Comment Response Document
for the Preapproval Draft
Environmental Assessment
Atlas Relocation and Operation
at the Nevada Test Site
DOE/EA--1381 DRAFT, February 2001

The following is a response to comments received from Vernon Brechin in a letter dated March 26, 2001, on the Preapproval Draft Atlas Relocation and Operations at the NTS Environmental Assessment (EA), dated February 2001. Several clarifications were added to the Final Draft EA as a result of these comments.

Comment: The final approved EA should contain an updated version of the NTS map which appeared on page 5. Major administrative boundary alterations likely occurred on 5 October 1999, when President Clinton signed Public Law No: 106-65 into existence. That act involved the administrative transfer of approximately 127,620 acres of Pahute Mesa to the DOE and terminated DOE's administrative control over approximately 38,400 acres of lands in the Groom Lake region. That boundary alteration added approximately 89,220 acres to the withdrawn lands designated as the NTS. Such a late map error is difficult to understand given the fact that the Nevada Operation Office publicly announced the Pahute boundary change in a 15 December 1999 press release. This PR was moot on the Groom Lake changes and was never posted on the DOE/NV public web site. Since then DOE/NV has published the updated NTS map in several publications including the "Nevada Test Site Resource Management Plan" (DOE/NV-604) issued in January of 2000, and the "Report to Congress: Long-Term Stewardship" which was delivered to Congress in late January 2001, three and one-half months after its due date. The preparers of this draft EA were clearly aware of the NTS Resource Management Plan document since it was cited and appears in the References section under "DOE 2000a." If the final EA contains the map that now appears on page 5, then the DOE/NV should explain the reasoning behind using the old map and it should candidly explain why the Groom Lake region is not included on that NTS map.

Response: The NTS figure on page 5 of the Draft has been replaced with the version depicting the revised site boundary.

Comment: 2-6 "The Atlas facility, classified as a low hazard, non-nuclear facility, provides significantly enhanced capability to the stockpile stewardship program..."

This is the position that also appears throughout DOE's "Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management (DOE/EIS-0236), September 1996 (1996 SSM PEIS), which justified the Atlas construction along with a host of other, similar projects. The significance and unique need for the Atlas and similar hydrodynamic facilities has recently been shown to be way overstated. Two financial audits were recently issued by DOE's Office of the Inspector General, "The Need for the Atlas Pulsed Power Experimental Facility" (Report No.: DOE/IG-0495),

February 2001, and "Utilization of the Big Explosives Experimental Facility" (BEEF) (Report No.: WR-B-01-03), March 2001, which indicates the operation of the two facilities was not nearly as important as was their construction. In the case of the Atlas facility the DOE failed to give priority to funding its operation so it has achieved little except to prove the basic machine design works. Apparently, project management requirements were violated such as Department Order 430.1A, "Life Cycle Asset Management," and Department Guide GPG-FM-002, "Critical Decision Criteria." As a result the new machine may be put into a cold-standby status. Though operational funds are missing the funds to further tinker with the machine are not. Twelve million dollars has been made available to relocate this massive new machine that has yet to prove its worth. As a result some move proponents claim that operational funding will not be needed until FY 2003.

In the Atlas IG report is the statement that "[E]xception was also taken to the statement that not operating Atlas might impact the confidence level of the stockpile. Management stated this would not of itself, justify the operation of the facility." DOE management's statement clearly conflicts with the justifications, presented in the 1996 SSM PEIS that led to the construction of the Atlas facility.

The huge machine was built at Los Alamos National Laboratory (LANL) utilizing a large suite of existing surplus facilities. This draft EA involves a proposal to move the machine to the Nevada Test Site (NTS). It provides few details concerning the disassembly processes, the transport processes or the reassembly processes. It appears that the relocation also involves major modifications to the existing design such as the replacement of the capacitor banks. The proposal also involves building new dedicated buildings to house the machine and for support facilities. After reassembly, the machine will need to readjusted, tested and then recertified, before dipping into the operational funding that the move proponents assume will be forthcoming.

