



Permit



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May 25, 2008

DCN 06280.220.ID.007

Mr. David Cobrain  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Building One  
Santa Fe, New Mexico 87505-6303



**Reference:** Work Assignment No. 06280.220.0002; State of New Mexico Environment Department, Santa Fe, New Mexico; LANL Public Comment Management Review of Non-Technical Public Comments Submitted on Revised Draft Permit, Los Alamos National Laboratory, Los Alamos, New Mexico, April 2008; Task 2 Deliverable.

Dear Mr. Cobrain:

Enclosed please find the draft deliverable for the above-referenced work assignment. The deliverable consists of a review of public comments on the Draft Hazardous Waste Facility Permit issued to the Los Alamos National Laboratory by the New Mexico Environment Department (NMED) in August 2007. Ms. Rebecca Kay of the NMED Hazardous Waste Bureau (HWB) provided the comments to Michael S. Smith of TechLaw, Inc. (TechLaw) via email on April 3, 2008. The comments focused on issues related to the Burn Ground at Technical Area 16 (TA-16 Burn Ground). The scope of TechLaw's review was discussed during an April 8, 2008 telephone conversation between NMED HWB (represented by Rebecca Kay and Steve Pullen) and TechLaw (represented by Michael S. Smith). In addition to reviewing and developing a response to the comments, the HWB requested TechLaw review the Los Alamos National Laboratory Technical Area 16 Burn Ground Air Pathway Assessment Report, Revision 0, LA-UR-07-5711 dated August 2007 (Air Pathway Assessment Report) to determine if deposition modeling addressed receptor locations beyond the Los Alamos National Laboratory (LANL) boundary (i.e., did the analysis address off-site receptors). Finally, HWB indicated TechLaw's responses to the comments would be considered in NMED HWB discussions regarding final responses for public release.

In determining the scope of the deposition modeling performed by LANL, TechLaw also considered information provided in the TA-16 Burn Ground Air Pathway Assessment Protocol, Revision 1.0, dated April 2007 (Air Pathway Assessment Protocol). According to Section 4.4, Receptors, of the Air Pathway Assessment Protocol, a 20 kilometer (km) by 20 km grid centered on the Burn Ground was used in the air pathway assessment analysis. Superimposing this grid<sup>1</sup> on Figure 1, Siting of Los Alamos National Laboratory (green boundary) and Burn Pad (red box) Relative to Residential Communities and Public Recreation Areas, shows the grid easily reaches beyond the LANL boundary to the north, west, and south. Along the eastern edge, an

<sup>1</sup> Neither the Air Pathway Assessment Report nor the Air Pathway Assessment Protocol includes a figure that relates the modeled receptor locations to the location of the Burn Ground and the LANL boundary.





**TASK 2 DELIVERABLE**

**REVIEW OF THE NON-TECHNICAL PUBLIC COMMENTS  
SUBMITTED ON REVISED DRAFT PERMIT  
LOS ALAMOS NATIONAL LABORATORY  
LOS ALAMOS, NEW MEXICO**

**APRIL 2008**

**TECHNICAL AREA 16 BURN GROUND**

**LANL Permit Support**

**Submitted by:**

**TechLaw, Inc.  
310 Maxwell Road, Suite 500  
Alpharetta, GA 30004**

**Submitted to:**

**Mr. David Cobrain  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Building One  
Santa Fe, New Mexico 87505**

**In response to:**

**Work Assignment No. 06280.220.0002**

**May 25, 2008**

**REVIEW OF THE NON-TECHNICAL PUBLIC COMMENTS  
SUBMITTED ON REVISED DRAFT PERMIT  
LOS ALAMOS NATIONAL LABORATORY  
LOS ALAMOS, NEW MEXICO**

**APRIL 2008**

**TECHNICAL AREA 16 BURN GROUND**

**TechLaw Response to Non-Technical Public Comments Submitted on Revised Draft Permit**

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1.	EPA 001	177	Part 12	EPA	<p>Page 177, Line 27. Due to the nature of releases of explosives from OB/OD units as particulates which do not readily migrate through the soil, EPA recommends samples collected for soil analysis for explosives should be collected from the upper 2 inches, rather than the 0 - 6 inches specified. Also, the method for explosives analysis in EPA's SW-846 manual of methods has been changed recently, with method 8330(b) being the currently adopted version. This method also now includes an appendix which describes a multi-increment sampling approach for collecting soil samples for explosives. These revisions were adopted based on data by the Department of Defense which showed traditional discrete soil samples for explosives demonstrated up to four orders of magnitude variation over less than one meter distances, while multi-increment samples prepared using the new procedures in 8330(b) greatly</p>	<p>Air dispersion and deposition modeling performed by TechLaw indicates maximum particle deposition will occur close to the burn units. In fact, modeled deposition flux was maximized at locations closest to the source. These four modeled locations defined a square with sides of 90 meters and centered on the source location with the amount of deposition changing at most, by an order of magnitude along a side of the square. Thus, TechLaw's modeling shows deposition from the plume will be maximized within the square and discrete samples taken from within the square may be sufficient to determine if explosive residues in the soil present a risk/hazard or not.</p> <p>In assessing risks under CERCLA, surface soils are typically thought to be in the top inch or two of surface. However, for application in a risk assessment for a hazardous waste combustion unit, EPA's 2005 HHRAP recommends using 2 cm (5.1 inches) for soil mixing depth when calculating soil concentrations from deposition. Thus, it appears sampling from 0 to 6</p>

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					increases the representativeness and reproducibility of the data.	inches is appropriate.
2.	EPA 002	177		EPA	Page 177, Line 27-28. Perchlorate should be added to the list of analytes, unless the facility can document the materials treated at the site did not contain this constituent.	<p>According to the Part A Application, perchlorate was used in nuclear chemical research at LANL and has been detected in groundwater. However, no discussion was found in the Part A, Part B, LANL air modeling protocol (Revision 1), or the LANL Air Pathway Assessment Report dated August 2007 that linked perchlorate usage or perchlorate contamination to the High Explosive (HE) and HE-contaminated waste streams treated at the TA-16 Burn Ground. Similarly, no discussion was found in these LANL documents confirming that perchlorate was not a part of the waste streams treated at the TA-16 Burn Ground.</p> <p>Most of the surrogate wastes identified by LANL for use in developing emission factors for burn ground operations did not contain perchlorate. The exception is the non-aluminized ammonium perchlorate (NAAP) propellant identified as a source of a conservative emission factor for dioxins. Note the dioxin emission factor was the only emission factor for NAAP used in the analysis as the other identified surrogate wastes were believed to be more similar to the waste streams actually treated at the burn ground. Unfortunately, a dioxin emission factor was not available for these surrogates; thus, the emission factor for dioxins from the open burning of NAAP was chosen due to its availability and relative magnitude among all dioxin emission factors in the OBODM Fuel File.</p> <p>TechLaw believes perchlorate is likely not a component of the wastes treated at the TA-16 Burn Ground. However, this does not appear to be</p>

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						documented in LANL's permit application. Adding perchlorate to the analyte list as suggested by EPA would constitute a conservative approach unless LANL can document that perchlorate is not a part of the wastes handled and treated at the TA-16 Burn Ground.
3.	EPA 003	177		EPA	Page 177, Lines 28-29. The draft permit requires annual soil sampling be conducted at locations 25 feet from the pad, in four different directions. While this approach may well be indicative of potential releases due to wind blown ash from the pan after the burn, it is not sufficient to determine whether releases are occurring from the burn itself, which can be carried substantial distances. The facility should supplement this with additional soil sampling at locations to be based on modeling of where the most likely impacts could occur. This approach is being done at other facilities in Region 6.	The location of maximum modeled deposition obtained from TechLaw's air dispersion and deposition analysis is discussed in the response to EPA Comment No. EPA 001. Further examination of TechLaw's results for deposition flux indicates that over the 6,000 meter by 6,000 meter area examined in the analysis, deposition decreased as distance from the modeled source location increased. Thus, TechLaw's modeling analysis supports sampling within 25 feet of the pad to characterize maximum deposition from the open burning process. It is not clear why soil sampling would be extended unless the soil sampling results in the area of maximum deposition indicated the need for a quantitative risk assessment and LANL preferred the use of measure soil concentrations over use of air dispersion and deposition results. Note that TechLaw's modeling analysis was limited to the 6,000 meter by 6,000 meter grid noted above. LANL's Air Pathway Assessment examined a much larger area but the text of the August 2007 Air Pathway Assessment Report does not address trends in the results for deposition flux.
4.	EPA 004	178		EPA	Page 178, Lines 3-5, 7-9, and 31-33. Each of these portions of the draft permit contains two maximum annual amount limitations, which appear to be in conflict with each other. Please clarify the appropriate limits.	LANL has requested an annual waste stream limit of 20,000 lb/yr for the TA-16 Burn Ground. TechLaw air dispersion modeling and risk-based screening analyses show that with the elimination of the 11 constituents listed on Lines 10-21 of Page 178 of the draft permit, this limit can be obtained by treating a combination of

