

RESPONSES TO COMMENTS ON THE DRAFT PRESCRIBED BURN PLAN OF RANGES 43–48

1 REGULATORY AGENCY COMMENTS

1.1 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CAL EPA), DEPARTMENT OF TOXIC SUBSTANCES AND CONTROL (DTSC), JULY 15, 2002.

Comment 1: Along the northern boundary of the project area, the primary, secondary and tertiary control lines appear to be coincident or are noted as “to be completed later”. Please indicate where the secondary and tertiary control lines are planned.

Response 1: Comment accepted. Attachments A, C, and D have been revised to show the secondary and tertiary control lines. The secondary lines shown are coincident with the boundaries of the multi-range area (MRA); the tertiary lines shown are coincident Parker Flats Cut-Off Road to the north, Barloy Canyon Road to the east, and the boundaries of the former Fort Ord to the south and west.

Comment 2: The MSDS for Fire-Trol LCA-F, Liquid Concentrate (aerial fire retardant), indicates that it is based on commercial fertilizers. Please provide any available information on whether or not application of a fertilizer will affect regrowth of central maritime chaparral or encourage the growth of invasive weeds.

Response 2: These suppressants and retardants are approved by the U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and California Department of Forestry (CDF), and they are commonly used throughout the country on all types of vegetation.

Comment 3: It would be helpful to provide in Section 1 a reference to the resume forms included as Attachment O and a reference to the qualifications summary.

Response 3: Comment accepted. A reference to the qualifications for the Incident Commander/Burn Boss and the Aerial Ignition Specialist/Air Attack Supervisor included in Section O has been added to Section 1.

Comment 4: Please indicate how Directorate of Environmental Natural Resources (DENR), U.S. Army Corps of Engineers (USACE), and unexploded ordnance (UXO) contract personnel (Parsons) fit into the organization chart/command structure during the proposed burn. Include a description of what responsibilities will be managed by DENR, USACE, and Parsons during the proposed burn. A table similar to those included in the various community safety plans would be appropriate.

Response 4: The Burn Plan is a planning tool that follows the normal format for performing a prescribed burn. The relationships with Fire Stop and the other key organizations are found in other supporting documents such as the Security Plan, the Command and Control Plan, and the Burn Support Plan, which covers burn-related operations (e.g., signs, barriers, escorts, and contingency actions).

Comment 5: Please provide a narrative explanation of Table 2.3. It is unclear if this table describes fuel loading for type 2 grasslands vegetation (10-20%) and type 4 (80-90%) vegetation or something else. Please clarify and include a definition of the NFFL fuel model.

Response 5: Table 2.3 has been deleted. Detail coverage of the fuel characteristics is provided in a revised Attachment P.

Comment 6: Different minimum helicopter altitudes of 100, 150 or 200 ft above ground level (AGL) are listed in Section 10. Please clarify how the acceptable minimum helicopter altitude was determined, and explain why the described different minimum altitudes are appropriate.

Response 6: The 150 ft and 200 ft AGLs are provided to discuss varying air speeds needed to obtain fire on the ground; the absolute lowest AGL for drops will be 100 ft. The USACE Ordnance and Explosives Safety Specialist (OESS) and the helicopter pilots will ultimately determine the minimum altitude to perform the burn operations.

Comment 7: Please provide documentation demonstrating that the aircraft minimum altitudes are consistent with the approved Defense Department Explosive Safety Board (DDESB) explosive safety submission (ESS) for OE/UXO response actions at Fort Ord. Please include a copy of the DDESB ESS as an attachment. If the original DDESB ESS for Fort Ord does not address the use of aircraft, please indicate if a revised DDESB ESS will be submitted for approval as has been required by the USACE for field work changes at other ordnance sites such as Tourtelot.

Response 7: DDESB submissions do not address vegetation clearance methods; therefore, the USACE OESS and the Fire Stop helicopter pilots will ultimately determine the minimum altitude to perform the burn operations.

Comment 8: Please provide the contingency plan for review.

Response 8: The contingency plan that will be used for this burn is the Monterey County OES plan for fire.

Comment 9: Please define “preparedness Level 3” and how it is determined.

Response 9: The standards in the Interagency Mobilization Guide determine the Preparedness Level, which ranges from 1 (maximum resources available) to 5 (minimum resources available). The standards in this guide factor variables such as availability of equipment and personnel, the extent of existing fires, and the current and forecasted weather.

Comment 10: Please indicate if a community safety plan will be prepared to address potential hazards associated with detonation of OE/UXO during the burn.