Response: The IG Audit Report DOE/IG-0495, dated February 2001, recognizes "the Department now faces budgetary problems for which there are no easy solutions" and goes on to state that with respect to all DOE facilities "unless the Department assigns a high enough priority to assure it can operate any facility once it is constructed, it should not proceed with construction. Likewise, unless the Department can be assured that it will have funds needed to operate a facility once it is moved, it should not be moved." Operations funding for Atlas was provided in FY01 and preparation for the first experiments is in progress. The DOE/IG report (pg 6) acknowledges that documentation (submitted after the Draft report was prepared) reflects the Departments intention to fund future operation of Atlas. Operational funding requirements thru FY05 were identified in the "Plan for Atlas Relocation and Operation at the NTS," dated 10/27/00. FY02 Operations funding for Atlas has been requested.

No significant modifications to the current design of Atlas are anticipated. The current design has passed the construction project acceptance testing (15 Dec 2000).

Comment: The final EA should provide candid details as what advantages are expected to be gained through the operation of this machine at this remote site, initially chosen for the conduction of atmospheric nuclear explosion tests. At LANL the facility personnel need commute only several miles to Los Alamos Townsite. At the NTS the commute would typically be about 160 miles each day. That makes little sense for a federal agency that preaches energy efficiency to the general public.

Response: Advantages are identified on page 2 and 3 of the Preliminary Draft EA. Relocation of Atlas to the NTS would result in the efficient use of NTS technical resources.

Comment: The conclusions in the DOE's IG report, dealing with the Atlas facility management, indicates that that focus and efficient implementation has failed in this instance. If the Atlas facility is to be replanted in this desolate Nevada location to serve as a training tool, then the EA should make that crystal clear. If that is the primary purpose of the proposed move, then perhaps more consideration should be given to the cost effectiveness of leaving the Atlas facility at LANL and transporting, or relocating, those who need to learn from such a large and complex facility.

Response: The primary mission of Atlas is to provide data on dynamic material properties and on behavior of complex hydrodynamic systems to the Stockpile Stewardship Program. Atlas, located at the NTS, provides an opportunity for engaging the faculty and students of the UCCSN in research in high energy density hydrodynamics and material properties, however, training is not the principle mission of Atlas.

Comment: The final EA should clarify the material contained at 2-43 and 3-5. The use of the term "load leveling" should be explained in more depth and it should appear in the Glossary.

Response: Clarification added to the EA with no revision to the Glossary. BN, in supporting the Laboratory subcritical experiment activities and other activities at the NTS, has increased staffing in technically skilled personnel (e.g., diagnostics development, fielding, data acquisition, technical management) and in other areas (e.g. assets control, instrumentation) as well. Because of the extended and complex nature of the subcritical experiment schedule, the program does not require nor can it employ all these resources on a full-time basis. The Atlas experimental schedule is highly flexible and can adjust to use the skills of technically skilled professionals during times while they await subcritical experiment critical path items. Similarly the Atlas experimental schedule will be structured to avoid operations during times when demands of the subcritical program are high and personnel nominally assigned to Atlas can assist in a short response time should a time-critical need arise in subcritical experiment activities (e.g. surge capacity).

Comment: The final EA should describe alternative machines and facilities such as Pegasus II, Jupiter and the highly successful Saturn facility at Sandia National Laboratory (SNL). Other facilities should also be mentioned such as Procyon, the Advanced

Hydrotest Facility (AHF), the Advanced Radiation Source (ARS) [X-1]), and the High Explosive Pulsed Power Facility (HEPPF). Perhaps some of these, as described in the 1996 SSM PEIS, were part of DOE's wish-list. Pulsed-power experimental facilities also exist at institution such as universities. Through the funding of the DOE's nuclear weapons division the University of Nevada at Reno has gotten into the act through its use of the former LANL ZEBRA Z-pinch machine at the Nevada Terawatt Facility. Soon the UNLV campus will have its own pulsed-power facility.

Response: The programmatic need for Atlas has been established. No other machine or facility provides the electrical performance of Atlas. Additional discussion of other facilities is outside the scope of the assessment.

(For information) Pegasus the predecessor of Atlas was decommissioned in Sept 1999 after a highly successful experimental program. Plans for Jupiter, X-1and the HEPPF have been deferred indefinitely. Atlas is a hydrodynamics facility, Saturn and the Z Machine at Sandia and the former ZEBRA facility at UNR are radiation sources which serve an important – but quite different role in the SSP. AHF is a radiographic facility which also serves a very different purpose in the SSP. Procyon in a single-use high explosive pulse power facility whose principle purpose is for single shot (remote) experiments.