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						<p>1,000 lb of HE per event at TA-16-399, 250 lb of HE per event at TA-16-388, and 250 lb of HE-contaminated waste per event at TA-16-388.</p> <p>Additional modeling showed that as little as 100 lb/event of bulk HE can be treated at TA-16-399 up to 8 times per year. Similarly, 100 lb/event can be treated at TA-16-388 up to 8 times per year. Finally, 50 lb/event of HE-contaminated waste can be treated at TA-16-388 up to 12 times per year. However, based on TechLaw's analysis, exceeding these lower treatment frequencies (i.e., 8 times per year for bulk HE and 12 times per year for HE-contaminated wastes) will result in air or soil concentrations in excess of applicable screening levels. This is due to the low plume rise resulting from the small treatment amounts. Thus, TechLaw's analyses showed better dispersion was achieved for higher (i.e., 250 lbs per event and 1,000 lbs per event) treatment quantities.</p> <p>NMED HWB may wish to consider the following revision to Part 12, Page 178 of the draft permit:</p> <p><b>12.2 ANNUAL TREATMENT LIMIT</b> The Permittees may treat any combination of dry or wet bulk high explosives (HE) and HE-contaminated wastes up to 20,000 pounds per year (lbs/yr) at the TA-16 Burn Ground subject to the per event limits presented in Sections 12.3 and 12.4 of this permit.</p> <p><b>12.3 TA-16-388 FLASH PAD</b></p> <p><b>Replace existing Lines 3 – 5 with:</b> The Permittees shall not treat more than 250 lbs bulk HE per event and</p>

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						<p>no less than 100 lbs per event. No more than 8 events per year shall be conducted at 100 lbs per event.</p> <p><b>Replace existing Lines 7 – 9 with:</b> The Permittees shall not treat more than 250 lbs per event and no less than 50 lbs per event. No more than 12 events per year shall be conducted at 50 lbs per event.</p> <p><b>12.4 TA-16-399 BURN TRAY</b></p> <p><b>Replace existing Lines 31 -33 with:</b> The Permittees shall not treat more than 1,000 lbs bulk HE per event and no less than 100 lbs per event. No more than 8 events at 100 lbs/event shall be conducted in one year.</p>
5.	EPA 005	178		EPA	Page 178, Lines 10-22. The list of constituents prohibited from treatment in the open burning operations listed in this portion of the permit are in conflict with the list of constituents which are listed as being treated in these units in Appendix C, Table C-6.	Based on the air modeling and risk-based screening performed by TechLaw, the eleven constituents listed on Lines 11-21 must not be emitted from open burn operations at TA-16-388. The analysis showed that if emitted, these constituents would fail the risk-based screens at the annual and per event treatment limits established in Part 12 of the draft permit. These constituents should be removed from Table C-6 of Attachment C.
6.	EPA 006		General/ Appendix C, Section C.1.3.2, and Table C-6	EPA	General. Appendix C, Section C.1.3.2, and Table C-6, indicate many types of wastes are to be treated by open burning, including listed halogenated solvents, which are contaminated with explosive wastes. Open burning and open detonation are technologies which are restricted to explosive wastes. While de minimus amounts of other wastes may be	TechLaw's screening level air modeling risk analyses showed that if the eleven constituents listed on Lines 11-21 on Page 178 are not treated at TA-16-388, all treatment operations at the TA-16 Burn Grounds can operate at the annual and per event treatment limits established in Part 12 of the draft permit. Thus, eliminating the eleven constituents from Table C-6 of Attachment C will result in types of wastes that passed

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					present as contamination with explosive wastes, the material to be treated must be reactive as generated and treated; explosives contamination alone does not justify treatment by open burning or open detonation. When other wastes are present along with explosives, even if the material is reactive, the facility should demonstrate that no other treatment technologies are capable of treating the wastes. Also, if other wastes, at amounts other than de minimus, are treated in the unit, the monitoring program should include constituents appropriate to those wastes.	TechLaw's risk based screening analysis.
10	SCI 004		Attachment 1	Santa Clara Indian Pueblo	<p>The draft LANL permit indicates that DOE and LANS will be allowed to open burn up to 60,000 pounds per year of liquid and solid hazardous waste at TA-16. See draft LANL permit at Attachment 1. Santa Clara Pueblo is concerned about open burning of hazardous materials as a waste management method and needs to better understand what other alternatives have been considered by NMED and rejected and why.</p> <p>Santa Clara Pueblo appreciates NMED requiring soil monitoring associated with the open burning but why is NMED not explicitly requiring monitoring of the air and water as part of the open burning process? <i>See id.</i> at 65. The draft LANL permit indicates that open burning should occur in accordance with, among other things, 40 CFR § 264, Subpart X. That section of RCRA requires that a so-called "miscellaneous unit" regulated under that</p>	<p>TechLaw's screening level air modeling and risk analyses demonstrated that up to 20,000 lbs/yr of any combination of bulk HE and HE-contaminated waste could be treated at TA-16-388 and TA-16-399 without negative impacts to human health and the environment. This result assumes the eleven constituents listed in Lines 11-21 on Page 178 are not treated at TA-16-388. Total annual quantities in excess of 20,000 lbs/yr were not addressed in the analyses as LANL is requesting a permit for 20,000 lbs/yr.</p> <p>Based on TechLaw's review of LANL documents and discussions with NMED HWB, no radiological contamination is treated at the TA-16 Burn Ground. Thus, TechLaw's analyses do not address the open burning of wastes containing radiological contaminants.</p> <p>TechLaw reviewed the Los Alamos National Laboratory Technical Area 16 Burn Ground Air Pathway Assessment Report, Revision 0, LA-UR-07-5711 dated August 2007 (Air Pathway Assessment</p>

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					<p>subpart "must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment" and specifically mentions including monitoring requirements as a way to achieve this. <i>See</i> 40 CFR § 264.601. Moreover, the environmental standards addressed in that subpart include numerous references to how "protection of human health and the environment" includes preventing releases affecting surface water quality, groundwater quality, and air quality and the ability to require monitoring, testing, and inspections, among other methods, as a way to achieve this.</p> <p>The need for more monitoring, not less, is emphasized in a recent report of the Government Accountability Project entitled <i>Citizen Environmental Monitoring, Los Alamos, New Mexico</i> (June 2007), <a href="http://www.whistleblower.org/doc/2007/FinalANLReport.pdf">http://www.whistleblower.org/doc/2007/FinalANLReport.pdf</a> (GAP Report). The GAP Report contains an analysis of indoor dust samples and "environmental samples" such as sediments and ash, at a variety of sampling sites around LANL. The findings in the GAP Report revealed indoor dust samples at greater total radioactivity than shown in surrounding soils or various controls and baseline references. Both Picuris Pueblo and San Ildefonso Pueblo locations were included in the</p>	<p>Report) and the TA-16 Burn Ground Air Pathway Assessment Protocol, Revision 1.0, LA-UR-07-3523 dated April 2007 (Air Pathway Assessment Protocol) to determine if deposition modeling addressed receptor locations beyond the Los Alamos National Laboratory (LANL) boundary (i.e., did the analysis address off-site receptors). According to Section 4.4, Receptors, of the Air Pathway Assessment Protocol, a 20 kilometer (km) by 20 km grid centered on the Burn Ground was used in the air pathway assessment analysis. Superimposing this grid<sup>1</sup> on Figure 1, Siting of Los Alamos National Laboratory (green boundary) and Burn Pad (red box) Relative to Residential Communities and Public Recreation Areas, from the Air Pathway Assessment Protocol shows the grid easily reached beyond the LANL boundary to the north, west, and south. Along the eastern boundary, an area to the east of TA-53 is not encompassed by the grid. Further, a significant portion of the LANL property southeast of the Burn Ground and south of White Rock reached beyond the grid. However, those areas of San Ildefonso Pueblo closest to the TA-16 Burn Ground and bordering LANL are included in the grid. The grid does not extend northward to the Santa Clara Pueblo.</p> <p>The unitized air concentration and deposition results illustrated in Figures 2-1 through 2-4 and 3-1 through 3-2 of the Air Pathway Assessment Report show the maximum off-site impacts do not occur to the east or southeast. For both 1-hour and annual average unitized air concentrations, maximum off-site impacts occur</p>

<sup>1</sup> Neither the Air Pathway Assessment Report nor the Air Pathway Assessment Protocol includes a figure that relates the modeled receptor locations to the location of the Burn Ground and the LANL boundary.