Response 10: The only community within the 1,701 ft exclusion zone of Ranges 43–48 is a portion of the southeastern section of the Fitch Park Housing Area. However, the USACE OESS has determined that it is acceptable for those residents located within the exclusion zone to remain in their homes. In the event that the Fitch Park Housing Area needs to be evacuated, the POM Federal Police is responsible for evacuating the Fitch Park homes that are within the 1,701-ft exclusion zone, in accordance with the Monterey County Community Safety Plan.

Comment 11: It is suggested that the radio frequencies and key phone numbers which will be in use during the proposed burn continue to be withheld from public review to prevent unauthorized or inappropriate use during the proposed burn.

Response 11: The Command and Control Plan, which contains the radio frequencies, will be a restricted document with a limited distribution and will not be reviewed by the public. This plan was finalized in September.

Comment 12: Please make it clear in this section (as in section 9.2.10) that the hospitals listed for use during an emergency will be notified 24 hours prior to initiating a burn.

Response 12: The fact that the Community Hospital of Monterey Peninsula, Natividad Medical Center, and Salinas Valley Memorial Hospital will be notified at least 24 hours before the burn begins has been added to the end of section 9.2.10.

2 COMMENTS FROM OTHER ORGANIZATIONS AND THE PUBLIC

2.1 MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT, JULY 17 2002

Comment 1: The distinction between the various ages of chaparral on Attachment I is not clear from the colors and patterns chosen.

Response 1: comment accepted. The colors have been changed to clearly distinguish the various types of vegetation in the Ranges 43–48 site.

Comment 2: Attachment L, Ignition Patterns: This is useful for the CALMET/CALPUFF modeling project and supports the assumption of burning into the (East) wind.

Response 2: It is agreed that Attachment L is useful for the CALMET/CALPUFF modeling project and that it supports the assumption of burning into the East wind.

Comment 3: Should day care and nursing homes be indicated as smoke sensitive areas on Attachment M.

Response 3: A table has been added to Attachment M that lists smoke sensitive facilities as found by searching the California Community Care Licensing Division (<http://cclcd.ca.gov>).

Comment 4: The smoke travel projections in Attachment N appear to be keyed to a desired offshore flow regime, which is reverse from the predominant onshore flow type. It should be noted that the nighttime flow is shown as going SE toward generally increasing elevations leading to Impossible and Lookout Ridges. In looking at the terrain, it is more likely that nocturnal drainage from the site would drain more ENE from the site, generally down the canyon and lower elevations leading to Merrill Ranch and the Salinas Valley. Also, if the targeted offshore regime is strong enough, it is possible that the local nocturnal flow could persist in the offshore direction which could deliver smolder phase smoke to the nearby communities immediately west of the burn site.

Response 4: comment accepted. Attachment N has been redrawn to more accurately depict the wind flow patterns. The desired wind flow during the burn is indeed “reverse of the predominant onshore flow”. It is expected that there will be a light offshore wind throughout the day; however, that is not always realistic. It is planned that burning will occur during light to moderate offshore wind flow patterns in the morning with the possibility of an on-shore sea breeze in the afternoon. Nocturnal air flow may indeed persist in the offshore direction. There is a possibility that the normal nocturnal wind flow pattern may follow this burn, and light offshore flow patterns could exist that have the possibility of bringing smolder phase smoke to the nearby communities.

Comment 5: It appears that Fire Stop has considerable experience and training in conducting prescribed burning. However, it is not clear from the text how much direct experience the team has in the challenges presented by the wildland/urban interface or the complex terrain and meteorology of the former Fort Ord.

Response 5: Fire Stop has considerable experience in dealing in all sorts of conditions, including the urban wildlife interface. Fire Stop conducted the first burns in over 25 years at the Lake Tahoe Basin, where expensive homes are adjacent to the burn unit. The Fire Stop Burn Boss has numerous years of experience in conducting controlled burns in maritime chaparral areas and has even conducted classes for the USFWS in performing such burns both domestically and overseas. This information has been added to the text in Section 1.

Comment 6: The procedure for making the “Go/No Go” decision and the overall command structure are not clear, especially as they relate to the OMC Fire Chief and the Fire Stop. Who actually makes the Go/No Go decision?

Response 6: The OMC Fire Chief makes the final go/no go decision. Before the OMC Fire Chief makes the decision, the Fire Stop meteorologist, fire behavior analyst, and burn boss must all recommend that the burn should proceed or else it will not be performed. Section 18 includes the go/no go checklist that the burn boss and OMC Fire Chief must sign, and Section 10 shows the Burn Day Monitoring form that the Fire Stop meteorologist, fire behavior analyst, and burn boss all must sign to approve the burn proceeding. As stated in section 18, if any item on the go/no go checklist has a "no" response, the burn will not proceed.