Comment: The final Environmental Assessment (EA) should provide a greater depth of coverage concerning the suggested collaboration between DOE's nuclear weapons research scientist and students and faculty at regional universities.

Response: Additional information regarding university participation has been added.

Comment: 4-6 Remove the word "continue" since according the IG Report No.: DOE/IG-0495, the Atlas facility has not yet received operational funding. Adding an additional alternative of moving Atlas to a cold standby status at LANL would be appropriate since the IG's findings indicated that machine operation had become a low priority issue.

Response: Operations funding for Atlas was provided in FY01. Operations funding requirements thru FY05 were identified in the "Plan for Atlas Relocation and Operation at the NTS," dated 10/27/00. FY02 Operations funding for Atlas has been requested. Use of the word "continue" is appropriate.

Comment: 4-20 The majority would be unlikely to be engineers and scientist if one considers all the tech, security and custodial support staff that would serve this and other facilities at the NTS.

Response: Comment noted. Clarified by editing, "The majority of the ~15-person Atlas operations crew are expected to be engineers and scientists…." The statement does not refer to the NTS population.

Comment: 4-40 The fabric structure suggestion indicates that the new facility planning remains tenuous. Such structures are not known for their heating and cooling energy efficiency. Such efficiency should be a major factor in DOE's planning since it is supposed to serve as an example for the rest of the nation.

Response: The fabric structure is identified in the EA as temporary and will aid in the staging and reassembly process. This approach protects the equipment during staging and reassembly. It is overall cost effective because energy inefficiencies (if they exist) are more than outweighed by the cost saving compared to a conventional building

Comment: The Bechtel Nevada drawing on page 6 should provide further detail that shows how the rectangular drawing on page 7 fits into the shaded circular area.

Response: The figure on page 6 is intended to identify the potential area for locating the facility and was not intended to define the facility boundary.

Comment: 8-7 The final EA should explain the term "uncolored" and this term should also appear in the Glossary.

Response: The term "uncolored" was a typing error. The term "uncolored" has been replaced with "uncleared."

Comment: 8-33 The expected lifetime, provided in the 1996 SSM PEIS which justified the construction, was 20 years. The final EA should explain the justifications behind reducing the expected lifetime by half. Were the appropriate congressional appropriation subcommittees made aware of this change?

Response: SSM PEIS identified a useful life 20 years. The engineering lifetime of the system in 1000 shots. At the maximum shot rate of 100 shots per year the engineering life time would be reached in about 10 years. At an average rate of 50 shots per year the useful lifetime would be reached in 20 years. There is no change in expected lifetime. The EA assumed 100 shots per year in the impact analysis.

Comment: 8-36 The final EA should explain the word "excessed" and this word should appear in the Glossary. If it serves as a substitute for the word "scraped" then say so.

Response: Clarification added to the EA with no change made to the Glossary. The term "excessed" refers to a process to disposition government property that implies the possible reuse of components, subsystems or whole systems first within the government and then by state and local government entities, educational institution and the private sector. "Scrapped" implies disposal of items for used material value and cannot be substituted for the term excessed.

Comment: 9-19 After the word converter add "(DC power supply)".

Response: Comment noted. Text added.

Comment: 9-21 A 24 MJ charge means that 80%-90% of the stored energy is lost before the imploding liner strikes the target.

Response: Comment noted. No change required to text. The stored energy to kinetic energy efficiency is important only if: a) the cost of the non-converted energy is high, b) the residual (unconverted) energy causes damage or wear and tear on the system or c) the cost of the system in inflated because of the need to store additional energy. One megajoule of electrical energy costs about 3 cents (at 10c/Kw-hr). Thus the cost of unconverted energy might be $0.60 - $0.70 per shot. Handling residual energy in regular or fault operation is, however, and important consideration. Atlas was designed in an overdamped mode, that is a significant amount of additional resistance is introduced in the circuit specifically to absorb energy and make the machine relatively fault-tolerant. The success of the design has been demonstrated both in engineering simulations and in tests. Early in the design, a trade-off between the cost of additional energy storage and the cost of fault-mode damage was performed and the overdamped design was chosen.

Comment: 9-23 In the 1996 SSM PEIS the discharge voltage was given as less than one million volts.

