits prove that DOE/NNSA must institute the ***"Reduced Operations Alternative"*** that was described in the draft LANL SWEIS.

The exhibits demonstrate that the DOE/NNSA, LANL and the NMED have not installed a network of monitoring wells that produce reliable and representative groundwater samples for the detection of groundwater contamination from past, present, and future operations for nuclear weapons research and pit production at the Laboratory facility. In order to lower costs, DOE/NNSA, LANL, and NMED decided to construct the network of LANL characterization wells with drilling methods that invaded the strata that are monitored with drilling additives that have well known properties to mask the detection of many LANL contaminants.

Exhibit 1. Exhibit 1 includes excerpts from reports by the DOE IG Inspector General, the EPA National Risk Management Research Laboratory, articles in the technical literature, and even LANL reports as irrefutable evidence that the LANL characterization wells impacted by the organic and bentonite clay drilling fluids do <u>not</u> produce representative water samples for many LANL contaminants of concern. This issue is especially problematic with the strongly sorbing radionuclide contaminants that would be produced by the *Expanded Operations Alternative*.

Exhibit 2. The information in Exhibit 2 identify the deficiencies with the water quality data presented in the Draft LANL SWEIS for water quality in perched zones of saturation and in the regional aquifer. LANL does not have the required monitoring well network for compliance with RCRA, DOE Orders, or the NMED LANL Consent Order. A fundamental requirement of NEPA is compliance with the Federal and State Regulations.

Exhibit 3 Exhibit 3 describes the deficiencies of the existing network of monitoring wells to protect the drinking water wells of Los Alamos County and Santa Fe City and County from contamination by the Hexavalent Chromium plume. The Draft LANL

SWEIS did not address the large but poorly characterized plume of Hexavalent Chromium that is present in the regional aquifer in a region of many of the Los Alamos County drinking water supply wells. The chromium plume is in aquifer strata with high permeability that are a fast pathway for travel of the contaminated groundwater over great horizontal distance.

Exhibit 4. Exhibit 4 describes the failure of DOE/NNSA, LANL and NMED to install a RCRA compliant groundwater monitoring program for the RCRA regulated waste disposal units at Technical Area 54 (TA-54) that contain DOE "Legacy Hazardous and Mixed Wastes" disposed of in unlined pits, trenches, and shafts. The Draft LANL SWEIS did not address the documented contamination of the regional aquifer by the "Legacy Wastes" in the improperly monitored disposal sites at TA-54.

Exhibit 5: George Rice, independent Ground Water Hydrologist and author of *New Mexico's Right to Know: The Potential for Groundwater Contaminants from LANL to Reach the Rio Grande*, reviewed the draft LANL SWEIS. Rice wrote comments about the Remediation of MDAs, Lateral flow into Wastes, Tritium in White Rock Canyon, Definition of background groundwater chemistry and Contaminants in Regional Aquifer, along with providing references. His comments are attached as Exhibit 5 and are incorporated by reference.

Groundwater Use

"The drop in the DOE well field has continued to be 1 to 2 feet (0.3 to 0.6 meters) per year, per the Water Supply at Los Alamos 1998 to 2001 report." S-29. As a result of this drop, at what point will the contamination increase to levels where people will no longer be allowed to drink the water?

"Impacts of LANL water use on the regional aquifer continue to be bounded by the impacts analyzed in the 1999 SWEIS." S-29. However, under the Infrastructure Section, DOE/NNSA states "demand for water could exceed the conservation limit of approximately 542 million gallons (2 billion liters [or 1,662 acre feet]) per year under the agreement with Los Alamos County." S-34.

The Expanded Operations Alternative will increase water usage by LANL above the amount allotted to it from the regional aquifer of "1,816 million gallons total (522 million gallons for LANL [1,601 acre feet]); 101 percent of system capacity." S-63. In water municipalities throughout the state there are fines and penalties associated with exceeding allotments. How will DOE/NNSA comply with the applicable laws governing water usage in the State of New Mexico given this scenario at LANL? Will DOE/NNSA work within the same legal boundaries as every other citizen of the State of New Mexico regarding water usage at LANL?

"Additional groundwater depletion projected as a result of potential new residential development within Los Alamos County could be somewhat offset by reduced depletion of the regional aquifer following implementation of the City of Santa Fe's water diversion project and reduced pumping of the Buckman Well Field." S-69. Please cite the draft Environmental Impact Statement for the Buckman Wellfield in the list of references for the new draft LANL SWEIS.

Groundwater Quantity

"LANL discharges have had little effect on groundwater quantities in the last 5 years." S-29. DOE/NNSA must back up this statement given references made in the draft LANL SWEIS to recent articles in *Vadose Zone Journal* about the uncertainties associated with LANL's groundwater modeling effort. These articles were authored by Elizabeth Keating and Bruce Robinson, among others, and are referenced in Exhibits 1 through 4.

"Impacts of LANL water use on groundwater quantities continue to be bounded by the impacts analyzed in the 1999 SWEIS." S-29. We disagree with this statement given the number of problems associated with the groundwater well drilling program as discussed in Exhibit 1 through 4 of our comments.

Comments on TRU waste issues in the draft LANL SWEIS
Don Hancock, Southwest Research and Information Center

1. The draft LANL SWEIS is fundamentally inadequate and extremely misleading about transuranic waste generation and storage. There is no disposal path for most of the transuranic waste proposed to be generated by the Expanded Operations Alternative. Can we format this to look like the rest of the document.

A. LANL's preferred Expanded Operations Alternative will turn the site into a permanent, large-scale transuranic (TRU) waste dump, a fact that is not mentioned in the document.

Buried on page 5-196 (Table 5-79), the draft LANL SWEIS estimates that the Expanded Operations Alternative from 2007 to 2016 would generate more than 25,000 cubic meters of TRU waste and the Modern Pit Facility would generate an additional almost 11,500 cubic meters of TRU waste during the same 10 years. The only TRU waste disposal site is the Waste Isolation Pilot Plant (WIPP), which in its most recent regulatory document (the Environmental Protection Agency Recertification Application) provides for 17,130 cubic meters of disposal capacity for LANL. Thus, the majority of the TRU waste that LANL would generate would not go to WIPP, but rather would very likely stay at LANL. The draft LANL SWEIS merely states: "Transuranic waste would be stored onsite until additional disposal capacity, at WIPP or elsewhere, was [sic] identified." P. 5-197. Of course, all of the TRU waste generation from continuing operations after 2017 would further add to the waste with "no disposal path" that would stay at LANL.