Comment 7: The OMC Fire Chief is mentioned as being involved in various decisions and approvals for the project, and yet this function is not shown in this organizational chart. Where does the OMC Fire Chief fit on the chart?

Response 7: The chart was intended to only include the organization of Fire Stop. The OMC Fire Chief clearly makes the decisions pertaining to fire-related activities.

Comment 8: The loadings shown in Table 2.3 range from two to 10 tons per acre. This does not seem to match the 7222 tons per 545 acres or the 13 tons per acre values mentioned on 9.1.14 and 9.1.19; nor are they consistent with the more common values cited by other agencies for other prescribed burns of 4 tons per acre for grasslands, 13 tons per acre for chamise, and 15 tons per acre for heavy chaparral.

Response 8: The overall fuel loading of the burn area is less than the loading typical of mature brush (fuel model 4), and is therefore less than the 13 tons/acre characteristic of “model 4” mature brush. The average fuel loading over most of the burn area is probably less than ½ that of mature brush, on the order of 6 tons/acre or less. Guidelines in “Burning by Prescription in Chaparral” (General Technical Report PSW-51) suggest that the available fuel in a stand of medium chamise is 2 to 8 tons/acre. The burn-site fuels are predominantly light to medium chaparral and the available-fuel loading is not much more than in medium chamise. Refer to typical fuel model loadings in the fuel model descriptions contained in Attachment P.

Comment 9: If possible, surveys of fuel loading should be made before and after the burn to estimate the amount of vegetation actually consumed, and consequently, the amount of PM10 emitted. The information would be useful for the post-burn analysis and for conducting future burns.

Response 9: Surveys have been conducted to determine existing fuel loads, and they will be conducted again after the burn to determine the amount of vegetation consumed. In addition, the surveys will be used in the post-burn analysis. For information pertaining to vegetation surveying, please consult Harding ESE.

Comment 10: Clearing vegetation and minimizing smoke impacts are both listed as goals of the burn in section 3.1. These are in potential conflict in that the burn could be going well, but producing smoke impacts.

Response 10: comment accepted. The goals and objectives in section 3 have been revised.

Comment 11: From the map in Attachment J, it appears that the Defensible Polygon B is over 2000 acres. How close to the proposed burn area of approximately 545 acres will the pretreatment be carried out?

Response 11: As stated in section 11.7, the area within 100 ft of the burn unit's outer perimeter will be pre-treated with foam and water.

Comment 12: The environmental variables presented in tables 7.1 (NFFL Model 2) and 7.3 (NFFL Model 4) cover such a wide range of values that virtually all normally observed conditions are included (i.e., 55 to 85° F ambient temperature, 10 to 60% relative humidity (RH), and a wide range of fuel moisture %). Is there a more definitive prescription available? The text indicates that ignition will occur under the driest fuel conditions possible, although the numbers cited (live £ 90%, 10-hr. dead fuels £ 10%) do not seem restrictive enough to preclude that condition. However, if the burn is conducted under very dry fuel conditions, the potential for escapes increases.

Response 12: A preliminary prescription was provided in the Draft Burn Plan, and it was subject to refinement. A new burn prescription has been developed (and is described in detail in the Fire Behavior Analysis in section 7 of the current Burn Plan). The prescription is based on specific guidelines put forth in “Burning by Prescription in Chaparral” (General Technical Report PSW-51). The extreme combinations of those guidelines define the lowest adequate fire intensity and the highest controllable fire intensity that are reasonable for a prescribed burn in chaparral. The Fire Behavior Prediction System (using BehavePlus) is applied to define the combinations of conditions (fuel moistures, temperatures, RH, and wind speed) that generate fire intensities that fall within the acceptable range. The range of prescribed conditions is more restricted than those in the preliminary prescription in the earlier draft plan.

Comment 13: RH as low as 10%, as indicated in these tables, seems too low for fire safety, i.e., the prospect for fire escapes would increase with very low ambient humidity.

Response 13: The lower RH limit in the current prescription is now 15%.

Comment 14: The suggested wind speeds in tables 7.1 (NFFL Model 2) and 7.3 (NFFL Model 4) as high as 15 mph may be too high as, based on past burns, winds in this range tend to lead to plume knockdown, which creates ground-level smoke impacts. It is also not clear what set of measurements the prescription will be compared against, i.e., if the target winds represent short term gusts, hourly averages, or some other derived value and if they are at 10 meters or averages within the mixed layer.