Response: Comment noted. No change required to text. 1/4 MV is less than 1 MV.

When the PEIS was drafted, Atlas preliminary design called for a dual operating mode: a high voltage mode using a 480 KV Marx configuration and an opening switch for radiation source applications and a lower voltage, higher current mode for liner hydrodynamics. At about the same time the Sandia "Z" machine demonstrated substantial success as a radiation source and the Atlas design was optimized to perform the liner-hydrodynamics mission, eliminating the complexity of dual functioning, and the need for a high performance opening switch. A 240KV Marx is the optimized design. Technically, of course, the 240KV design is less than 1MV and is consistent with the information in the PEIS, and more responsive to the needs of the SSP.

Comment: 10-1 In the final EA, explain why the term "characteristic" is used. Is the proposed move to the NTS a way of leaving the door open for the future use of a plutonium isotopes in the machine?

Response: The term "characteristic" has been deleted. The material list on page 10 represents the material proposed for use in Atlas operations.

Comment: 10-24 The final EA should provide more detail concerning the waste quantities expected in terms of mass and volume that will need to be disposed. Would depleted uranium debris be treated as mixed waste due to its toxic and radioactive hazard? If not, describe why it should not be treated as such.

Response: Waste type and estimated quantities, based on target mass and solvent use, are identified in 4.1.13 and compared to overall operation at the NTS, LANL, SNL and

Livermore Site 300 in Table of Section 2.2. DU alone (without RCRA component) would be considered LLW. DU plus a RCRA component (such as a solvent) would be a mixed waste. The potential waste types that could be generated by Atlas operations are identified in the EA.

Comment: The term "routine maintenance" should be further described. Explain the disassembly and replacement procedures that need to be followed after each shot.

Response: A further definition of routine maintenance is not relevant to the assessment. As stated in the EA, the most common routine maintenance for the machine is the replacement of worn plastic insulation. Like other electrical systems, most maintenance activities are focused on inspection rather than on replacement or adjustment. Each MU will be removed and inspected on a regular rotation. Rail switches are cleaned at the same time (approximately once per year at nominal shot rates). Replacement of an energy storage capacitor is rare, with similar pulse power systems experiencing the need to replace less than one capacitor per year.

Comment: 10-43 "The purpose and need of the NNSA in this instance is, as stated in section 1.2, to enhance the NTS scientific and engineering capabilities and establish a capability for large-volume hydrodynamic experiments at the NTS."

This statement again indicates that the nuke safety and reliability justifications, contained in the 1996 SSM PEIS, are only secondary to management's present desire to maintain the infrastructure of the remote Nevada Test Site. This EA involves the geographic relocation of an existing facility, who's need is now in doubt at its place of construction. This proposed facility relocation was not addressed in the 1996 SSM PEIS and as a result this study should be upgraded to a NEPA EIS level.

Response: The mission of Atlas is to provide experimental data to validate models in computer codes used to certify the stockpile, and to provide experimental data to support the development of new and improved models. The previously quoted DOE/IG report states that, Atlas "…was designed to meet a vital role in the Departments Stockpile Stewardship Program." The system has met its design specification (on time and on budget). The "need" for Atlas has not been questioned. Budget constrains within SSP have impacted, not only Atlas, but many other activities aimed at providing basic data and data to validate codes across the SSP. The relocation of the Atlas machine does not represent a change in the Stockpile Stewardship program but rather a relocation of an asset within the Stockpile Stewardship complex. The analysis contained within the EA identifies no significant increase or change of impact on the health and safety of workers, the public or the environment and hence upgrading of the analysis is not justified.

Comment: 11-4 The final EA should mention that DOE has dispersed Stockpile Stewardship activities to many additional places including to universities throughout our country. The University of Rochester's Omega laser operates on funding associated with LLNL's National Ignition Facility (NIF) project. Stanford, and many other universities,

have computer development programs that are funded via DOE's Stockpile Stewardship program.

Response: This information is beyond the scope of the assessment.

Comment: Page 11, Table 1.
The NTS acreage shown is not consistent with the old map shown on page 5. The note associated with SNL should indicate if this includes the Livermore, California site. Was consideration given to siting the Atlas Facility at places such as the LLNL Main Site or at the spacious SNL site in Livermore?