The draft LANL SWEIS is misleading in that it repeatedly does not fully report the amount of TRU waste that would be generated under the Expanded Operations Alternative. For example, Table 3-17 on pages 3-51 to 3-53, shows much smaller amounts of TRU waste transport, receipt and acceptance than 36,500 cubic meters. The table shows 8,400 cubic meters of legacy TRU, 2,000 cubic meters of newly generated TRU (200 cubic meters x 10 years), 190 cubic meters of additional TRU and 100 cubic meters of remote-handled TRU, for a total of 10,690 cubic meters. The table also states that an unspecified amount of TRU waste from DD&D and remediation activities would go to WIPP. Page 3-54 states that TRU wastes "are prepared for disposal and shipped to WIPP." There is no indication that any TRU waste, let alone most of it, could not go to WIPP.

Table 5-37 on page 5-128, entitled "Summary of Total …Waste Generation Projections" (emphasis added) shows that the total amount of TRU was for the Expanded Operations Alternative would be 25,230 cubic meters. The large amounts of additional TRU waste from the Modern Pit Facility is not included. Table 5-49 on page 5-143 includes the same misleading underestimate of the amount of TRU waste. Table 5-50 on page 5-147 showing offsite TRU waste shipments also does not include Modern

Pit Facility TRU wastes. That same misleading shipment information is shown on Table K-5, page K-25.

B. The draft SWEIS provides no analysis of the impacts of some of the TRU waste that is proposed for LANL, specifically the sealed sources.

One element of the Expanded Operations Alternative is to increase the type and quantity of sealed sources brought from other sites to LANL. However, the draft SWEIS does not include all of the off-site sealed sources as TRU waste even under the largest waste estimates. On page J-47, the draft LANL SWEIS states: "At this point, sufficient information is not available to predict the total number of [actinide-bearing] sources to be managed." Thus, the draft LANL SWEIS proposes unlimited amounts of TRU waste in those sealed sources could come to LANL with no adequate analysis of their environmental impacts. And since those actinide-bearing sources are legally barred from being disposed at WIPP because they are not defense TRU wastes, those sources have no disposal path and would likely stay at LANL.

2. <u>The draft SWEIS does not acknowledge that LANL is already storing increasing amounts of TRU waste, nor does it adequately analyze their impacts</u>.

Since the issuance of the 1999 LANL SWEIS, WIPP has opened. The draft LANL SWEIS does not include any information about the amounts of TRU waste shipped to WIPP from LANL. Table 4-52 on page 4-149 shows that LANL made 47 shipments of TRU waste to WIPP from 2002 to 2004 but includes no information about the amounts of TRU waste (which was 344 cubic meters). Information from WIPP shows that from 1999 through 2004, LANL shipped 598 cubic meters of TRU waste to WIPP. Table 4-40 on page 4-134 of the draft SWEIS shows that during that same time period, LANL generated about 1,440 cubic meters of TRU and TRU mixed waste. Thus, even though TRU waste was being shipped from LANL, it was generating and receiving substantially larger amounts of TRU waste. Thus, LANL's mission is increasingly one of being a long-term TRU waste site, a fact that is not acknowledged in the draft LANL SWEIS and there is no adequate analysis of the impacts of that mission.

3. <u>The draft LANL SWEIS does not describe the substantial problems that have occurred in managing TRU waste and preparing it for shipment to WIPP.</u>

According to the draft LANL SWEIS under any of the three alternatives, LANL will ship its legacy TRU waste (8,400 cubic meters) as well as 2,000 cubic meters of newly generated TRU waste (200 cubic meters per year) to WIPP. Table 3-17, page 3-51. However, as already noted, the draft SWEIS does not acknowledge that in six years LANL shipped less than 600 cubic meters of waste to WIPP. During some of that period, LANL was prohibited from shipping TRU wastes because it did not comply with characterization procedures. The document describe the major changes that would need to be made in its operations in order to increase characterization and

shipments of TRU waste by more than 10 times -- from an average of less than 100 cubic meters per year from 1999 to 2004 to more than 1,000 cubic meters per year from 2007 through 2016.

In fact, its past history shows that LANL does not have the capability to ship all of its legacy TRU waste to WIPP, so the draft LANL SWEIS statement that all legacy TRU will have been shipped to WIPP "by the end of 2015" (page 5-99) cannot be supported. Instead, the draft LANL SWEIS must analyze the impacts of further increasing amounts of TRU waste being managed at LANL.

Chapter 5. Environmental Consequences
Section 13. Cumulative Impacts

The cumulative impacts analysis in the draft LANL SWEIS is inadequate and misleading. Cumulative impacts are "the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Cumulative impacts can result from "individually minor but collectively significant actions taking place over a period of time." Id.; see also Attach No. ** (Council on Environmental Quality (CEQ) "Considering Cumulative Effects Under the National Environmental Policy Act" (January 1997)). Properly analyzing cumulative effects includes: (1) identifying the significant cumulative effects issues associated with the proposed action; (2) establishing the proper geographic scope for the analysis; (3) establishing an appropriate time frame for the analysis; and (4) identifying other actions affecting the resources, ecosystems, and/or human communities of concern. Under NEPA, it is not enough to simply list other actions cumulatively affecting the resources at issue – an actual analysis of the cumulative impacts is required. Here, the draft LANL SWEIS fails to properly address cumulative impacts in a number of significant respects, including the omission of environmental justice impacts.

The Draft LANL SWEIS Needs to Consider the Impacts of All Authorized Activities in Conjunction with Other Federal, State, and Private Activities Taking Place in the Region. According to the CEQ, the "most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time.". The requirement to consider cumulative impacts, therefore, is designed to avoid the "combination of individually minor" effects situation – to avoid the "tyranny of small decisions" or "death by a thousand cuts" scenario. See e.g., Grand Canyon Trust v. FAA, 290 F.3d 339, 346 (D.C. Cir. 2002); Save the Yaak Comm. v. Block, 840 F.2d 714, 721 (9th Cir.1988) (Agency cannot consider environmental impacts of logging in isolation but must address cumulative effects of past and reasonably foreseeable logging in watershed); Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372 (9 Cir. 1998) (Agency must address impacts of future timber sales); Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208 (9th Cir. 1998) (impacts of project must be viewed in conjunction with other past, present and reasonably foreseeable future actions); Sierra Club v. U.S. Forest Service, 46 F.3d 835 (S.D. 1991) (EA must recognize impacts of activities reasonably expected to occur on private lands); Resources Ltd., Inc., v. Robertson, 35 F.3d 1300 (9 Cir.1993) (cumulative impacts from non-Federal actions need to be analyzed by the Agency).