Response 14: The current prescription allows winds of 15 mph in only one set of circumstances; otherwise, it only allows lower wind speeds. The wind speeds in the prescription are average 20-ft winds. The details of the prescription and the numerical factors used to relate midflame-level wind speeds to the 20-ft wind speeds are included in the revised section 7. The fire behavior prescription only describes a window-of-opportunity to achieve the appropriate fire intensities; further operational or smoke transport considerations will limit what is attempted within that window.

Comment 15: What about weather monitoring offsite in potential impact areas such as nearby Seaside, downwind areas in Salinas Valley and Toro Park area, etc?

Response 15: The weather stations that are currently positioned are sufficient to support the burn operations. As stated in Sections 8.1 and 8.2 of the Burn Plan, weather data will be collected from the three RAWS stations around the burn and offsite at the Marina Profiler, Monterey Airport, and Salinas Airport. These meteorological stations should be more than adequate to address the meteorology of the burn site and the surrounding areas. Additionally, the Fire Stop meteorologist will be requesting access from the MBUAQMD, for the data collected at its air quality monitoring stations at Salinas and Seaside (yet to be established).

Response 16: What sort of analysis will be developed to link the available synoptic scale products with local fine scale conditions? Since the local-scale patterns are often durable and persist despite synoptic variation, will the analysis look at synoptic to local relationships over several years of archive data or will this mostly focus just on the months of the upcoming burn period?

Comment 16: Meteorological relationships of variables on the synoptic scale to micro-scale will be reviewed from over the past 5+ years to determine possible influence and interaction. However, that review will only be focused on the times of the year where our prescription will be met, which in this case is from September to November.

Comment 17: Airborne or mobile LIDAR could also be very useful for portraying initial conditions over the area and to characterize plume behavior during the burn.

Response 17: Surface and/or airborne lidar or even sodar could be useful, but the close proximity of the Marina profiler and the additional meteorological stations in the area minimize the value of a lidar or sodar. The local meteorological data and atmospheric modeling available for this burn are sufficient for our needs. Such additional data collection and monitoring adds to the complexity of the effort, while adding just a minimal value.

Comment 18: Can the Redding & Riverside Interagency Fire Forecast and Warning Unit (IFFWU) forecasters be of any additional assistance?

Response 18: The National Weather Service is re-initiating fire-weather forecasting at its weather service forecast offices. The NWS has a regional WSFO at Monterey less than 5 miles from the burn site. The Fire Stop meteorologist is in contact with them and the corresponding WSFO in Hanford. Before burning, the Fire Stop meteorologist will discuss the upcoming weather scenarios with these offices to establish the best possible day for the burn. CARB and MBUAQMD will also be on the daily contact list once an up-coming weather scenario is identified.

Comment 19: The approach of minimizing smoke by relying on optimum fire behavior techniques and weather conditions sounds promising, although not a lot of specifics are provided on how this will be accomplished

Response 19: From a meteorological and smoke dispersion standpoint, the idea is to burn the brush at its driest in order to minimize smoke. This allows for a cleaner burn with less smoke because the fuel has a lower moisture content. Additionally, the fire will be hotter, which will give more loft to the smoke allowing more smoke dispersion higher in the atmosphere keeping the smoke above and away from the public. The key is picking the day that produces local weather patterns that are conducive to burning and smoke dispersal. Specific weather variables

are not added here, because there are a variety of scenarios on the large scale and local scale that accomplish our goals. In this Burn Plan, ranges for specific meteorological variables and time lines that will be used as the frame work for the burn strategy have been specified.

Comment 20: The District requests to be provided with more notice than 24-hours to mobilize staff resources for observing the burn, conducting monitoring and dealing with potential complaints. The 24-hour value applies when prescribed burn permit holders are requesting authorization from the District, which does not apply in this case.

Response 20: The Army is responsible for notification. The Army and its contractors will be monitoring the weather to determine when the appropriate burn conditions are observed. At that time the Army's plan is to initiate the burn notifications identified in this plan and the Voluntary Relocation Plan. The notification process will provide the initial notification (approximately 3-7 days before the burn) that a burn is possible but the final determination will occur on the day of the burn. The Army will add the Air District to our notification system.

Comment 21: Based on previous fire events at Fort Ord, Spreckels, residential areas along River Road and most of the Salinas Valley cities have been affected by smoke impacts and should be included in this list.

Response 21: comment accepted. The Salinas Valley (as far south as King City") has been identified as a smoke sensitive area in the burn plan.

Comment 22: The text indicates that one burn in 1998 resulted in community impacts and smoke complaints. In actuality, four burns resulted in impacts and smoke complaints, some more than others.

Response 22: comment accepted. Text has been revised to state that four of the 1998 burns resulted in smoke complaints

Comment 23: It is unclear whether "extinction" means the end of active ignition, or the end of smoke generation. The end of the smoldering phase should mark the end of monitoring, as the potential impacts from smoldering may be significant.