Response: The figure on page 5 has been replaced. Further consideration of alternatives that do not meet the purpose and need is not warranted.

Comment: 12-16 The final EA should provide more details as to why consideration of these other alternative sites was dropped. This paragraph also suggests that site infrastructure maintenance needs was the primary factor used in justifying the proposed Atlas Facility move.

Response: Further consideration of alternatives that do not meet the purpose and need is not warranted. In 1999 and 2000, Congress appropriated funds in the Energy and Water Appropriations FY00 Conference Report 106-536 and FY01 Conference Report 106-988 for proof of concept experiments and completion of facility operational capability for the Atlas pulsed power machine at the NTS.

Comment: 12-31 Remove the word "continue" in the final EA since, according to the DOE IG report, it never had operating funds. An additional alternative is in order that involves putting the facility into a cold stand-by status, as suggested in the IG report.

Response: Use of the term "continue" is appropriate. Operations funding for Atlas were in the "out year" budget requests since the beginning of the project. In the 2000 planning process for FY-01 budget, a variety of funding pressures emerged (Auditors Comments in DOE/IG report) that highlighted a number of issues in SSP. Ultimately however operations funding was provided in FY01 and initial experiments are in preparation. Operations funding requirements thru FY05 were identified in the "Plan for Atlas Relocation and Operation at the NTS," dated 10/27/00. FY02 Operations funding for Atlas has been requested.

Comment: Page 14, Figure 5 Map of LANL
An additional map would be useful that shows the placement of the existing Atlas Facility within TA-35.

Response: Comment noted. Map added.

Comment: 15-16 The final EA should mention that this is public land that is temporarily withdrawn, under Public Land Order 805 (12 Feb. 1952) for the purpose of conducting atmospheric nuclear detonations.

Response: Comment is inaccurate with respect to PLO 805. PLO 805, dated February 12, 1952, reserved lands for the use of the United States Atomic Energy Commission as a weapons testing site. Reference to PLO 805 has been added.

Comment: 15-20 The proposed move of the Atlas facility to the NTS is intended to help keep the site ready for the potential resumption of full-scale underground nuclear detonations there. The draft EA failed to mention that connection or to, in anyway, analyze the environmental effects that a resumed nuclear test program might have on the facility structure or on its operational purpose. The final EA should address these issues.

Response: The primary purpose of the facility is to provide data to the Stockpile Stewardship program. Seismic events and potential ground motion from NTS activities are considered in the Facility structural design. The impacts of nuclear testing are identified in the 1996 Site-wide Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada. The relocation of Atlas does not change those impact and additional analysis of the environmental impacts of "full-scale nuclear testing" is clearly beyond the scope of this EA An evaluation of the role of Atlas in the event of resumption of nuclear testing would be speculative and also outside the scope of the EA.

Comment: Section 3.0 Affected Environment section of the draft EA failed to mention, or otherwise address, the highly significant issue of environmental damage already rendered to the loaned public lands that now make up the NTS. A measure of this can be found in the DOE/NV report titled "Focused Evaluation of Selected Remedial Alternatives for the Underground Test Area" (DOE/NV--465), April 1997. Here, DOE/NV contractors estimated that a partial remediation of the underground test areas could cost as much as $7.3 trillion dollars. Such an analysis deserves a place in the reference section of all DOE/NV NEPA reports. Interestingly, DOE/NV rarely cites this report. The final EA for the Atlas Facility should at least cite this in the reference section.

Response: The 1996 Site-wide Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada is referenced in the EA. The NTS EIS includes detailed discussion of the impacts of underground nuclear testing. Reference to a cost analysis for partial remediation of underground nuclear test areas is not relevant to the Atlas assessment.

Comment: 15-34 According to the 1996 NTS EIS, this airstrip is not used so mention of it should be removed in the Atlas final EA.

Response: Airstrip is not in use but exits. Note added to the text (not in use).

Comment: 17-10 The final EA should mention that potential nuclear blast seismic effects were not analyzed. That EA should include such a potential effect analysis.

Response: Seismic events and potential ground motion from NTS activities were considered in the Facility structural design criteria. Design for this new structure is consistent with existing facilities that were designed/built in the forward areas during the period of NTS underground nuclear testing.