By way of example, DOE/NNSA must consider the synergistic impact of the location of two of the nation's nuclear weapons laboratories located within 60-miles of one another

in New Mexico. DOE/NNSA has not made the case to exclude analysis of the impacts of Sandia National Laboratory in the draft LANL SWEIS. The only way to do this is to expand the geographic scope of the DOE/NNSA's cumulative impacts analysis to encompass the range of impacts from the two laboratories. Further, DOE/NNSA must conduct a realistic evaluation of the impacts to determine the geographic scope of those impacts in the new draft LANL SWEIS. Please see additional comments below.

Collectively, the impacts of all of these and other activities – whether conducted by private individuals, state agencies, or other federal agencies – may be significant and must be analyzed. See e.g., Grand Canyon Trust, 290 F.3d at 346 (discussing collective impacts to Zion National Park); NRDC v. Hodel, 865 F.2d 288 (D.C.Cir. 1988) (discussing collective impacts to migratory whales). As the D.C. Circuit Court noted, Federal agencies must "give a realistic evaluation of the total impacts [of the action] and cannot isolate the proposed project, viewing it in a vacuum." Grand Canyon Trust, 290 F.3d at 342. Even "a slight increase in adverse conditions . . . may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel." 290 F.3d at 343 (quoting Hanly v. Kleindienst, 471 F.2d 823 (2nd Cir. 1972)). It is imperative that the DOE/NNSA avoid the death by a thousand cuts scenario and take a hard look at the big picture impacts of its decision. The only way to do this is by engaging in a proper cumulative impacts analysis as required by NEPA.

Environmental Justice There is no mention of Environmental Justice in the cumulative impact analysis of Chapter 5. Section 5.13. Section 3-301 (b) of Executive Order 12898 states, "Environmental human health analysis . . . shall identify multiple and cumulative exposures." Land resources, geology and soils, water resources, air quality and noise, ecological resources, human health, cultural resources, infrastructure, waste management and transportation were all analyzed, and the analysis of each was subsequently summarized as a part of the cumulative impacts section, but not environmental justice. What was the basis of the decision making process to omit Environmental Justice from the Cumulative Impact analysis?

The decision to omit Environmental Justice from the cumulative impact analysis is particularly appalling because Environmental Justice is an issue to which cumulative impacts are particularly significant. During the 63 year existence of LANL, it has produced substantial radioactive, hazardous and toxic pollution and had a large impact on its surroundings. One cannot consider the use of land, or the cultural significance of certain sites, without considering this contamination which the residents of New Mexico have been living with for at least three generations --- and will continue to live with for many more. For more on this topic, see our comment on Environmental Justice regarding page 5-157.

The Draft LANL SWEIS Fails to Establish the Proper Geographic Scope for the Cumulative Impacts Analysis. Establishing the proper geographic scope or boundary

for a cumulative impacts analysis is extremely important because the proposed action may have direct, indirect, or an even an "additive" effect on resources beyond the immediate area. According to the CEQ, project specific analyses are "usually conducted on the scale of counties, forest management units, or installation boundaries, whereas [a] cumulative effects analysis should be conducted on the scale of human communities, landscapes, watersheds, or airsheds." (12).

To determine the appropriate geographic boundaries for a cumulative effects analysis, DOE/NNSA must: (1) determine the area that will be affected by their proposed action (the "project impact zone"); (2) make a list of resources within that area or zone that could be affected by the proposed action; and (3) determine the geographic areas occupied by those resources outside the immediate area or project impact zone. (15).

In most cases, "the largest of these areas will be the appropriate area for the analysis of cumulative effects" Id. Here, DOE/NNSA's cumulative impacts analysis stops at the artificial and indefensible 50-mile boundary. As such, DOE/NNSA fails to take into account the real direct, indirect, or additive impacts its actions are having not only on the environment, but those Who live beyond the selective 50 mile radius or those who live within the 50 mile radiuses of both Sandia National Laboratory and LANL.

The Draft LANL SWEIS Fails to Properly Assess Indirect Effects Under NEPA. The Draft LANL SWEIS must consider the "indirect effects" of a proposed action. Indirect effects are effects that are caused by the action but occur later in time or are further removed in distance. 40 C.F.R. § 1508 (b). Indirect effects "may include growth inducing effects or other effects related to induced changes in pattern of land use; population density or growth rate; and related effects on air, water, and other natural resources." Id. Here, the draft LANL SWEIS fails to properly address indirect impacts of a modern pit facility capable of manufacturing 450 pits per year, let alone name it as a primary discriminator on the cover sheet.

When considering the cumulative impacts in a reanalysis for the new draft LANL SWEIS, DOE/NNSA must examine impacts beyond the regional boundaries of our geographic area. A narrow sphere of analysis completely denies the impacts to the national and international contexts and is therefore insufficient. LANL requires other facilities, located in New Mexico and around the country, for disposal of radioactive hazardous and toxic materials generated. It also uses other facilities for some experiments. The LANL mission and the proposals put forth in the draft LANL SWEIS, therefore, directly cause impacts to these sites as well. DOE/NNSA must consider these impacts as a part of the cumulative impacts from operations at LANL in the reanalysis for a new draft LANL SWEIS.

Furthermore, the legacy of LANL activities does not merely impact the local environment. Rather, LANL has perpetrated an international tragedy onto innocent individuals. Examples of this are devastatingly apparent with the dropping of atomic

bombs on Hiroshima and Nagasaki and the horrific reality that the Hibaksha live with to this day. Or the tragedy imposed on the Marshall Islands and its Natives who withstood, but are suffering from, 67 atmospheric atomic tests. Some of these bombs bore pits manufactured at LANL. In all these instances, generations continue to bear the burden of this gross exploitation. Please see attached pictures in Exhibit 6.2. With advancements in technology, communities no longer exist as isolated islands from the international community. DOE/NNSA must assess historical, current, and international consequences due to LANL activities in the reanalysis for a new draft LANL SWEIS.