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					<p>GAP Report, and residential dusts from both those Pueblos were among the most elevated radiation levels. <i>See</i> GAP Report at 2. At a minimum, the GAP Report indicates the need to increase monitoring of contaminants through airborne particulates. NMED should require more air quality monitoring and reporting in this LANL permit.</p> <p>The draft permit also does not appear to include a discussion regarding how open detonation issues will be addressed. It is our understanding that these open detonation sites continue in limbo in so-called "interim status" (<i>see</i> draft LANL permit at Table 0-5) where it is unclear to us whether there is any air, surface water, groundwater or soil monitoring and sampling required to determine levels of contamination. This is an extremely important issue to Santa Clara Pueblo, not only because of air, water, and soil quality concerns but also due to problems in the past caused by conducting explosives testing during ceremonies at the Pueblo. The permit needs to include proper enforceable requirements to address this specific cultural sensitivity issue.</p> <p>Santa Clara Pueblo cares deeply about ensuring proper monitoring of soils, air emissions, and water associated with open burning and open detonation because Santa Clara Pueblo is downwind of LANL. Monitoring at the Pueblo reveals that the prevailing winds come from the southwest and that there is an indication of contaminant transport from LANL to the</p>	<p>along the northern and western boundaries. For unitized peak annual average deposition flux, Figures 3-1 and 3-2 show the maximum off-site impact occurs at the LANL boundary north of the Burn Ground.</p> <p>These figures show a discrete receptor location on the eastern boundary between LANL and San Ildefonso Pueblo. Table 2-3 of the Air Pathway Assessment Report lists unitized air concentrations at this point for a variety of averaging periods. The 1-hour average unitized air concentration at this point is roughly an order of magnitude lower than the maximum off-site value. The annual average unitized air concentration at this point is also approximately an order of magnitude lower than the maximum off-site value. A similar table is not provided for annual average deposition flux. However, examination of Figures 3-1 and 3-2 indicate an approximate reduction of an order of magnitude in predicted deposition flux at the point representing San Ildefonso Pueblo compared to the maximum off-site impact point.</p>

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					<p>Pueblo via particulate. Of course, the quality of the air we breathe is related to health impacts (as we discuss in more detail further in these comments). In addition, emissions settle on soils and, as evidenced by the soil erosion after the Cerro Grande fire, infect surface water runoff, all of which cause impacts to our traditional practices (a few of which were mentioned in the section above regarding ground and surface water monitoring). Emissions settling on soils also impact us through our crafts. The clays and sands of the region are used by our world-famous artists. The pigments that are applied to the pottery made by Santa Clarans come from the soils too and often applied using brushes made of natural materials. It is difficult for us to describe all the ways contaminated air emissions impact Santa Clara Pueblo, in part because we are private about our traditions and in part because the impacts go to every aspect of our way of life.</p>	
56	CNS 041		General	Concerned Citizens for Nuclear Safety	<p>We object to NMED permitting the open burning of high explosives and other hazardous materials as a waste management method at any LANL location, including TA-16-388 and TA-16-399. We specifically object to NMED permitting LANL to open burn these materials at TA-16-388 Flash Pad because on January 10, 2006 DOE/LANL stated that they do not</p>	<p>Information reviewed by TechLaw indicates that the TA-16 Flash Pad covered by Air Quality Permit 2195J was for flashing residual HE on non-RCRA scrap metal. Thus, the operation was regulated using an air quality permit as dictated by the Clean Air Act. As stated in LANL's letter of January 10, 2006, an operations review indicated this process was no longer</p>

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					<p>have a need for that facility.</p> <p>Background. In 2004, DOE/LANL applied for two new construction permits from the NMED Air Quality Bureau (AQB) for open burning activities at three technical areas at LANL, including the Flash Pad at TA-16-388. The NMED AQB issued the permits: Air Quality Permit 2195J for the TA-11 Wood and Fuel Fire Test Site and TA-16 Flash Pad and Air Quality Permit 2195K for the DX-TA-36 Sled Track. CCNS, Tewa Women United and the Embudo Valley Environmental Monitoring Group appealed the permits to the Environmental Improvement Board. On January 10, 2006, DOE/LANL wrote a letter to Richard Goodyear, Program Manager at the NMED AQB, requesting “the Bureau cancel these permits” because as the result of a review of the open burn activities, LANL “no longer needs to perform the types of testing and activities authorized by the permits.” A copy of the letter is attached to our comments as Attachment *. We request that the letter be added to the Administrative Record.</p> <p>During the public education campaign about the open burning/open detonation permits, 749 individuals signed postcards to NMED opposing the issuance of the permits. Copies of the receipts signed by NMED are attached to our comments as Attachment 4.</p> <p>Therefore, we request that NMED deny a permit for the open burning activities at TA-16-388. It appears that LANL applied for the</p>	<p>needed.</p> <p>Note that documents generated by LANL and NMED, including Air Quality Permit 2195J, refer to the unit as the TA-16 Flash Pad or TA-16-FP. TechLaw could not confirm from the reviewed documents if the TA-16 Flash Pad is a physically different unit than the TA-16-388 Flash Pad for which a RCRA operating permit is sought, however, we believe it is. Regardless, the draft permit covers the flashing of residual HE from metal objects under RCRA, not under the Clean Air Act.</p> <p>TechLaw believes that the required soil sampling will serve as indicator for performing additional investigation. If soil concentrations are below levels of concern, the need for groundwater monitoring is obviated. If soil concentrations are elevated, additional investigation could include screening against soil-to-groundwater risk-based screening levels, groundwater monitoring, or corrective action.</p> <p>Air monitoring of open burn processes is difficult. Confirming emissions in open air is technically challenging and further complicated by meteorological conditions. Ambient air monitoring at important receptors can be conducted. However, it can be difficult to attribute measured concentrations to specific sources, especially with increasing distance from the source. As such, the impact of emissions from open burn processes is typically, first addressed through air dispersion and deposition modeling and risk-based screening of the results at locations of interest.</p> <p>TechLaw’s screening level air modeling and risk analyses demonstrated that up to 20,000 lbs/yr of any combination of bulk HE and HE-contaminated waste</p>

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					<p>permit in 2003, prior to the change in regulations requiring them to apply for a new construction permit for open burning activities.</p> <p>We also request that NMED deny a permit for open burning activities at TA-16-399.</p> <p>The draft permit states that “[t]he Permittees shall conduct open burning operations in accordance with this Permit Part, in accordance with 40 CFR Part 264, Subpart X and 40 CFR §§ 268.7(b) and 270, which are incorporated herein by reference, in accordance with Permit Part 12 (TA-16), and Attachment I (Open Burn Unit Management).” The draft permit requires soil monitoring, but does not require groundwater and air monitoring as required in 40 CFR § 264.401 (a) and (c), Subpart X.</p> <p>If NMED refuses to deny a permit for opening burning activities at TA-16-388 and TA-16-399, then the permit must also include the groundwater and air monitoring requirements found in 40 CFR 264, Subpart X “Miscellaneous Units,” specifically §264.101 (a) and (c) “Environmental performance standards.”</p> <p>If these sites are denied a permit, then they should be covered under the Consent Order, § IV.A.5 “Firing Sites,” and should be listed as non-deferred sites for corrective action in Table IV-1.</p>	<p>could be treated at TA-16-388 and TA-16-399 without negative impacts to human health and the environment. This result assumes the eleven constituents listed in Lines 11-21 on Page 178 of Part 12 of the draft permit are not treated at TA-16-388. Please note TechLaw’s analyses were predicated on the overall maximum impacts predicted by the air dispersion model and not by the maximum modeled off-site impact.</p>

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65	NWN 009		General	Nuclear Watch New Mexico	<p>We request that NMED deny a permit for open burning activities at TA-16-388. We object to NMED permitting the open burning of high explosives and other hazardous materials as a waste management method at any LANL location, including TA-16-388 and TA-16-399. We specifically object to NMED permitting LANL to open burn these materials at the TA-16-388 Flash Pad, especially given that on January 10, 2006 DOE/LANL stated that they do not have a need for that facility.</p> <p>In 2004, DOE/LANL applied for two new construction permits from the NMED Air Quality Bureau (AQB) for open burning activities at three technical areas at LANL, including the Flash Pad at TA 16-388. The NMED Air Quality Bureau (AQB) issued Air Quality Permit 2195J for the TA-11 Wood and Fuel Fire Test Site and TA-16 Flash Pad and Air Quality Permit 2195K for the DX-TA-36 Sled Track. Concerned Citizens for Nuclear Safety, Tewa Women United (TWU) and the Embudo Valley Environmental Monitoring Group appealed the permits to the Environmental Improvement Board. On January 10, 2006, DOE/LANL wrote a letter to</p>	<p>Please see TechLaw's response to Comment No. 56.</p> <p>Further, based on TechLaw's review of information supplied by LANL regarding the TA-16 Burn Ground, propane burners are not installed at TA-16-399 as they are at TA-16-388.</p>