Response 23: Extinction means the end of all smoke generation, including all hot spots, being totally out.

Comment 24: The District requests more advance warning, to be able to mobilize staff.

Response 24: Please see the response to comment 20 regarding the notification process. The burn plan has been changed accordingly

Comment 25: The San Joaquin Valley Unified Air Pollution Control District has requested to be notified of prescribed burns over 250 acres in size, because of past impacts from this air basin.

Response 25: The San Joaquin Valley Unified Air Pollution Control District is now included in this list of organizations to be notified before the burn.

Comment 26: The ideal temperature range is still very wide, from 55 to 85° F, apparently to accommodate the August to December burn window. However, the outer ranges of 15 mph and 10% RH are still present which seem too extreme. The goal of lofting the plume is positive, but might not be feasible at the high wind speed limit of the prescription.

Response 26: The refined burn prescription is based on the oldest and most flammable portions of the on-site fuels (the 30-year-old brush stands on the southwest side) to ensure that the greatest control problems have been addressed.

Comment 27: It is stated that “ignition will be halted while smoke impact conditions are present”. Although some level of impact is regarded as inevitable, it is not clear what level of impact triggers this provision and whether the decision will be based on visual/aerial observations, smoke complaints, real-time air monitoring data, or some combination of these factors.

Response 27: The burn plan has been revised to state that if smoke impact conditions are present or meteorological conditions deviate from prescription, the fire ignition may be halted at the discretion of the OMC Fire Chief.

Comment 28: In order for the information collected to be useful in guiding future burns, the Post-Evaluation Form should be submitted 30 days after conducting the prescribed burn.

Response 28: The Army will complete the Post-Evaluation Form as required under Title 17 and submit this form within the required time frame. In addition, the Army will complete a Post-Burn Evaluation—the draft of the Post-Burn Evaluation will be submitted 45 days after the burn project is completed.

Comment 29: Details of the procedures by which complaints of smoke impacts will be handled must be included.

Response 29: An Army representative will log all smoke-impact complaints; coordination procedures between the Army and the MBUAPCD are being developed.

Comment 30: The firing, according to Attachment L, will likely begin along Range 48, which according to Attachment H is one of the more UXO-laden areas of the parcel. Will the UXO density have any effect on the ignition pattern?

Response 30: The amount or density of UXO on the ground will not affect the ignition pattern as specified in the Burn Plan.

Comment 31: The ignition information for all burning, not just the Test Burn, should be documented to facilitate subsequent analysis of the burn. The information recorded should include the actual ignition pattern used, including the times of active ignition, as well as the spatial and temporal progress of the ignition operation across the burn unit. The quantities of napalm used to facilitate ignition should also be recorded to help assess the energetics of the plume.

Response 31: Obtaining good operational and fire behavior information from the burn is important, and such monitoring/recording will be ongoing during the burn.

Comment 32: The text indicates that the site-related weather data will be analyzed to identify a weather pattern that will produce a burn hot enough to meet the objectives. What type of analysis is being developed and how many months or years does the database encompass? Can the results be used to help define the “better” or “ideal” meteorological conditions for the CALMET/CALPUFF modeling project.

Response 32: The FWM has been analyzing weather patterns and working directly with the other team members to develop a burn scenario that will produce a fire that is sufficient to meet the

various burn criteria. The FWM uses numerous models that encompass this area. The FWM determines which models appear to be performing better and closely evaluates them to help define the best and most likely set of meteorological conditions for producing good results. The offshore wind scenario has occurred many times during the past 5+ years in the September to November time frame.

Comment 33: Who is responsible for sampling? The Sampling and Analysis Plan should be referenced.

Response 33: Harding ESE is developing the Prescribed Burn Air Sampling and Analysis Plan for Ranges 43-48. The Air District along with the other agencies involved in this burn including USEPA and DTSC have been provided a copy of the plan for review and comment

Comment 34: There is no analysis of likely escape scenarios or fuel characteristics of the adjoining parcels

Response 34: A revised Attachment 'T' has been included that describes the behavior of 4 hypothetical spot fires at different points around the burn that have been modeled as they would burn under the most severe conditions of the burn prescription. Retardant and water drops within the first half-hour (or more) could span the heads of the fires and stop their forward spread. Such fires would be expected to be contained to 1½ acres, but usually much less.

Comment 35: The CALMET/CALPUFF modeling resource being developed for Fort Ord could be used in the post-burn analysis and to assess future refinements to the prescriptions.

Response 35: Using the CALMET/CALPUFF modeling resource will be considered.