The current global political climate surrounding nuclear weapons is teetering on the edge of disaster. Please listen to *Eve of Destruction.* Exhibit 6.1. The United States pursued a war in Iraq under false pretenses that weapons of mass destruction had fallen into the hands of a dictator. The invasion of Iraq has left that country in shambles.

North Korea has already announced its nuclear weapons capabilities. Meanwhile, many speculate that Iran is pursuing nuclear weapons capabilities. In the case of Iran, the United States is relentlessly curtailing international efforts towards negotiating a resolution that involves a perspective other than its own demands. This type of unilateral thinking is fueling a cultural wildfire in the Middle East and beyond. With a proposal to increase nuclear weapons production at LANL, the United States is compromising security nationally and internationally. With this consideration at hand, a prudent proposal is necessary. CCNS and EVEMG request that the draft LANL SWEIS address the implications of continued operations at LANL on peace and security in the Middle Eastern, and a particular focus on Iran.

CCNS and EVEMG find the proposal to increase nuclear weapons activities at LANL to be in total disregard of both domestic and international laws and the commitments that underlie those laws. Without enforcement from the United Nations (UN) through a thorough inspection from the International Atomic Energy Agency (IAEA) into United States nuclear strategic plans, both weapons and energy based, disarmament will never be realized. The Preferred Alternative under the draft LANL SWEIS proposes increased nuclear weapons activities, which undermines international cooperation, diplomacy and brings to the forefront the hypocritical foreign policy of the United States. CCNS and EVEMG request that the draft LANL SWEIS outline exactly how a proposal to increase plutonium pit production of the United States nuclear stockpile honors the United States commitment under the Nuclear Non-Proliferation Treaty (NPT) and aligns with international efforts for disarmament. Further, an inspection into the nuclear weapons programs of the United States is rightfully due at this point in time. DOE/NNSA must open LANL's doors for inspections by the IAEA.

A recent report, *Weapons of Terror*, created and published by former chief weapons inspector Hans Blix and a team of diverse experts states that, "over the past decade,

there has been a serious, and dangerous, loss of momentum and direction in disarmament and non-proliferation efforts." Blix Report, p. 17. [www.wmdcommission.org/files/**Weapons**_of_**Terror**.pdf. The draft LANL SWEIS supports this claim. The draft LANL SWEIS Preferred Alternative proposes increasing pit production from 20 pits per year to 80 pits per year. Furthermore, a Modern Pit Facility is referenced over 60 times in the document itself, leading many to believe that LANL is preparing to become the new production factory for nuclear weapons, with the capability of producing 450 pits per year. The justification given from the DOE for this sharp increase is to replace aging weapons stockpile and fulfill commitments under the life extension and stockpile stewardship programs. There are two distinct problems with this argument. The first is that many have argued that a pit can withstand the weight of time over many decades, and is not aging as rapidly as first thought. Moreover, a pit's destructive capability can increase over these lengths of time. Therefore, pit replacement is not only unnecessary, but also a thorough waste of taxpayer funds.

The second flaw in this argument, and perhaps more disturbing, is that replacing these supposed aged pits send a clear message to the rest of the world of a *do as I say, not as I do* foreign policy. This message will resonate to non-nuclear states and will provide justification for their pursuit of a nuclear weapons arsenal and encourage nuclear states to maintain their existing arsenals. Thus, the United States is paving the path for a new, more dangerous arms race that will include new enemies, new targets and a new array of players.

Weapons of Terror states, "so long as any state has such weapons – especially nuclear arms – others will want them. So long as any such weapons remain in any state's arsenal, there is a high risk that they will one day be used, by design or accident. Any such use would be catastrophic" Blix Report, p. 17. While the United States continues to condemn Iran for its proclamation of the pursuit of nuclear energy, the DOE is undertaking the fulfillment of its nuclear weapons agenda at various facilities scattered across the nation. At the heart of these activities is LANL.

The DRAFT LANL SWEIS' Cumulative Impacts Analysis Fails To Establish The Proper Baseline. As mentioned earlier, cumulative impacts are "the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. The draft LANL SWEIS, however, fails to properly take into account the impacts of LANL's own past actions by failing to establish the proper baseline and failing to conduct the requisite "trends analysis" – an assessment of the environmental impacts of its management decisions over an extended period of time – preferably from the earlier, pre-development days to the present. See also discussion of background radiation in the Environmental Justice portion of our comments above. Only by properly defining the baseline and engaging in this trends analysis can DOE/NNSA present the changes

that have occurred to the area's resources overtime. According to the CEQ, "trends in the abundance and distribution of habitats are one of the most important indicators of cumulative effects problems." CEQ Guideline at A-26.

The following are specific comments related to portions of the text in the draft LANL SWEIS.

p. 5-180. "Additional DOE or NNSA actions potentially impacting LANL include the possible siting of a modern pit facility at LANL. . . ." CCNS and EVEMG object to the many references made to a modern pit facility (MPF) capable of producing 450 plutonium pits per year. In 2003 when the draft EIS was issued for the MPF there was widespread public opposition by New Mexicans. Five sites were proposed for the MPF, including LANL. The funding for the MPF was later tabled by Congress, and the EIS was never finalized. It is unacceptable and misleading to refer to the impacts of this facility when the MPF EIS was never finalized. DOE/NNSA is violating NEPA by proposing a MPF at LANL in the draft LANL SWEIS. Furthermore, these activities have dire local, national and international implications. Increasing the plutonium pit production would exaggerate the repercussions addressed above. The draft LANL SWEIS omits a discussion of how an MPF or increased pit production would not violate the Nuclear Nonproliferation Treaty. DOE/NNSA must eliminate all references to a MPF at LANL in the reanalysis for a new draft SWEIS.