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					<p>Richard Goodyear, NMED AQB Program Manager, requesting “the Bureau cancel these permits” because as the result of a review of the open burn activities, LANL “no longer needs to perform the types of testing and activities authorized by the permits.” We request that the letter be added to the Administrative Record.</p> <p>Therefore, we request that NMED deny a permit for the open burning activities at TA-16-388. It appears that LANL applied for the permit in 2003, prior to the change in regulations requiring them to apply for a new construction permit for open burning activities.</p> <p>We also request that NMED deny a permit for open burning activities at TA-16-399. The draft permit states that “[t]he Permittees shall conduct open burning operations in accordance with this Permit Part, in accordance with 40 CFR Part 264, Subpart X and 40 CFR §§ 268.7(b) and 270, which are incorporated herein by reference, in accordance with Permit Part 12 (TA-16), and Attachment I (Open Burn Unit Management).” The draft permit requires soil monitoring, but does not require groundwater and air monitoring as required in 40 CFR § 264.401 (a) and (c), Subpart X.</p> <p>If NMED refuses to deny a permit for opening burning activities at TA-16-388 and TA-16-399, then the permit must also include the groundwater and air monitoring requirements found in 40 CFR 264, Subpart X “Miscellaneous Units,” specifically § 264.101</p>	

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					<p>(a) and (c) "Environmental performance standards."</p> <p>If these sites are denied a permit, then they should be covered under the Consent Order, § IV.A.5 "Firing Sites," and should be listed as non-deferred sites for corrective action in Table IV-1. In either case, please provide us with the current deferral or non-deferral status of TA-16-388 and TA-16-399.</p> <p>NMED's August 2007 Fact Sheet declares, "Applicants are prohibited from treating mixed [hazardous and radioactive] waste at the open burn units." P. 13. What prohibits the burning of purely radioactive wastes?</p> <p>The August 2007 Fact Sheet also states, "Propane shall be the sole fuel source at TA-16-388," but gives no such limitation for TA-16-399. Why?</p> <p>Therefore, we request that NMED deny a permit for the open burning activities at TA-16-388. It appears that LANL applied for the permit in 2003, prior to the change in regulations requiring them to apply for a new construction permit for open burning activities.</p>	
132	EVE 004		General	Embudo Valley Environmental Monitoring Group	<p>EVEMG objects to NMED allowing LANL to open burn up to 60,000 pounds per year of liquid and solid hazardous waste at TA-16. NMED is allowing LANL to burn high explosives, volatile solvents, acids, bases and oils. The draft permit states "open burning of wastes at the TA-16 [open burning] units is conducted in a manner that does not threaten</p>	Please see TechLaw's response to Comment Nos. 10 and 56.

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					<p>human health or the environment. Prior to OB operations at the TA-16 Burn Ground, the area is cleared of all but authorized Burn Ground personnel. A barrier is placed across the road to prevent entry.” Attachment I, page 8.</p> <p>It is noted that NMED is not requiring LANL to monitor the smoke plumes that carry the pollutants off the LANL site and the groundwater, even though the regulations require such monitoring. 40 CFR § 264.601 (a) and (c). If NMED is going to allow the open burning of these materials, it must also require LANL to monitor the air emissions from open burning and the groundwater resource beneath TA-16. Putting a barrier across the road will not identify contaminants or prevent dispersion of hazardous materials through the air pathway into surrounding communities.</p> <p><b>OPEN BURNING SITES</b></p> <p>We object to NMED permitting the open burning of high explosives and other hazardous materials as a waste management method at any LANL location, including TA-16-388 and TA-16-399. We specifically object to NMED permitting LANL to open burn these materials at TA-16-388 Flash Pad because on January 10, 2006 DOE/LANL stated that they do not have a need for that facility.</p> <p>Background. In 2004, DOE/LANL applied for two new construction permits from the NMED Air Quality Bureau (AQB) for open burning activities at three technical areas at LANL,</p>	

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					<p>including the Flash Pad at TA-16-388. The NMED AQB issued the permits: Air Quality Permit 2195J for the TA-11 Wood and Fuel Fire Test Site and TA-16 Flash Pad and Air Quality Permit 2195K for the DX-TA-36 Sled Track. CCNS, Tewa Women United (TWU) and EVEMG appealed the permits to the Environmental Improvement Board. On January 10, 2006, DOE/LANL wrote a letter to Richard Goodyear, Program Manager at the NMED AQB, requesting "the Bureau cancel these permits" because as the result of a review of the open burn activities, LANL "no longer needs to perform the types of testing and activities authorized by the permits." A copy of the letter is attached to our comments as Attachment 1. We request that the letter be added to the Administrative Record.</p> <p>During the public education campaign about the open burning/open detonation permits, 749 individuals signed postcards to NMED opposing the issuance of the permits. Copies of the receipts signed by NMED are attached to our comments as Attachment 2 with an example of the postcard as Attachment 3.</p> <p>Therefore, we request that NMED deny a permit for the open burning activities at TA-16-388. It appears that LANL applied for the permit in 2003, prior to the change in regulations requiring them to apply for a new construction permit for open burning activities. We also request that NMED deny a permit for</p>	

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					<p>open burning activities at TA-16-399.</p> <p>The draft permit states that “[t]he Permittees shall conduct open burning operations in accordance with this Permit Part, in accordance with 40 CFR Part 264, Subpart X and 40 CFR §§ 268.7(b) and 270, which are incorporated herein by reference, in accordance with Permit Part 12 (TA-16), and Attachment I (Open Burn Unit Management).” The draft permit requires soil monitoring, but does not require groundwater and air monitoring as required in 40 CFR § 264.401 (a) and (c), Subpart X.</p> <p>If NMED refuses to deny a permit for opening burning activities at TA-16-388 and TA-16-399, then the permit must also include the groundwater and air monitoring requirements found in 40 CFR 264, Subpart X “Miscellaneous Units,” specifically § 264.101 (a) and (c) “Environmental performance standards.”</p> <p>If these sites are denied a permit, then they should be covered under the Consent Order, § IV.A.5 “Firing Sites,” and should be listed as non-deferred sites for corrective action in Table IV-1. In either case, please provide us with the current deferral or non-deferral status of TA-16-388 and TA-16-399.</p> <p><b>OPEN DETONATION SITES</b></p> <p>Given the 749 individuals signed postcards to NMED, Governor Richardson, Senator Bingaman and Representative Udall opposing both the open burning and open detonation</p>	

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					activities at LANL, we are surprised and alarmed that the open detonation sites are not included in the draft permit. These sites must be included in any final permit.	
136	PSD 002		General	Pueblo de San Ildefonso Department of Environmental and Cultural Protection	The Pueblo has concerns with the effect of both Open Burning and legacy contamination at TA-16 and their effects on the elk herd there. Elk are used traditionally and culturally by the people of San Ildefonso. If these elk also travel to Tribal lands they may constitute a non-typical pathway to receptors. Are the movements of the elk herd tracked? What steps are taken to keep the elk out of the Open Burning area? Are the meat and bones of these elk sampled and analyzed?	Based on the review of information provided by LANL regarding the TA-16 Burn Ground and conversations with NMED HWB, TechLaw is not aware of any efforts to track elk herd movements or sample elk tissues. However, Part 2, Subpart 2.5, Security, Page 26, Lines 29 and 30 states LANL "shall prevent the unknowing entry and minimize the possibility for the unauthorized entry of persons or livestock onto permitted units. Further, Lines 37 and 38 require LANL to maintain a 24-hour surveillance system which continuously monitors entry into the permitted units. Page 27, Line 3 requires that security fences be maintained.  The risk-based screening analysis performed by TechLaw included a screen using the LANL Ecological Screening Levels (ESLs). Where multiple screening levels were available for an emitted constituent, the most conservative value was used. None of the emitted constituents included in the analysis exceeded their ESL. Note that TechLaw's analysis was based on the overall maximum impacts predicted by the air dispersion model. This is likely a reasonable but conservative approach, especially if elk can access areas close to the Burn Ground.
139	PSD 005		General	Pueblo de San Ildefonso Department of	As per OSWER Directive No. 9523.00-18; "Non-military waste explosives can be open burned/open detonated if the waste has the	Information provided by LANL indicates the HE-contaminated solvent waste streams cannot be treated by other means due to safety (i.e., detonation) concerns.