Comment 36: The checklist, to be signed by the Burn Boss and the OMC Fire Chief, seems to be the most complete layout of a decision tree provided in this document. Additional detail on the decision-making process should be included either here or elsewhere in this document.

Response 36: The checklist follows the standard format. The conditions are highly dynamic and require prompt evaluation and action by the designated parties. Only the essential components are shown in the burn plan.

Comment 37: Who performs the technical review?

Response 37: The technical review of the burn plan is being performed by many agencies. The actual technical review is performed by others.

2.2 BLM, JULY 18 2002

Comment 1: The color coding in Attachment H for the Vegetation Clearance Priorities doesn't work very well.

Response 1: comment accepted. The color coding in Attachment H has been changed to better distinguish the three vegetation clearance priorities.

Comment 2: By adding the loading component in the BEHAVE PLUS you exceed the capabilities of the program. Your outputs are inadequate/false, and to assume otherwise is foolish. Understanding the premise of loading, but don't value the outputs you enclose. Request a demonstration of the BEHAVE PLUS run including Aluagel component. Strongly encourage the Army to request additional proof to substantiate the outputs of the BEHAVE runs and predicted fire behavior numbers

Response 2: The “loading” would be flammable material pre-positioned in especially sparse or damp portions of the fuel bed, in order to raise the fire intensity high enough to remove the fuel. It would function in the same way that alumagel applied aerially would, but without requiring the helicopter to linger and thereby incur extra risk from detonating ordnance. The “extra” intensity provided by the pre-loaded flammables would just raise the fire intensity to be approximately equivalent to what would be generated by the more flammable mature stands of brush as they burned on their own. The Behave runs address the highest intensities to be expected from the oldest, most flammable brush stands on-site. Therefore the pre-loading is not adding anything beyond the intensities that have been modeled, and in any case the pre-load intensities would be very localized and short-lived. No Behave output is going to directly model the effects of the alumagel—Behave assumes the fire has moved away from the ignition source.

Comment 3: With the information provided at the time this burn plan was received it is concluded that a more coordinated effort with OMC Fire is needed. With the political climate that the military is faced with and the efforts made to date it would be prudent to postpone/re-evaluate the burn. The ramifications will not only effect the potential burn program's) of the military, but the BLM, whose HMP depends on the re-establishment of a fire regime as a component to maintain the health of both vegetation and wildlife.

Response 3: Site status meetings occur on a weekly basis to closely coordinate all activities.

Comment 4: What effect will Alumagel have on the fire behavior?

Response 4: The alumagel will ignite the fire, which will then move away from the ignition source as a free-spreading fire carried by the natural fuels. The fire model applies to the fire after it spreads away from the igniting heat source. Only where high concentrations of alumagel are applied might fire intensity be significantly higher than that of an established, spreading fire front, and even then only for a short time. High concentrations of alumagel will only be used where the fuels will not burn well enough on their own, not on the heavier more flammable fuels.

Comment 5: What modeling program has been used to determine the percentage of success, rate of spread, and fire behavior.

Response 5: The burn prescription is based on the publication “Burning by Prescription in Chaparral” (General Technical Report PSW-51). The degree of fuel removal expected is that of a “medium” or “high” intensity burn as described in that publication. The prescription corresponds to conditions that typically remove over 75% of the mature fuels, but perhaps somewhat less of the younger brush stands. The Fire Behavior Prediction System, utilizing the Behave application, was used to define the combinations of burn conditions that would fit the prescription.

Comment 6: By loading the unit, how will this impact the UXO potential for detonation

Response 6: The fire intensity in areas where “fuel loading” might be added in the form of flammable material (the sparser or damper fuels) would be approximately the same as the normal fire intensity in the heavier fuels. The potential to cause detonation of UXO would be roughly equivalent. Neither the fire model nor general prescribed-burn experience can provide a detailed prediction of the potential for UXO detonation by the burning of natural fuels or of alumagel.

Comment 7: Test burn—not an issue outside the MRA

Response 7: The test burn will be performed within the boundaries of the Ranges 43-48 site.

Comment 8: Extreme fire behavior below 25% R.H.

Response 8: “Extreme” fire behavior (not a specific, quantified descriptive term) is the product not only of the relative humidity, but of the totality of the fire environment factors. A 25% relative humidity alone does not necessarily cause extreme fire behavior. The prescription is based on field-tested guidelines (“Burning by Prescription in Chaparral”, General Technical Report PSW-51), and is designed to limit fire behavior to that which can be controlled.

Comment 9: How is the Fuel Model 2 affected when adding Alumagel (BTU’s, Flame length in feet, Fire Line Intensity)?