Rather than drastically expanding nuclear weapons production, Congress must change the mission of LANL to focus on life affirming research and development into renewable non-nuclear energy, such as solar, wind and biomass, and clean up technologies that support environmental and public health. DOE/NNSA must include an analysis of this transition as an additional Green Alternative in the cumulative impacts for a new draft LANL SWEIS. Such an analysis must include the international impacts that this transition would have. Please see Seeds of Change and Peace in Exhibit 6.2 and Exhibit 14.

p. 5-181. DOE/NNSA must include a description of the type of research that will be conducted at the BSL-3 in the reanalysis for a new draft LANL SWEIS. Experiments with biological agents potentially have huge repercussions in light of the current international political climate. Therefore, the reanalysis for a new draft LANL SWEIS, as well as the draft EIS for the BSL-3 must include the state, national and international impacts of its operation. Psychological impacts must be included in the health assessment of the draft EIS for the BSL-3

p. 5-181. What was the basis for the choice of building the BSL-3 out of stucco?

p. 5-181. "Air emissions would be passed through HEPA filters and would not affect the air quality of the region." CCNS and EVEMG do not share DOE/NNSA's confidence in the HEPA filters; and neither does the Defense Nuclear Facilities Safety

Board (DNFSB). A DNFSB Technical Report dated May 1999 (DNFSB/TECH-23), states, "today there is convincing evidence that [the] infrastructure [which supported production and quality assurance for the HEPA filter] is failing; this report describes significant degradation of the infrastructure supporting DOE's HEPA filter program." DOE/NNSA must provide justification for their confidence in the HEPA filters in the new draft LANL SWEIS.

p. 5-181. DOE/NNSA must list the contaminates, which are to be captured by the HEPA filter, as well as their respective regulatory limits and health impacts, which will be filtered through the HEPA filters. For context and clarity, this list must be presented in a text box on this page.

p. 5-181. "Liquid waste would be discharged to the LANL sanitary sewage system where it would be commingled and treated prior to discharge and would have minimal impact on local and regional water quality." As water quantity dwindles, water quality becomes increasingly significant. DOE/NNSA must not dismiss any risk to our drinking water supply as minimal. For context and clarity, DOE/NNSA must define "commingled" and "treated" in the new draft LANL SWEIS.

p. 5-182. "It is also necessary to consider activities implemented by other Federal, state and local agencies and individuals outside, but within the region of influence for LANL." The CEQ regulations quoted in the draft LANL SWEIS place no limit on the geographic area or person who undertakes the other actions. p. 5-180. Therefore, the cumulative impacts through out the entire state, nation and world must be assessed. See above comments.

p. 5-182. "The city of Santa Fe . . . ; the Santa Clara Pueblo and San Ildefonso Pueblos. . . were contacted regarding anticipated future activities that could contribute to cumulative impacts." Why were only the Santa Clara and San Ildefonso Pueblos contacted? DOE/NNSA must contact all impacted pueblos and tribes in a reanalysis for a new draft LANL SWEIS as required by law and regulations. Tribes who travel to use the Los Alamos area, such as the Hopi, must also be contacted.

Furthermore, DOE/NNSA must contact all sites whose activities are correlated or dependent upon LANL activities or with whom LANL will work. Along with those sites, DOE/NNSA must contact all communities and federal agencies which may have information regarding anticipated future activities which could contribute to cumulative impacts for those sites. See above comments regarding the CEQ regulations.

p. 5-182. "Rio Arriba and Santa Fe Counties, and the Santa Clara and San Ildefonso Pueblos did not provide information for the cumulative impact analysis." DOE/NNSA must work with these communities, taking the lead and the responsibility as the party

imposing potential harm, using every means possible, to obtain such information, for the reanalysis for the new LANL SWEIS.

p. 5-184. "The North Railroad Avenue groundwater contamination plume. . . would not contribute to cumulative impacts as LANL." CCNS and EVEMG disagree with the analysis of DOE/NNSA. The North Railroad Avenue groundwater contamination plume is moving towards the Rio Grande. It contains chlorinated solvents including "tetrachloroethene (PCE) and trichloroethene (TCE), cis1,2-dichloroethene (c-DCE) and trans-1,2-DCE (t-1,2-DCE)." North Railroad Avenue Plume Site Proposed Plan Fact Sheet, June 2001, EPA. What will happen when this contamination reaches the river and mixes with the LANL contaminants already there, such as PCBs, perchlorate, nitrates and tritium? The determination that the North Railroad Avenue groundwater contamination plume does not contribute to cumulative impacts at LANL is ignoring the future migration of these contaminants. DOE/NNSA must include an analysis of the impacts of this inevitable mixing in a reassessment for a new draft LANL SWEIS.

p. 5-186. "Some resources were not provided with a detailed analysis based on . . . a judgment that cumulatively there would be no appreciable impacts to these recourses." DOE/NNSA must define the terms "judgment" and "appreciable" as they are not listed in Chapter 8.

In the absence of a definition of "judgment" provided by DOE/NNSA, CCNS and EVEMG suggest that the Ancient philosopher Aristotle's concept of judgment be used. In The Rhetoric, Aristotle discusses judgment and states, "But since rhetoric is concerned with making a judgment [hepei d'heneka kriseos estin he retorike] (people judge what is said in deliberation, and judicial proceedings are also a judgment), it is necessary not only to look to the argument [ton logon], that it be demonstrative and persuasive [apodeiktikos kai pistos] but also for the speaker to construct a view of himself as a certain kind of person and to prepare the judge." Line 1377b20-24. Based on Aristotle's understanding of the term, CCNS and EVEMG are not confident in DOE/NNSA's ability to judge the "appreciable impacts to these resources." The quality of analysis in the rest of the draft LANL SWEIS has been too poor, inadequate and incomplete as to make DOE/NNSA appear to be of such a kind as to be able to judge. DOE/NNSA must include a table or list of all areas for which a judgment was made that there would be no cumulative impact in the reanalysis for a new draft LANL SWEIS and the reasoning behind that "judgment".

p. 5-186. "Up to 826 acres (334 hectares) of this land could be developed after transfer with the potential introduction of incompatible land uses and the loss of recreational opportunities." What do the phrases "incompatible land use" and "loss of recreational opportunities" mean? DOE/NNSA must restate this sentence in such a way as the meaning can be easily understood by members of the public in a reanalysis for a new draft LANL SWEIS.