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				Environmental and Cultural Protection	potential to detonate as stated in Section 265.382. If the waste explosives, including wastes consisting of part solvent, do not have the potential to detonate, the waste cannot be destroyed in OB/OD units (emphasis added). Solvents contaminated with explosives to the extent that they have the potential to detonate (emphasis added) may be open burned provided that the unit qualifies under either 264, Subpart X or 265, Subpart Q. According to this Directive, LANL is illegally open-burning wastes at TA-16 which do not have the ability to detonate, including solvent-contaminated waste that does not have the ability to detonate. This activity must not be permitted until LANL demonstrates that only wastes which have the ability to detonate are being treated.	TechLaw is aware that NMED HWB continues to work toward an effective specification for this waste stream. To that end, Subpart 12.2, Page 178, Lines 24 and 25 state "The Permittees shall ensure solvents or soils treated at the Flash Pad have a minimum of 10% HE."
145	PSD 011		C.1.3.2., Attachment C	Pueblo de San Ildefonso Department of Environmental and Cultural Protection	<p>ATTACHMENT C WASTE ANALYSIS PLAN</p> <p><u>C. 1.3.2 HE Waste and HE-Contaminated Waste Treated by Open Burning</u></p> <p><u>HE-Contaminated Water</u> This waste stream consists of HE-contaminated water that may contain trace <i>solvents</i> (emphasis added) and/or regulated hazardous metals. It is generated primarily by laboratory analysis; HE processing; ER, R&amp;D, and D&amp;D activities; drilling activities; and maintenance activities.</p> <p><u>HE-Contaminated Solvent Waste</u> This waste stream consists of HE-contaminated solvents. It is generated primarily by laboratory analysis; R&amp;D, ER, and D&amp;D activities; HE</p>	Information provided by LANL indicates these HE-contaminated waste streams cannot be treated by other means due to safety (i.e., detonation) concerns. Note these waste streams are unsafe due to the presence of HE contamination.

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					<p>production; spills; and the dissolving of HE and polymers.</p> <p><u>HE-Contaminated Used Oil</u> This waste stream consists of HE-contaminated used oil, which is generated primarily from hydraulic presses and lubrication systems associated with HE- processing operations and ER and D&amp;D activities.</p> <p><u>HE-Contaminated Solid Waste</u></p> <p><u>HE-Contaminated Equipment</u></p> <p><u>HE-Contaminated Liquid Acids, Bases, and/or Inorganic Salt Solutions</u></p> <p>COMMENT - DECP believes the evidence demonstrates that the wastes listed above are not eligible for Open Burning. See General Comment 4.</p>	
146	PSD 012		C.3.1	Pueblo de San Ildefonso Department of Environmental and Cultural Protection	<p>C.3 CHARACTERIZATION PROCEDURES [20.4.1 NMAC §§ 264.13(a)(1) and 264.13(b)(2), and 20.4.1 NMAC § 270.14(b)(2)]</p> <p><u>C.3.1 Hazardous and Mixed Low-Level Waste Characterization</u></p> <p>COMMENT - DECP believes the evidence demonstrates that the solvent wastes discussed in this section are not eligible for Open Burning. See General Comment 4</p>	A review of Section C.3.1 indicates that the characterization procedures described therein are applicable to wastes handled at TA-54. No wastes containing radiological components will be treated at the TA-16 Burn Ground. Please see Subpart 6.1, General Condition, Page63, Lines 9-10 of the draft permit.
150	PSD 016		Attachment I	Pueblo de San Ildefonso Department of Environmental and Cultural	<p>ATTACHMENT I OPEN BURNING UNITS MANAGEMENT</p> <p><u>TA-16 OPEN BURNING UNITS MANAGEMENT</u></p> <p>I.1 TA- 16 OPEN BURNING UNITS</p>	Please see TechLaw’s response to Comment No. 139.

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				Protection	<p>COMMENT - This section describes the burning of "highly hazardous volatile solvents". See General Comment 4.</p> <p>I.2 OPERATIONAL AND WASTE MANAGEMENT PRACTICES I.2.3 Waste Management Practices COMMENT - This section states in part; "Burning will treat a number of waste constituents (e.g., HE, solvents).. ." See General Comment 4.</p>	
214	LAN 056	24	Part 2, Section 2.4.6	LANL	<p>The proposed requirement is not found in NMED or EPA rules, the administrative record, and does not appear based in protection of human health and the environment. The Permittees environmental impacts analysis for the open burning treatment units was designed to estimate air emissions based on all of the types of waste that have been accepted at the open burning units, not on individual waste types that are accepted at each unit.</p> <p>Any new waste type that could be added for acceptance at one of the open burning units would be covered through the environmental impacts analysis already conducted for the TA-16 Burn Ground and therefore a separate analysis should not be required. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 24, Lines 12-15: Please clarify the sentence that reads: "The Permittees shall sufficiently analyze any waste which has not been previously treated in the thermal process</p>	<p>At this time, the Air Pathway Assessment Report has not been accepted and approved as demonstrating that open burning at the TA-16 Burn Grounds is protective of human health and the environment. Once NMED HWB is satisfied that LANL has demonstrated that operations are protective, it may be appropriate to revise the draft permit language to offer LANL the option of demonstrating that the new waste type is adequately covered by an approved air pathway assessment. However, the existing language should remain to cover cases where waste types that differ significantly from those currently addressed in the draft permit are proposed for open burning at the TA-16 Burn Ground.</p>

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					(open burning) to establish appropriate operating conditions (including waste quantity and auxiliary fuel feed) and to determine the type of pollutants which might be emitted (40 CFR § 270.32(b)).” To read: <u>“The Permittees shall evaluate any waste type which has not been previously treated in the thermal process (open burning) to establish that general unit operating conditions (including auxiliary fuel feed) are sufficient and that the type of pollutants that may be emitted have been evaluated (40 CFR § 270.32(b)(2)).”</u>	
215	LAN 057	24	Part 2, Section 2.4.6	LANL	<p>The proposed requirement is not found in NMED or EPA rules, the administrative record, and does not appear based in protection of human health and the environment. Heating values, emission factors, and halogen and sulfur contents that were part of the Permittees environmental impacts analysis for the open burning treatment units were not measured for current waste types, but were obtained from published sources of information for wastes that were as similar as possible to the waste burned at TA-16. None of the actual waste burned at the open burning units have been measured for these parameters at the units. Further, actual measurement for heating values or emissions factors is not a capability that exists at LANL.</p> <p>Page 24, Lines 16-18: Please clarify that the heating value, emission factors, and halogen and sulfur content of the new waste type will be obtained from published sources of</p>	Note that the type of analysis to be performed is not specified in Part 2, Section 2.4.6 of the draft permit. Application and documentation similar to that used in an air pathway assessment approved by NMED HWB should be sufficient to satisfy this requirement. However, whenever possible, properties and/or characteristics of the waste streams should be determined by direct measurement to eliminate uncertainty in the characterization.

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					information for wastes that are similar to the waste to be treated.	
311	LAN 153	63	Part 6 Section 6.1	LANL	<p>Suggested changes fix typographical errors (spacing for “.” and the inclusion of “high explosives (HE)”), and include language consistent with regulatory requirements for open burning and consistent with language in permit application. The terms “detonation and deflagration” go beyond the open burning of waste explosives and can be interpreted to include certain chemicals that have a potential to detonate rather than only HE or HE-contaminated waste. LANL’s permit application only included procedures for and potential impacts from the open burning of waste explosives and HE-contaminated waste. Chemicals that present the potential for detonation or deflagration that are not HE contaminated, are treated using the emergency destruction procedures of the LANL Hazardous Materials Response personnel.</p> <p>Page 63, Lines 11-21: Revise text to read: “The Permittees shall limit open burning treatment activities to waste <u>explosives as defined by 40 CFR § 265.382</u><del>that would result in detonation or deflagration</del>. This includes the following <u>high explosives (HE) or HE-contaminated materials</u>:</p> <ol style="list-style-type: none"> <li>1. water;</li> <li>2. solvent waste;</li> <li>3. used oil;</li> <li>4. solid and scrap <u>HE</u>;</li> <li>5. commercial chemical products;</li> </ol>	<p>Subsection 6.1, Page 63, Lines 11 and 12 could be revised to strike the words “or deflagration” and cite 40 CFR § 265.382. The revised text would read: “The Permittees shall limit open burning treatment to waste that would result in detonation (40 CFR § 265.382).”</p> <p>The identified typographical errors and definition of HE should be addressed when the draft permit is revised. Currently, the acronym HE is not defined until Part 11, Page 109 of the draft permit.</p>