Response 9: The contribution to fire intensity of areas of “model 2” fuel is minor, and fuel model 2 is not used in the current burn prescription.

Comment 10: BLM area and Project managers should be added to the list of organizations to be notified before the burn.

Response 10: comment accepted. BLM has been added to the organizations to be notified before the burn.

Comment 11: Red Flag on 10% RH - possibly 25-30 %

Response 11: Surface wind speed maximum conditions for ignition are currently set at 15 mph. This is a very outer limit. Anytime prescribed burning is performed an absolute outer limit must be established. Wind speeds on the order of 10-15 mph present a variety of concerns for the command team. Wind speeds that are less, but yet gust to the 10-15 mph may pose less of a concern especially if the forecast is for decreasing winds, which is normally the case with the typical morning offshore wind pattern. With an offshore wind pattern during this time of year (September to November) the wind speeds are highest in the morning and decrease as the morning progresses. The land mass heats up, which diminishes the offshore pressure gradient and may allow formation of a sea breeze later in the morning or during the afternoon. A wind speed maximum gives the burn team some flexibility. It is not an absolute in terms of the burn team burning below that limit. It is an absolute that will shut down a burn if winds meet or exceed it. Practical experience backed up with technical data may prevent burn ignition at a much lower wind speed.

Comment 12: Why is using three burn ships considered cost effective?

Response 12: This number factors in the potential for a breakdown. In addition, this quantity ensures the burn can be performed within the limited window of time.

Comment 13: How big is the tank on the skids?

Response 13: Approximately 70 gallons.

Comment 14: Verify the accepted long line length for helitorch operations. The longer the lead line, the higher degree of an area outside the accepted burn unit to be ignited.

Response 14: The line length to be used will meet International Helicopter Operations Guide (IHOG) specifications.

Comment 15: How many helicopters will be used?

Response 15: The burn plan indicates that a minimum of 3 operational type II helicopters that are totally dedicated to suppression will be used.

Comment 16: 50-ft pretreatment is inadequate with the loading agent selected. 150-200 ft outside the unit is more appropriate because of the fire line intensities and energy release component runs.

Response 16: The planned control-line widths are more than adequate to hold the flame lengths that will impinge directly on the line. Such flames are predicted to be approximately 7 feet (backing/flanking) fire. The guideline from firing courses is that a control line that is 4 times the flame length will prevent any slop-overs by radiant heat or by direct flame contact—that width is also adequate for the protection of unsheltered firefighters in a “safe zone”. Spot fires from airborne brands are expected, and the projections of the spread of 4 hypothetical spot fires have been included in a new Attachment T. The air attack would be sufficient to stop the spread of such spot fires.

Comment 17: What has been the WX history for the proposed time of burn? Concerns that holding will be an issue.

Response 17: Prior wind history shows that an offshore wind event can have winds that are light (0-5 mph) or they can be quite strong (greater than 15mph and gusty). Wind speeds of 10-15 mph pose control problems for the burn team. But if winds are generally less than 10 mph with gusts in the 10-15 mph, then burning may still be an option—especially if winds are expected to decrease. Practical experience backed up with technical data may prevent burn ignition at a much lower wind speed.

Comment 18: The OMC Fire Chief needs to be more involved—this is your subject matter expert.

Response 18: The OMC Fire Chief has been, and will continue to be, completely involved in the planning of this operation.

Comment 19: Given close proximity to BLM property, will BLM resources be committed during the burn? If so, additional coordination will be needed incurring additional expense

Response 19: BLM resources will not be needed.

Comment 20: What dialog has happened between Fire Stop and BLM, CDF, and SRFD

Response 20: Fire Stop and CDF have consistently communicated, as the CDF is responsible for fires outside of the former Fort Ord and incorporated cities.

2.3 AIR RESOURCE BOARD, JULY 26, 2002

Comment 1: Our substantive comment addresses the proposed size of the burn and the meteorological conditions outlined in the smoke management plan have a very low probability of occurring. For example, historical climatological data indicate that easterly daytime surface winds during the fall season are extremely rare. Therefore, there is a high probability that the burning would occur under less than ideal conditions.

The range of acceptable conditions for burning identified in the Draft Burn Plan pose the possibility of increasingly greater impacts on the surrounding area. Given that possibility, we believe that 560 acres may be too large an area to burn at one time, in light of the area’s complex terrain and the proximity of smoke sensitive communities. We note that the Draft Burn Plan indicates that “interior boundary lines” exist that can be used to halt burning and bring fire activity and smoke under control should conditions change or unacceptable or unexpected

impacts occur. We recommend that the U.S. Army consider an alternative proposal that would use these interior boundary lines to define areas of smaller burns. Another option might be to prepare for the full burn, but ignite it in stages based on acceptable smoke dispersion. The final Burn Plan should present a thorough analysis of whether a series of smaller burns could reduce the potential for unacceptable smoke impacts.