Comment: 17-15 Over 1,030 nuclear detonations have been conducted at the NTS. The proposed Atlas site lies next to the northern edge Area 6. North of that edge lies a major NTS nuclear blast testing area. The fallout was not blocked by artificial political boundary lines such as the ones that define Area 6. Areas that contain less than 10pCi/g of plutonium-239 in the soil are wide-spread at the NTS. When Pu-239 is present there is a good chance that fission products are also present. The final EA should provide a quantitative value for what the draft EA states is a small area. Could that be a blast circle, a mile in diameter? The term "residual" is deceptive and should be removed in the final EA. Virtually, none of the initial fallout plutonium-239 has been removed from the vast majority of the land surface. Since Pu-239 has a half-life of ~24,000 years, virtually all that material that fell to the NTS surface, remains there and will continue to remain radioactive for tens of thousands of years. The traditional practice of NTS environmental managers, selectively withholding information, needs to end. This practice is not protective of the public, the environment or of a free and open democracy which depends upon the trust of its people.

Response: "Residual" is a term of art meaning something remaining. Small has been defined as relative to Area 6. Surface radiological contamination is described in detail the 1996 Site-wide Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada. The EA references the NTS EIS.

Comment: 20-34 The External gamma radiation exposure data produced by the on-site thermoluminescent dosimeter network fails to provide comprehensive radiation exposure detection. That network fails to detect many beta and alpha particle emitters including those that may have entered into the body of human and non-human organisms. The draft EA readers should notice that the most recent data in this paragraph was based on 1994 data. That should provide an indication of much has been learned from past practices of providing the public with timely results. Let's see if the final EA can do better.

Response: As stated in the Section 3.0, Affected Environment, the affected environment for the NTS is summarized from the Final Environmental Impact Statement for the Nevada Test Site and Off-site Location in the State of Nevada. Underground nuclear weapons testing at the NTS was suspended in 1992. Section 3.1 was edited to include the 1999 Annual Site Environmental Report data on Gamma exposure.

Comment: 27-29 "At the NTS, it is anticipated that the Atlas facility, including the machine and the buildings, would consume approximately 500,000 kilowatt hours/year."

If 40 shots are performed each year that deliver 5 MJ of energy to the target region, then that amounts to approximately 0.01% of the total operating energy of the facility. Again, some people may wonder about the sincerity of this agency that preaches energy efficiency to the public.

Response: Comment noted. No change to the text is required. The transient dynamic environment produced by pulsed power and other machines for hydrodynamic and other experiments inherently involves very low duty cycles (short on time, very long off time). Energy efficiency is not a useful or meaningful metric for the utility of such machines.

For comparison a 2000 sq ft dwelling might consume 1000 KW-h per month (seasonally averaged) or 12,000 KW-h per year. The Atlas building is ten times the floor area and 5 times the height of a residence (50 times the volume) which is completely consistent with the estimated power consumption. Conclusion is that the power consumption of the pulses power system is negligible and certainly not a metric for comparison.

Comment: 30-5 If lead is classified as a HAP then an explanation is in order concerning why depleted uranium (DU) is not classified as a HAP.

Response: EA states that "some of the metal targets (including lead) and the solvents are classified as HAPS and regulated by the State of Nevada. This statement does not exclude DU. "(including lead)" has been deleted. Text revised to include NESHAPS subpart H requirement.

Comment: 30-14 The final EA should describe the engineering considerations for Atlas that limit it to 100 experiments per year.

Response: Annual emissions described in the EA were based on a maximum of 100 experiments per year. The primary limitation on shot rate is the time to prepare and install experimental hardware and install diagnostic systems was added to the EA.

Note: The shot rate is limited by the budget available to support the operating crew. Detailed operating plans for liner/hydrodynamic experiments show that a crew working a single shift can perform (maximum) 1 shot per week (40 per year with required down time for maintenance) – primarily because of sequential nature of many activities. Approximately round-the-clock work (5 days per week) would be required to meet the 100 shot per year rate. Twenty four hours per day/7 days per week work would at best produce 140 shots per year.

Comment: 31-3 Before the word "public" insert the word "accessible."
The NTS remains public land but is restricted from public access.

Response: The term "accessible" has been added to the text.

Comment: 43-26 In the 1996 SSM PEIS, mention is made of a capacitor explosion that results in shrapnel being shot into the hi-bay. Interestingly, the Atlas draft EA fails to

mention or analyze such a situation. Instead it mentions a capacitor bank fire which may be a "politically correct" reference to what may have started with an explosion. The draft EA indicates the risk as less than once in 10,000 years of operation.