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					6. wet HE; 7. solid waste; 8. equipment; and 9. liquid acids, bases, and/or inorganic salt solutions.”	
312	LAN 154	64	Part 6 Section 6.2	LANL	<p>The proposed change clarifies that run-on and runoff controls for the open burning units are already installed and will be maintained. Further, berms and ditches are not the main storm water controls located at the TA-16 Burn Ground. LANL’s permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 63, Lines 23-24: Please change the first sentence of the section to read: “The Permittees shall maintain run-on and run-off controls (40 CFR § 270.14(b)(8)(ii)), including the following structures <u>where present at the OB units.</u>”</p>	Currently, Attachment A of the draft permit indicates drainage control at TA-16 is illustrated in Figure A-9 of Revision 4 of the TA-16 permit application. TechLaw believes any revision to the text should include a listing of the existing run-on or run-off controls at TA-16. For example, the actual run-on and run-off controls at TA-16 could be substituted for the numbered examples currently on Page 63, Lines 25 through 27 and Page 64, Lines 1 and 2.
313	LAN 155	64	Part 6 Section 6.2	LANL	<p>The permit condition to ensure that burning operations do not occur “if storms are forecasted for the location of the permitted unit within a four hour period” would be very difficult to meet, and does not appear to be based in the administrative record. Open burning of waste does not occur during precipitation or high wind conditions, or when any inclement weather is imminent. Forecasting storm events, however, involves fluctuating percentages and ranges in the likelihood of precipitation from very low to mid-range (especially during the summer</p>	Currently, the draft permit does not describe how halting and resuming open burning operations at TA-16 based on weather conditions is accomplished. Any revision to the text should include a description of these procedures. For example, a description of the actual procedures for halting and resuming open burning operations based on weather conditions could be substituted for the phrase “or if storms are forecasted for the location of the permitted unit within a four-hour period” currently found on Page 64, Line 11 of the draft permit.

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					<p>monsoon season), make this permit condition indefinite. Further, LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64, Lines 10-11: Please delete the text: "or if storms are forecasted for the location of the permitted unit within a four-hour period"</p>	
314	LAN 156	64	Part 6 Section 6.2	LANL	<p>The proposed requirement to ensure that burning does not occur during weather inversions within a four hour period would be difficult to meet and does not appear to be based on the administrative record. There is low certainty for the observation of a weather inversion due to the height of weather towers within the area. Additionally, forecasting of weather is subjective and makes compliance with this permit condition difficult to ensure and document and has no specific added protection for human health or the environment. LANL's towers are incapable of detecting weather inversions because of their height. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64 lines 12-13: Please delete the sentence: "The Permittees shall ensure that burning operations do not occur during a weather inversion or if an inversion is forecasted for the location of the permit unit within a four-hour period."</p>	<p>If procedures were in place at TA-16 to halt open burning operations based on the presence of an inversion, the text on Page 64, Lines 12 and 13 could be replaced with site-specific information. However, it is not clear that LANL has such procedures in place. Further, it does not appear that the analyses described in LANL's Air Pathway Assessment Report addressed the influence of inversions on the dispersion and deposition of emitted constituents. Unless site-specific procedures for responding to inversions are provided or LANL demonstrates that open burning at TA-16 during inversions is protective of human health and the environment, the text on Lines 12 and 13 should remain unchanged.</p>

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315	LAN 157	64	Part 6 Section 6.2	LANL	<p>The proposed requirement allows for all fire prevention measures, including mowing the ground surface as outlined in the permit application and adds clarification to the word "removal". LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64, Lines 14-15: Please change text as follows: "The Permittees shall <u>remove or keep mowed</u> any <del>and all</del> combustible material <u>or the ground surface will be wetted prior to open burning operations</u> at a minimum radius of 200 ft from the open burn treatment location as a fire prevention measure."</p>	If the text revisions proposed by LANL reflect procedures in place or to be put in place at the TA-16 Burn Ground, the suggested changes should be made to Page 64, Lines 14-15.
316	LAN 158	64	Part 6 Section 6.2	LANL	<p>Soil contaminated with high explosives may require multiple treatment phases and complex staging similar to oversized equipment. Suggested change allows for this situation. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64 lines 17-19: Please change the text to read: "If oversized equipment <u>or soil</u> requires complex staging, the Permittees may stage on a burn pad for 48-hours and the Department will not consider the staging inappropriate storage; however the equipment <u>or soil</u> and the unit must be covered."</p>	No mention of staging HE-contaminated soil at the TA-16 Burn Ground was found in Attachment A or Attachment I of the draft permit. LANL should provide information on the need for complex staging of soil before open burning at TA-16-388. Once the need for complex staging of soil is established in the Attachments to the draft permit, the suggested change in text can be implemented.
317	LAN 159	64	Part 6 Section 6.2	LANL	<p>The suggested change clarifies that a minimum temperature can only be maintained at TA-16-</p>	A temperature of 400 Celsius is specified on Page 8 of Attachment I as the minimum temperature needed to

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					<p>388 because open burning operations at this unit use a supplemental fuel of propane. TA-16-399 does not use supplemental fuel; therefore a minimum temperature for an open burning operation cannot be specified. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64 lines 20-21: Please change the text to read: "The Permittees shall maintain a minimum temperature of 400 degrees Celsius during open burning <u>at the Technical Area (TA) 16-388 Flash Pad</u> to ensure complete thermal degradation of HE <u>contaminated</u> wastes."</p>	<p>thermally degrade HE-contaminated wastes. Because HE-contaminated wastes are only burned at TA-16-388, the text can be changed as proposed by LANL when the draft permit is revised.</p>
318	LAN 160	64	Part 6 Section 6.2	LANL	<p>The proposed requirement to cover the unit 8 hours after the last open burning even to cover containment devices conflicts with requirements under the DOE's Explosive Safety Manual. The manual dictates that no entry should be allowed until eight hours have elapsed unless it can be determined visually that all explosives have been destroyed. Suggested changes are consistent with this requirement. Further, LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64 lines 24-25: Please change the text to read: "The Permittees shall <u>wait eight hours after the last open burn event</u> to cover the containment devices (e.g., pans, trays, or flash pads) <u>within eight hours of the last open burn</u></p>	<p>The information cited by LANL regarding the requirement to wait 8 hours before entering the treatment area is provided on Page 11 of Attachment I. Thus, revising the text to reflect the changes suggested by LANL appears appropriate. Further, the suggested clause concerning visual confirmation that all HE has been destroyed should be integrated into the revised text. For example Lines 24 and 25, Page 64 could be revised to read: "The Permittees shall wait eight hours after the last open burn event to cover the containment devices (e.g., pans, trays, or flash pads) unless it can be determined visually that all HE has been destroyed. If visual confirmation is not possible, the containment devices shall be covered as close to eight hours after the last open burn event as possible."</p>

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					<p>event , but should cover the containment devices as close to eight hours after as possible while awaiting collection of treatment residue."</p> <p>Or include a clause that would allow for the units to be covered within 8 hours if it can be determined visually that all explosives have been destroyed.</p>	
319	LAN 161	64	Part 6 Section 6.2	LANL	<p>The DOE's Explosive Safety Manual requires LANL workers wait at least 24 hours before ashes are collected. Therefore, a requirement to clean up treatment residues within 24 hours conflicts with DOE Safety requirements and could not be met. Also, requiring the management of all waste treatment residues to be managed as hazardous waste until proven otherwise by waste analysis is not consistent with NMED rules, and waste characterization practices at LANL. Treatment residues may not constitute a "hazardous waste" and may be a "New Mexico Special Waste". Many of the TA-16 Burn Ground treatment residues have previously been characterized as New Mexico Special Waste in accordance with 20.9 NMAC. Wastes that have an EPA hazardous waste number associated with them prior to treatment that is not associated with a characteristic hazardous waste will be managed as hazardous waste after treatment. Waste characterization is performed on all treated waste residues. The proposed permit condition clarifies that treatment residue will be managed appropriately, depending on the outcome of the characterization. LANL's permit application</p>	<p>The information cited by LANL regarding the requirement to wait 24 hours before collecting or removing treatment residue is provided on Page 11 of Attachment I. NMED HWB may want to consider revision of Lines 26 and 27 on Page 64 to read: "The Permittees shall clean open burn unit containment devices of any treatment residue after 24 hours have elapsed from the end the open burning event. The removal of treatment residue shall be conducted as close to 24 hours after the last open burn event as possible unless it has been determined that is unsafe for personnel to enter the treatment unit."</p> <p>LANL has proposed further changes to Lines 27 and 28 based on process knowledge. However, it is not clear that this knowledge has been accepted by NMED HWB. Until NMED HWB is satisfied that LANL's process knowledge is an acceptable basis for decisions regarding residue management, the conservative approach of handling residues as hazardous wastes should remain in the draft permit.</p>