CCNS and EVEMG object to the phrasing "if the waste at the MDAs is confined in place" as a description of the MDA capping option. Contamination is not confined in place in this option, simply covered. Runoff from storm and melting snow events, heavy winds, change in land use and forest fires could easily move and remobilize this contamination. DOE/NNSA must use phrasing which more accurately describes the MDA capping option in a reanalysis for the new draft LANL SWEIS. See CCNS and EVEMG comments regarding water. See also attached comments by George Rice regarding MDA cleanup. Exhibit 5 Additionally, DOE/NNNSA must pursue clean up technology with the same drive and intention as developing the atomic weapon in order to make it a viable alternative.

p. 5-187 – 5-191. Water: Please see CCNS and EVEMG comments regarding Water.

p. 5-191 – 5-193. Air Quality: Please see CCNS and EVEMG comments regarding Air.

p. 5-193. Human Health: CCNS and EVEMG object to DOE/NNSA limiting their analysis to cancer deaths. DOE/NNSA must assess all health impacts of not only radiation exposure but also those resulting from exposure to the other toxic and hazardous contaminates generated by LANL activities.

Please see Exhibit 17.2 "New Mexico's Right to Know: the Impacts of LANL Operations on Public Health and the Environment." Full report is available at www.nuclearactive.org. CCNS and EVEMG submit this report as a part of our formal comments.

"There would be no increase expected in the number of LCFs among the general public even if a modern pit facility operations were located at LANL." All references to the modern pit facility must be removed from the reanalysis for a new draft LANL SWEIS. Furthermore, the phrase "latent cancer fatality" and especially the acronym LCF mislead the public by disguising the significance of the topic. DOE/NNSA must use terminology which is easily understood by the general public.

If DOE/NNSA determines that they will retain references and analysis of a modern pit facility at LANL in the new draft LANL SWEIS, then they must explain how there could be no increase of impacts from such a drastic increase of pit production, emissions, discharges and waste generation as would be caused by the operation of a modern pit facility. Furthermore, DOE/NNSA must explain how the future use of one of the bombs built with a pit produced at the modern pit facility would have no increase in human health impacts. If DOE/NNSA does not consider the use of one of these bombs as a foreseeable future activity, then there is no justification for operating the facility. DOE/NNSA must include the life-cycle and international human health impacts of increasing nuclear weapons manufacturing.

DOE/NNSA must use more accessible terms than LCF and MEI to describe the impacts to individuals whose health has been harmed by the resumption of nuclear weapons manufacturing.

p. 5-194. Infrastructure: The cumulative impacts of infrastructure changes must assess not only the usage requirements for water, electricity and natural gas, but also the impact of the use. DOE/NNSA must include a life-cycle assessment for the use of these resources, in the reanalysis for a new draft LANL SWEIS.

p. 5-195. Infrastructure: The cumulative impact of infrastructure changes is not capacity constraints, but rather the socio-economic, environmental and human health impacts of using the resources. DOE/NNSA must include a life-cycle assessment of the emissions and discharges generated by obtaining the materials and generating the electricity in the reanalysis for a new draft LANL SWEIS.

"Without the San Juan-Chama water, demand could exceeded the available water supply in the future." There is no plan to mitigate the effects of reduced flows through the San Juan/Chama diversion. Is it reasonable to assume an increase in pit production and an increase in contaminated discharge through the canyon system to the Rio Grande when the availability of San Juan/Chama water in the suggested quantities may be in doubt?

Two questions are raised by San Juan/Chama water discussion. One concerns the models used to predict water resources available below the Pajarito Plateau. These models use parameters that the modelers frankly call "uncertain." Please see Exhibits 1-4.

Second, the basic assumption that San Juan/Chama water will flow through the Rio Grande in the amounts predicted since the 1960s has not been proven given the scale and number of upstream demands on that water. If San Juan/Chama water is not available in the quantities predicted, what is the plan? This is particularly important question because LANL has the intention of discharging 60% more water to the river through a number of canyon systems, many of which contain contaminants. If the solution to pollution is dilution, how does LANL expect to deal with a situation in which they increase the contaminated discharge even if there is no increased volume in the river?

Until the uncertainties are dealt with in a realistic manner, the Final LANL SWEIS must be delayed. Water is the lifeblood without which neither LANL nor surrounding communities can expect to continue and prosper.

p. 5-195. Waste Management: The Waste Management assessment focuses only on the practicality of storing the proposed waste, but not the social, environmental and health impacts of such disposal. DOE/NNSA omit addressing the pertinent question with this analysis. The issue is what the impacts of the proposal will be, not what is possible.

DOE/NNSA must address the impacts of their proposal for waste management in a reanalysis for the new draft LANL SWEIS. Please see more Waste discussion near the end of these comments.

DOE/NNSA must not lump the waste from cleanup in with the newly generated waste. Waste from remediation and DD&D of facilities is waste which is already in existence and must be dealt with. Waste from future activities is waste which is being generated. DOE/NNSA omits analysis and consideration of the waste from the remediation of future activities, this waste would be rightfully considered generated. Remediation and DD&D of facilities is necessary for protection of the environment and public health. Planned future activities generate unnecessary waste in the service of weapons of mass destruction. DOE/NNSA must not conflate the two in reanalysis for the new draft LANL SWEIS.

p. 5-196. Table 5-79. Estimated Cumulative Waste Generation at LANL (2007 to 2016). See comments by Don Hancock regarding Transuranic Waste.

The sentence "therefore, Table 5-79 overestimates cumulative waste generation associated with pit production," is misleading. If a modern pit facility is a "reasonably foreseeable future action," then the table is an accurate estimation of foreseeable future actions, because LANL would have the capability to both produce the current 80 pits per year in addition to the 450 pits per year in the modern pit facility. If DOE/NNSA does not intend to utilize the full capability they are proposing to establish at LANL, they must be straightforward about their intentions to build redundant facilities.

"Increases in the cumulative waste generation rate may require the construction of additional facilities and assignment of additional staff to manage the wastes . . . Substantial quantities of low-level radioactive wastes and solid wastes (primarily the debris from excavation, construction and demolition activities) are projected." These statements are misleading and make it appear as though the limitations to storage space are not a serious concern. The Summary to the draft LANL SWEIS, however, states in Expanded Operations Alternative, with the MDA removal option and the operation of a modern pit facility were to be undertaken, "the projected low-level radioactive waste volume (1.5 million cubic yards [1.1 million cubic meters]) would exceed the onsite disposal capacity, and the transuranic waste volume (48,000 cubic yards [37,000 cubic meters]) would significantly exceed the volume (27,500 cubic yards [21,000 cubic meters]) attributed to LANL in the *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement.*" S-71. Which makes it a matter of great contention, because there is not enough storage space available for the low-level radioactive and transuranic waste at LANL.