Response 1: We consider the prescribed weather conditions are likely to occur this fall. We agree that these weather conditions are not an every day occurrence. But, a morning offshore wind pattern is not unusual during the fall and winter months. These patterns usually last 1 to 3 days, and they can occur every 7 to 10 days, beginning in late September and continuing through March. For the prescribed burn to be successful, we need low fuel moisture and a light offshore morning airflow pattern. These two very important prescriptive elements occur from September through November. It is possible that we may not get the weather we desire. But, we will not perform a prescribed burn under weather conditions that could cause concern for public health due to smoke. We expect smoke to be in the air and some of the public will smell the smoke. Our goal is to minimize public health impacts by burning under the most desirable weather conditions possible. The size of the burn has been designed to address the greatest OE concern with the knowledge of the limited number of burn days. The interior boundary lines identified are not of sufficient width or OE clearance to be used as a fire break. The vegetation in these areas cannot be cut and the firebreaks can be developed due to the types of OE found. Further details and supporting information has been included, and the Army has considered conducting smaller fires but has decided that from the overall safety considerations that this could allow access into areas of high OE safety risk and would not be acceptable. The burn plan addresses your suggestion regarding the ignition of the burn based on the downwind effects. We have discussed this issue and the Burn Boss will have the ability to modify the ignition process based on his professional judgment to mitigate smoke impacts

Comment 2: The Draft Burn Plan incorrectly states that ARB meteorologists will give a Go/No Go recommendation at 12 and 24 hours before the burn. The Monterey Bay Unified Air Pollution Control District (District) has responsibility for the 24-hour recommendation. ARB provides the 48-hour forecast and 72-hour outlook when requested by the District.

Response 2: The ARB Duty Meteorologists will be consulted for a “Go” or “No-Go” recommendation, and they will be consulted to discuss the meteorological scenario to see if they agree in the day-to-day set-up of the proposed burn day with the Fire Stop’s Incident Meteorologist. MBUAQMD will also be in the daily discussion loop. When atmospheric models appear to be consistently forecasting the appropriate weather scenario for burning, the ARB and MBUAQMD will be notified. Initial discussions will be made 5-7 days prior to burning, followed by daily contact to discuss the meteorological set-up and day-to-day progression.

Comment 3: Several meteorological criteria proposed in the Draft burn Plan for identifying the optimal burn conditions conflict with the criteria specified in the California Code of Regulations, Title 17, for determining Burn/No Burn days in the North Central Coast Air Basin (Air Basin). For example, the Air Basin criteria for minimum wind speed on a burn day is 5 mph. The Draft Burn Plan identified the ideal wind speed for burning as 0 to 5 mph. The Draft Burn Plan also identified the target mixing height as greater than 1000 (units not specified). If the Draft Burn Plan meant 1000 feet, the proposed mixing height also conflicts with the Air Basin criteria of a

mixing height of greater than or equal to 1500 feet on a burn day. The final Burn Plan needs to address these conflicts.

Response 3: The burn day criteria established in Title 17 are guideline recommendations for burning. The burn day criteria set forth in Title 17 Section 80200 are generalized meteorological variables. An actual weather forecast encompasses many more variables. The special circumstances of this prescribed burn make it necessary to go beyond the recommended criteria set forth in Title 17 Section 80200. The Fire Stop Meteorologist will be in contact with CARB and MBUAQMD prior to burning. Daily contact with these organizations will be made once the large-scale weather scenarios are identified in the atmospheric models. Identification of the appropriate weather producing scenario will be made 5-7 days prior to the burn. Discussions will be focused on the approaching weather scenario and if it will give the desired conditions that will allow the burn and its smoke to accomplish their respective results for consumption and public health protection.

Comment 4: Finally, the Draft Burn Plan states that Ranges 43-48 contain approximately 560 acres. However, the Final Interim Action Ordnance and Explosives Remedial Investigation/Feasibility Study for Ranges 43-48, Range 30A, Site OE-16 Former Fort Ord, California states that Ranges 43-48 contain approximately 483 acres. The final Burn Plan should provide the correct acreage or an explanation for why the acreage in the two documents is different.

Response 4: References to size of Ranges 43-48 IA site will use approximately 500 acres throughout the document. 498 acres cannot be used because the revised burn line cannot completely follow the IA site boundary to be effective, although the burn line is relatively coincident with IA site boundary.