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					<p>did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 64 lines 26-28: Change text to read: "The Permittees shall clean open burn unit containment devices of any treatment residue <del>within</del> <u>after 24 hours have elapsed</u> after any open burning event. <u>The removal of treatment residue shall be conducted only after it has been determined that it is safe for personnel to enter the treatment unit.</u> These residues shall be <del>managed as a hazardous waste until determined otherwise based on waste analyses</del> <u>characterized in accordance with the Waste Analysis Plan (Attachment C), and managed appropriately.</u></p>	
320	LAN 162	64	Part 6 Section 6.2	LANL	<p>The proposed requirement to wait a minimum of 24 hours between burns is not based on LANL's permit application or the administrative record. Suggested change clarifies that each unit can be used once a day. This is also consistent with LANL's permit application.</p> <p>Page 64 lines 29-30: Change text to read: "<u>At each unit,</u> tThe Permittees shall wait a minimum of 24 hours between open burning events before burn pan/flash pad reuse to allow the surface to cool."</p>	<p>TechLaw's screening level air modeling risk analyses showed that if the eleven constituents listed on Lines 11-21 on Page 178 of the draft permit are not treated at TA-16-388, all treatment operations at the TA-16 Burn Grounds can operate at the annual and per event treatment limits established in Part 12 of the draft permit. The air modeling analysis assumed that a single unit could be used as frequently as twice in one day for a maximum of two burn events in a 24-hour period. Thus, an operating schedule roughly equivalent to the one cited in this comment has been demonstrated to be protective of human health and the environment. It appears LANL's suggested revision could be accepted without concern of additional impacts to human and ecological receptors.</p>

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393	LAN 234	177	Part 12, Section 12.1	LANL	<p>The proposed requirement to annually inspect and maintain the surface water run-on/runoff control features associated with TA-16-388 and -399 is not found in NMED or EPA rules, is not supported in the administrative record, and is not protective of human health and the environment. LANL's permit application did not suggest this permit condition. Run-on and runoff control features associated with storm water runoff from the unit are inspected in accordance with the Environmental Protection Agency's Multi-Sector General Permit for Storm Water. Run-on to the units is prevented via the unit covers that are inspected weekly using the procedure identified in the Inspection Plan (Attachment E) of this Permit. This change does not make the condition less stringent but reflects the procedure more accurately.</p> <p>Page 177, Lines 12-15: Please change the text to read: "The Permittees shall <del>inspect and</del> maintain as necessary the surface water run-on/run-off control features associated with TA-16-388 and TA-16-399, including all associated rock retention structures and the retaining wall (40 CFR §§ 264.601(b) and 270.32(b)(2)). The Permittees shall document <del>these inspections</del> any maintenance or repair of these controls in the Facility Operating Record."</p>	Details of the inspection program based on EPA's Multi-Sector General Permit for Storm Water were not found in the draft permit or in Attachments E and I. Attachment E notes weekly inspection of secondary containment but not of all run-on/run-off control features. Information on the inspections performed by LANL is needed before the text on Page 177 Lines 12-15 can be revised. LANL must demonstrate that the inspections of the run-on/run-off controls are as or more effective than the annual inspection specified in the draft permit. Furthermore, all inspections of the run-on/run-off controls should be noted in the facility operating record.
394	LAN 235	177	Part 12, Section 12.1	LANL	The proposed requirement to sample soils around the TA-16 burn units annually is not found in NMED or EPA rules, is not supported	LANL does not offer a compelling argument for shifting the frequency of soil sampling from annually to once every five years. However, NMED HWB may

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					<p>in the administrative record, and is not protective of human health and the environment. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record. The thermal treatment units located at TA-16 are not land treatment units and should not be subject to Subpart M Unsaturated Zone Monitoring (40 CFR §264.278) requirements. However, the suggested changes made to the text provide the information necessary to satisfy the requirements of 40 CFR §264.601(b) establishing background soil concentrations for the immediate area and indicate the impact that open burning treatment operations have at the site through the comparison of the two analyses.</p> <p>Page 177, Lines 16-31: Please delete the requirement for soil sampling (lines 16-31) to be conducted at the TA-16 Burn Ground or revise this text as follows: "<u>The Permittees shall conduct soil sampling and analysis at the TA-16-399 Burn Tray and TA-16-388 Flash Pad (40 CFR 264.601(b) and 264.602). Soil samples shall be collected within 180 days from the issuance of this Permit and the sampling and analysis report must be submitted within 60 days from that date in accordance with the date specified in Attachment N (Compliance Schedule). Soil sampling and analysis shall again be conducted 5 years after the issuance of this Permit in the same month initial sampling was conducted. The sampling</u></p>	<p>consider removal of the reference to 40 CFR §.278 Subpart M Unsaturated Zone Monitoring. In general, soil sampling at open burn units should address 40 CFR §.264.601(a)(1), 40 CFR §.264.601(a)(7), 40 CFR §.264.601(b)(2), 40 CFR §.264.601(b)(8), 40 CFR §.270.23(b), and 40 CFR §.270.23(e). Please see the response to Comment No. 1 for additional information on soil sampling around the burn units.</p>

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					<p><u>and analysis report for this activity must be submitted within 90 days from the date of collection and compare results to the previous analysis in accordance with the date specified in Attachment N (Compliance Schedule).</u></p> <p><u>Four soil samples shall be collected from the zero to six inch depth and analyzed for total metals, explosives, and semi-volatile organic compounds. Sample locations shall be within 25 feet of the OB unit's concrete pad, along its north, south, east, and west sides.</u></p> <p>"The text currently reads: "The Permittees shall conduct an annual soil sampling and analysis program in accordance with 40 CFR § 264.278 and § 264.602. Soil samples shall be collected annually at the open burn unit each July; the sampling and analysis report must be submitted in accordance with the date specified in Attachment N (<i>Compliance Schedule</i>). Sampling shall occur within 24 hours following the last treatment event for June of each year at the unit. If no treatment has been conducted since June of the preceding year, annual sampling may not be conducted for that annual period. The Department shall be notified, in writing, no later than July 1 of each year after the effective date of this Permit of the anticipated annual soil sampling date. If treatment has not been conducted since the previous June, the Permittees shall certify, in writing, that treatment was not conducted at the unit during the preceding year no later than July 1 of each year after the effective date of</p>	

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					<p>this Permit.</p> <p>Four soil samples shall be collected from the zero to six inch depth and analyzed for total metals, explosives, and semi-volatile organic compounds. Sample locations shall be within 25 feet of the OB unit's concrete pad, along its north, south, east, and west sides. If sampling analysis results indicate hazardous constituents above residential risk soil screening levels, the Permittees shall follow the sampling and remediation requirements in Permit Sections 9.2.4.7 and 9.2.4.8."</p>	
395	LAN 236	177	Part 12, Section 12.1	LANL	<p>The proposed condition appears to require that the units undergo clean closure, or at least cleanup, if sampling identifies hazardous constituents present at levels that exceed residential soil screening levels. Existing soil analyses conducted nearby indicate the presence of some constituents above residential levels. It is not practicable or necessary to clean this area if hazardous constituents are present above residential levels while the units are still in operation. The area where the open burning units are located is surrounded by SWMUs and it is likely that contamination found at the site would be attributed to RCRA historical operations rather than open burning operations. Clean up for SWMUs is scheduled to be conducted through the 2005 NMED Order on Consent. Air dispersion and deposition models submitted to the Department as part of the permit application for these units demonstrate that their continued operation does</p>	<p>NMED HWB may wish to consider removing the reference to Permit Section 9.2.4.8 on Page 177 Line 31 of the draft permit. It is important that if soil contamination is detected, the requirements in Permit Section 9.2.4.7 are met. Based on those results, the risk and hazard presented by the detected contamination should be assessed for this active unit. This will provide information needed to make an informed risk management decision regarding the contamination.</p> <p>Note that LANL's air pathway assessment has not been approved and there are outstanding questions about the air modeling approach. Thus, it cannot be assumed that current operations at the TA-16 Burn Ground are protective of human health and the environment based on LANL's analysis.</p>