The cited sentence above is purposefully misleading because it does not even mention the issues related to transuranic waste disposal.

DOE/NNSA must not go forward with any activities until the issue of waste disposal has been determined. CCNS and EVEMG believe that it is common sense to apply a preventative principle such as this before expending taxpayer dollars on facilities that will continue to generate waste that does not have a disposal path.

"Most wastes, with the exception of some low-level radioactive waste, are disposed offsite at permitted facilities." DOE/NNSA must define the term "some." Furthermore, waste remains on site until it has been shipped for permanent disposal. DOE/NNSA must address the time it has taken to ship the "Quick to WIPP" high activity waste drums before making the above statement. DOE/NNSA must explain the reason for the delays, including the EPA shutdown of activities. Furthermore, the socioeconomic, environmental, health and psychological impacts of the offsite disposal options must be assessed as part of the cumulative impacts of LANL activities.

"The expansion of Area G into Zone 4 is expected. . . " DOE/NNSA must fully and completely address the environmental impacts of continuing to bury low-level radioactive waste in unlined, pits, shafts and trenches. Such an analysis cannot be done until the area G performance assessment has been completed. See CCNS and EVEMG comment regarding the Area G performance assessment. Please note that the State of New Mexico has recognized the need to protect surface and ground water. All municipalities in the State of New Mexico are required to install liners in all new waste facilities. Please explain why DOE/NNSA omits such a requirement in the draft LANL SWEIS.

"In addition, offsite disposal options. . . NNSA's Nevada Test Site…" The socioeconomic, environmental, health and psychological impacts of the Nevada Test Site must be assessed as part of the cumulative impacts of LANL activities.

p. 5-197. The socioeconomic, environmental, health and psychological impacts of disposal of transuranic waste at WIPP must be considered as a part of the cumulative impacts of LANL operations. DOE/NNSA must address the violation of environmental Justice in using a sacred salt site to dispose of waste from the production of weapons of mass destruction.

"Off site treatment options are available at commercial facilities across the country, including treatment facilities and disposal facilities in Nevada, Colorado, Utah and Texas." DOE/NNSA must analyze the socioeconomic, environmental, health and psychological impacts of the offsite treatment and disposal options, as part of the cumulative impacts of LANL activities.

"…appropriately permitted solid waste landfill…." DOE/NNSA must analyze the socioeconomic, environmental, health and psychological impacts of the solid waste landfill, as part of the cumulative impacts of LANL activities.

". . .the Rio Rancho, Sandoval County, Torrance/Bernalillo County Landfills." DOE/NNSA must analyze the socioeconomic, environmental, health and psychological impacts of the solid waste landfill, as part of the cumulative impacts of LANL activities.

p. 5-197. Transportation: "The collective dose, cumulative health effects and traffic features from approximately 100 years of radioactive material and waste transportation across the United States are estimated in Table 5-80." What transportation of radioactive materials occurred 100 years ago? Does DOE/NNSA have data regarding the possible use of a Model A to transport radioactive materials to Madame Curie? It is disgraceful the scientists would expand the data in this way in order to simplify calculations about the environmental and health impacts of transportation of radioactive materials. DOE/NNSA must reanalysis the cumulative impacts of transportation based on actual data in a new draft LANL SWEIS.

p. 5-198. "For perspective, in 2004 there were 522 traffic fatalities in New Mexico and 58 in the three neighboring counties (Los Alamos, Rio Arriba, and Santa Fe)." Please describe what actions DOE/NNSA are taking to reduce the potential for a traffic accident involving their radioactive, hazardous and toxic materials. Please see attached articles and cartoons regarding traffic accidents in New Mexico.

p. 5-199. The draft LANL SWEIS refers to "a modern pit facility." The collective voice from Northern New Mexico: "No MPF! Nowhere! No way!" Please see Exhibit 6.2.

Local Transportation: DOE/NNSA must analyze the CO2 emissions from such a traffic increase. Furthermore, DOE/NNSA must assess the Environmental Justice implications of the health impacts due to such an increase.

p. 5-200. "Some resources were not provided with a detailed analysis based on . . . a judgment that cumulatively there would be no appreciable impacts to these recourses." See above comment regarding "judgment." Please include the basis and decision making process for making this "judgment."

"The following paragraphs summarize the impacts for LANL and the surrounding region of influence." The CEQ regulations quoted in draft LANL SWEIS place no limit on the geographic area or person who undertakes the other actions. p. 5-180. Therefore, the cumulative impacts through out the entire state, nation and world must be assessed. See above comments.

"… and locate a facility producing 450 pits annually at LANL." Again, the collective voice of Northern New Mexico says, "No MPF! Nowhere! No Way!" Please see Exhibit 6.2.9.

CONCLUSION

DOE/NNSA consistently uses misleading information, incomplete and technically indefensible data and information as a basis for analysis in the draft LANL SWEIS. It relies on documents which have not been finalized to make formal conclusions in the draft LANL SWEIS. Furthermore, DOE/NNSA has not followed proper procedural rules under the National Environmental Policy Act (NEPA) for the release of the draft LANL SWEIS for public comment. The public has not been afforded adequate time nor provided a genuine opportunity to fully review the draft LANL SWEIS, the referenced documents and the Data Call. Nor have the citizens in Albuquerque been provided with a hearing on the draft LANL SWEIS as requested by many elected officials, newspapers and non-governmental organizations. Therefore, the public has not responded to the draft LANL SWEIS as fully as we may have if we were given adequate time and opportunity to do so.

These patterns of behavior by DOE/NNSA endanger public health and wellbeing and further threaten an increasingly dangerous environmental burden. As demonstrated in our comments, DOE/NNSA has acted in an arbitrary and capricious manner with regard to preparing the draft LANL SWEIS. Therefore, CCNS and EVEMG demand that the current draft LANL SWEIS be withdrawn. Pending the finalization of the necessary reports used as a foundation for this document, accurate information and data collection and a subsequent reanalysis, DOE/NNSA must release a new draft LANL SWEIS for public review and comment under NEPA.

Thank you for your careful consideration of our comments. We submit them with the intent that they will be helpful, informative and useful during the reanalysis for the new draft LANL SWEIS. In the alternative, our comments must be incorporated into the final LANL SWEIS. We look forward to your response to both these written comments and the mixed CDs. Should you have any questions or comments, please contact us either by email or phone.