Response: The EA identifies the bounding case accident for the site worker, collocated workers, and the public. The EA states that additional accident scenarios are contained in the 1995 PHA. A capacitor explosion (especially when capacitor is located under oil inside a metal tank) is unlikely to produce significant shrapnel in the area. However an electrically caused fire (possibly initiated by a capacitor failure) is the likely bounding case. Such a fire was deemed not to have an impact on workers, collocated workers or the public, because the hazard is mitigated by engineering controls (interlocked barriers) and administrative controls (removal of personnel during an experiment). This section has been updated to reference the latest Facility Safety Analysis, dated 11/01/00.

Comment: Before the final EA is issued, a thorough analysis should be performed as to how this "once in 10,000 year" figure was derived. This analysis should be totally independent, using academics who have no recent past, or present, connections with the DOE or its SSM program. If the original analysis is found to be way off-base then the consequence should be the termination of the Atlas program, along with the individuals responsible for the faulty analysis and its management review.

Response: The hazards analysis and the latest Facility Safety Analysis have undergone extensive reviews. An additional Facility Safety Analysis will be required for a facility located at the NTS.

Comment: 44-14 If the phrase "accidental release" includes the possibility of an explosive release, then state that openly. The same goes for the phrase "operational fault (breakdown).

Response: The paragraph applies to release of oil. General terms were used to encompass accidental releases of oil that could result from several scenarios such as a capacitor fault or electrical breakdown during operation leading to a puncture of a tank, seismic event potentially breaking piping connection, or diaphragm failure. None of which are "explosive releases," a fire is treated elsewhere in the analysis. In a sense, "explosive release" may be misleading since the driving function is a fault, undesirable energetic electric discharge. The EA text has been revised to clarify the scenarios that could result in a release of oil.

Comment: 46-32 Add to the definition a conversion factor to Teslas.

Response: Comment noted. Tesla units are not used in the EA. No change to the text is required.

Comment: All public comments on this EA should be published verbatim, rather than just summarized by the DOE/NV. A reference to the exact location of the public's original comments should appear on the web page associated with the final EA.

Response: Comment noted. No change to the text is required. Comments on a draft EA are not required to be published with the Final EA and it is not standard practice to do so.

Comment: The final EA should contain a list of preparers which includes the persons name, their project position, their work division and in the case of contractors, the contracting company name.

Response: Comment noted. No change to the text is required. List of prepares is not required in an EA and it is not standard practice to do so.

Comment: In addition, a project work flow chart would prove useful which shows the relationship of the primary EA prep. contractor to the DOE/NV office.

Response: Comment noted. No change to the text is required.

Comment: An initial EA distribution list would be a useful addition to the final Atlas EA.

Response: Comment noted. No change to the text is required. A draft EA initial distribution list is not required to be published in the final EA and it is not standard practice to do so.

Comment: According to the DOE's own Inspector General Audit Report No.: DOE/IG-0495, there were serious management flaws concerning the decision to complete the construction of the Atlas Facility before operation funding was assured. Then other management decisions were made to relocate the new machine before operating funds could be procured. The justifications for that move appear to be tied to preserving the NTS infrastructure more than to the increasingly questionable use of the Atlas Facility for maintaining the safety and reliability of the U.S. nuclear weapon arsenal. The IG suggested that the Atlas Facility not be moved from LANL. This is the same as the draft EA's No Action Alternative. For a rare change, its time DOE management bit the bullet and select the No Action Alterative. After that, serious consideration should be given to placing this embarrassing machine into a cold stand-by status.

Response: The IG Audit Report DOE/IG-0495, dated February 2001, recognizes "the Department now faces budgetary problems for which there are no easy solutions" and goes on to state that, "unless the Department assigns a high enough priority to assure it can operate any facility once it is constructed, it should not proceed with construction. Likewise, unless the Department can be assured that it will have funds needed to operate a facility once it is moved, it should not be moved." Operations funding for Atlas was provided in FY01. Operations funding requirements thru FY05 were identified in the "Plan for Atlas Relocation and Operation at the NTS," dated 10/27/00. FY02 Operations funding for Atlas has been requested.