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					<p>not present a threat to human health or the environment. RCRA requires the immediate clean up of spills but does not require annual cleanup of hazardous waste management units that operate in compliance with the regulations. There is no basis in the rules or the administrative record for this condition. Further, LANL's permit application did not suggest this permit condition.</p> <p>Page 177, Lines 29-31: Please remove the text: "If sampling analysis results indicate hazardous constituents above residential risk soil screening levels, the Permittees shall follow the sampling and remediation requirements in Permit Sections 9.2.4.7 and 9.2.4.8."</p>	
396	LAN 237	178	Part 12, Section 12.2	LANL	<p>The proposed requirement is not found in NMED or EPA rules, and is not protective of human health and the environment. The condition placing a minimum quantity burn restriction for the TA-16 Burn Ground will impact waste management practices because smaller burns relieve the need for 90 day storage extensions and address issues with accumulation of waste at smaller generator sites to meet the threshold quantity. At the sites where most HE contaminated waste is generated, laboratories have quantity limitations for the amount of HE that can be accumulated within the area. These quantity limits are within the gram range for most laboratories and at the time that the HE quantity limit for the individual laboratory is reached, waste must be moved from the</p>	<p>Please see the response to Comment No. 4.</p> <p>Information on small quantity burns is not found in LANL's permit application. LANL should demonstrate that small quantity burns are protective of human health and the environment by describing controls that protect nearby workers and showing deposition resulting from small burns falls largely on secondary containment structures at the TA-16 Burn Ground.</p> <p>TechLaw's analysis showed the minimum quantities currently in the draft permit were protective based on the screening performed. While LANL should be able to obviate the need for minimum quantity burn sizes, the current limits should remain in place until LANL provides the information necessary to support their removal.</p>

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					<p>satellite accumulation area within the laboratory to a 90 day storage accumulation area. The waste must then be transported and treated at the TA-16-388 Flash Pad within the regulatory required time frame. Suggested changes to these paragraphs remove the minimum quantity limitation, correct the maximum quantity per burn at TA-16-388, and clarify that the maximum annual quantity applies to both units at the TA-16 Burn Ground. This decreases the amount of waste that may be open burned throughout a year and is consistent with the maximum quantity used for air quality modeling conducted for the open burning units. LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 178, Lines 2-9: Please change the text to read: <u>"The Permittees may treat dry or wet bulk high explosives (HE) and HE-contaminated waste on the TA-16-388 Flash Pad.</u></p> <p><u>The Permittees shall not treat more than 250 lbs of combustible material per event at the Flash Pad or a total maximum annual quantity for both open burning units at the TA-16 Burn Ground of 20,000 lbs (40 CFR 270.32(b)(2)). Combustible material shall not include the weight of non-burnable material such as equipment, soil, or piping."</u></p> <p>Text currently reads: "The Permittees may treat dry or wet bulk high explosives (HE) on the</p>	

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					<p>TA-16-388 Flash Pad.</p> <p>The Permittees shall not treat more than 250 lbs bulk HE per event (with a maximum annual amount of 20,000 lbs) and no less than 100 lbs per event (with a maximum annual amount of 800 lbs) at the Flash Pad (40 CFR § 270.32(b)).</p> <p>The Permittees may treat HE-contaminated waste on the TA-16-388 Flash Pad.</p> <p>The Permittees shall not treat more than 1,000 lbs per event (with a maximum annual amount of 20,000 lbs) and no less than 50 lbs per event (with a maximum annual amount of 600 lbs) of HE-contaminated waste at the Flash Pad (40 CFR § 270.32(b)).”</p>	
397	LAN 238	178	Part 12, Section 12.2	LANL	<p>The proposed requirement is not found in NMED or EPA rules, and is not protective of human health and the environment. The environmental air modeling conducted for the TA-16 Burn Ground included an analysis of the estimated air dispersion and deposition impacts for constituents in surrogate waste streams as similar as possible to those treated at the open burning units. The modeling analysis used a conservative approach that assumed wastes with the highest emissions factors were burned frequently. Even with these conservative estimations, the air dispersion and deposition impacts analysis did not support a prohibition for the treatment of any of the constituents that were modeled. The LANL TA-16 Burn Ground Air Pathway Assessment Report, Revision 0 was submitted to the</p>	<p>LANL’s air pathway assessment has not been approved and there are outstanding questions about the air modeling approach. Thus, it cannot be assumed that current operations at the TA-16 Burn Ground are protective of human health and the environment based on LANL’s analysis.</p> <p>The air modeling and risk-based screening analyses performed by TechLaw show that with the elimination of the 11 constituents listed on Lines 10-21 of Page 178 of the draft permit, the Burn Ground operations addressed in the screening analyses appear protective.</p> <p>Until LANL’s air assessment is completed to NMED HWB’s satisfaction, the draft permit language should remain unchanged.</p>

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					<p>Department on September 5, 2007 (LA-UR-07-5711). Additionally, LANL's permit application did not suggest this permit condition, and no support could be found for the condition in the administrative record.</p> <p>Page 178, Lines 10-22: Please delete lines 10-22.</p>	
398	LAN 239	178	Part 12, Section 12.2	LANL	<p>The proposed requirement to ensure treated soils have a minimum level of HE is not found in NMED or EPA rules, is not supported in the administrative record, and is not protective of human health and the environment. Setting a minimum level of HE within soils may restrict the treatment of soil that is contaminated with less than 10% HE but contains large pieces of HE that pose a detonation danger and should not be shipped off-site for treatment. In contrast, large pieces of HE as a contaminant within solvents can be filtered out of the solvent prior to shipment off-site. LANL's permit application did not suggest this permit condition.</p> <p>Page 178, Lines 24-25: Please change text to read: "The Permittees shall ensure solvents <del>or</del> soils treated at the Flash Pad have a minimum of 10% HE (40 CFR 270.32(b)(2))."</p>	<p>Additional information on HE-contaminated soil is needed before changes to Page 178, Lines 24-25 are considered. For example, it is not clear why percentage of HE cannot be estimated for soil containing large pieces of HE. Further, it has not been demonstrated at what level or percentage of HE the danger of detonation of the contaminated soil begins. NMED HWB must be sure soil that should be treated by other technologies rather than open burning is not open burned at the TA-16 Burn Ground.</p>
399	LAN 240	178	Part 12, Section 12.3	LANL	<p>The proposed limit on the minimum amounts of HE treated at the TA-16 burn units is not found in NMED or EPA rules, is not supported in the administrative record, and is not protective of human health and the environment. A minimum quantity burn</p>	<p>Please see the response to Comment No. 4.</p>

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					<p>restriction will impact waste management practices because smaller burns are necessary to comply with the 90 day storage limit and accumulation of waste at smaller generator sites to meet the threshold quantity. In addition, some of the bulk HE that is stored in magazines must be placed into a 90 day accumulation area as they are removed from storage in the stockpile and the waste determination is made.</p> <p>Air modeling conducted for the TA-16 Burn Ground assumed at maximum quantity for waste treatment at the entire Burn Ground to be 20,000 lbs, rather than 20,000 lbs for each unit. Revised text reflects this quantity restriction and is consistent with LANL's permit application. LANL's permit application did not suggest this permit condition.</p> <p>Page 178, Lines 29-33: Please change the text on lines 29-33 to read: "<u>The Permittees shall ensure that the TA-16-399 Burn Tray is used to treat only pure dry HE (40 CFR § 270.32(b)(2)).</u></p> <p><u>The Permittees shall not treat more than 1,000 lbs bulk HE per event at the Burn Tray with a maximum annual quantity for both open burning units at the TA-16 Burn Ground of 20,000 lbs (40 CFR 270.32(b)(2)).</u>"</p> <p>The text currently reads: "The Permittees shall ensure that the TA-16-399 Burn Tray is used to treat only pure dry HE (40 CFR § 270.32(b)).</p> <p>The Permittees shall not treat more than 1,000</p>	

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					lbs bulk HE per event (with a maximum annual amount of 20,000 lbs) and no less than 100 lbs per event (with a maximum annual amount of 800 lbs) at the Burn Tray (40 CFR § 270.32(b)).”	
587	LAN 429	10	Attachment I, Section I.2.3	LANL	<p>The information within the Attachment should be changed to be consistent with the requirements of this Permit and allow for the characterization of treatment residues using methods as allowed for in the Waste Analysis Plan (Attachment C) and as included in LANL’s permit application.</p> <p>Page 10: The fourth sentence in the first paragraph of the section should read: “Burning will treat a number of waste constituents (e.g., HE, solvents) but metals (if present) will not be destroyed; they can remain in the residues which are characterized in accordance with Attachment C (Waste Analysis Plan) of this Permit.”</p>	Footnote a to Table C-14, Attachment C indicates all ash generated from open burning at the TA-16 Burn Ground is “...characterized for all TCLP metals.” This appears equivalent to the text in the fourth sentence on Page 10 of Attachment I. To clarify the fourth sentence, NMED HWB may wish to consider revising the end of the fourth sentence to read: “...they can remain in the residues which are sampled and analyzed for all TCLP metals in accordance with Attachment C (Waste Analysis Plan) of this Permit.”