Sincerely,

Joni Arends
Executive Director
Concerned Citizens for Nuclear Safety
jarends@nuclearactive.org

Kalliroi Matsakis
Media Network Coordinator
Concerned Citizens for Nuclear Safety
kmatsakis@nuclearactive.org

Sadaf Cameron
Public Education and Outreach Director
Concerned Citizens for Nuclear Safety
scameron@nuclearactive.org

John Hoffmann
Intern
Concerned Citizens for Nuclear Safety
intern@nuclearactive.org

Sheri Kotowski
Embudo Valley Environmental Monitoring Group
serit@cybermesa.com

Exhibits
In support of CCNS and EVEMG
comments regarding
the draft LANL SWEIS

Exhibit 1: Gilkeson, Bob. "The Complex Geologic Setting Beneath LANL Requires the Use of Drilling Methods that Mask Detection of Most Radionuclide and Chemical Contaminants in Groundwater."

Exhibit 2: Gilkeson, Bob. "Deficiencies in the Draft LANL SWEIS for the Water Quality Data Produced From the LANL Monitoring Wells."

Exhibit 3: Gilkeson, Bob. "Failure of Draft LANL SWEIS to Address the Environmental Impact From the Hexavalent Chromium Plume in the Regional Aquifer."

Exhibit 4: Gilkeson, Bob. "Failure of the Draft LANL SWEIS to Address Environmental Impact Because of Groundwater Contamination From the RCRA Regulated Disposal Sites at Technical Area 54."

Exhibit 5: George Rice, Remediation of MDAs

Exhibit 6: Multi Media Compact Discs

6.1 *Where do the Children Play?*

6.2 CCNS and EVEMG Comment Images and source list

Exhibit 7: Email, Elizabeth Withers to Joni Arends, September 19, 2006

Exhibit 8: Census Articles

8.1 Cotreras, Russell. "N.M. 40th in Nation in High School Grads." *Albuquerque Journal* July 3, 2004.

8.2 Garcia, Patricia. "State's Social Health Poor, Study Says." *Albuquerque Journal* November 19, 2003.

8.3 Burford, Katie. "More Live in Poverty, Group Says." *Albuquerque Journal* July 9, 2003.

8.4 Armas, Genaro. "Thousands of Minority Kids Missed in Census." *Albuquerque Journal* December 7, 2002.

8.5 Armas, Genaro. "N.M Tops U.S. For Poverty in 2001." *Albuquerque Journal* September 25, 2002.

8.6 Dickinson, Joy. "N.M. Ranks 50th in Child Poverty Report." *Albuquerque Journal* May 24, 2002.

8.7 Propp, Wren. "Los Alamos Leads State In Median Income Level." *Albuquerque Journal* January 15, 2002.

8.8 Massey, Barry. "Report: N.M. Still Among Nation's Worst for Poverty," Associated Press, "Poverty Rate up for 4th Strait Year," *The New Mexican* August 8, 2005.

8.9 Armas, Genaro. "White Counties Found Big Income Gains." *The New Mexican* June 28, 2002.

8.10 Tollefson, Jeff. "Senator: Income Numbers Skew Aid Eligibility." *The New Mexican* March 15, 2002.

Exhibit 9: Environmental Justice

9.1 Associated Press. "Lawsuit accused LANL of discrimination against women, Hispanics." *The New Mexican* August 8, 2006

9.2 CCNS comments regarding the draft EIS for the National Enrichment Facility, January 7, 2005

9.3 Smith, Brice. "Soil Cleanup at Los Alamos National Laboratory." *Science For Democratic Action* April 2006.

9.4 State of New Mexico Environment Department Office of the Secretary. "Additional Fish Consumption Advisories Announced." January 2, 2006

9.5 State of New Mexico Office of the Governor. "Executive Order 2005-056 Environmental Justice Executive Order." November 18, 2005.

Exhibit 10: Santa Fe City Council

10.1 Journal Staff Reports. "SF Against LANL Plutonium Work." *Albuquerque Journal* August 29, 2006.

10.2 City of Santa Fe, New Mexico. "A Resolution Objecting to Proposed Expanded Nuclear Weapons Activities, Including Plutonium Pit Production [sic], at The Los

Alamos National Laboratory and Directing the City Clerk to Inform Federal Authorities of the Objections."

Exhibit 11: Receipts

11.1 CCNS and EVEMG draft LANL SWEIS Comments, 2006

11.2 Letters Regarding the Draft LANL SWEIS, 2006

11.3 Letters Opposing Construction and Operation of a Modern Pit Facility, 2003

Exhibit 12: Mission

12.1 NM SEES. "New Security, New Mission, New Mexico."

12.2 *Don't Let New Mexico Go to the Pits* Placard.

12.3 Hill, Judyth. "Wage Peace."

12.4 Political Cartoon, "One of the Lesser Known Elvis Movies."

12.5 Glasgow. "Join the Fun?" *Albuquerque Journal* 1997.

Exhibit 13: Maps

13.1 Map Showing Proximity of Los Alamos National Laboratory and Sandia National Laboratories.

13.2 Areas of the Continental United States Crossed by More Than One Nuclear Cloud from Aboveground Detonations.

Exhibit 14: International

14.1 Burroughs, John and Makhijani, Arjun. "Undermining Nuclear Security Agreements."

Exhibit 15: Cerro Grande Fire

15.1 Question Sheet: Cerro Grande Fire

15.2 Russ, Abel. "Comments on the 2002 Risk Assessment Corporation analysis of risks from the 2000 Cerro Grande fire at Los Alamos National Laboratory."

Exhibit 16: Water

16.1 Bearzi, James P. "Notice of Violation Los Alamos National Laboratory (LANL), EPA ID NM0890010515."

16.2 LANL WW Shared Values Statement

Exhibit 17: Health

17. 1 Letter, EPA, Re: Public Comment Release- Public Health Assessment of LANL, July 27, 2005

17.2 Bernd Franke, Catherine M. Richards, M.S., Steve Wing, Ph.D., David Richardson Ph.D., and Concerned Citizens for Nuclear Safety. "New Mexico's Right to Know: The Impacts of LANL Operations on Public Health and Environment."

Attachment 1: Figures for Exhibits 1-4