February 10, 2006

BASF Corporation
100 Campus Drive
Florham Park, NJ 07932

Brian Amme
Project Manager
United States Department of the Interior
Bureau of Land Management
P.O. Box 12000
Reno, NV 89520-0006

EMC0613

BY FACSIMILE AND ELECTRONIC SUBMISSION

RE: Comments on Draft Programmatic Environmental Impact Statement for BLM Vegetation Treatments Using Herbicides

BASF Corporation commends the Bureau of Land Management for completing and publishing for comment its Programmatic Environmental Impact Statement for use of herbicides in the treatment of vegetation. BASF Corporation, headquartered in Florham Park, NJ, is a subsidiary of BASF AG, a 141 year old chemical company located in Ludwigshafen, Germany. BASF has been in the business of vegetation management for nearly 50 years and continues to develop new generations of herbicides through ongoing research efforts. All of the herbicides we market meet the safety standards established by the US Environmental Protection Agency.

2

I. Support of Alternative B

In general, BASF strongly supports the BLM's preferred approach as detailed in Alternative B, **"Expand Herbicide Use and Allow for Use of New Herbicides."** First, because the greatest number of acres would be treated under this alternative, we believe the most amount of environmental good can be expected. This is due to the increased capacity to control invasive and non-native vegetation that not only promote unhealthy forests and rangelands, they are also a root cause of the devastating wildfires that sweep the West each year. Second, because this approach encourages the use of the most effective herbicide for a specific vegetation treatment, the end result will be an overall decrease use of herbicides over time. In essence, herbicides are not needed in a healthy environment where limited or infrequent stress is put on an intact plant community. Third, since Alternative B looks to the future by anticipating the introduction of new chemistry, we believe the BLM will be able to apply continuous best management practices in maintaining ecosystem integrity. BASF also suggests that the BLM amend its priorities to include the development of sustainable fuel breaks in an effort to return wildfires to historical size and frequency. This would significantly reduce the magnitude

3

of property damage from wildfires while protecting critical habitats and newly rehabilitated acreage. Prevention of wildfire damage using fuel breaks and aggressive fuel management through vegetation treatments should be a first priority; fire suppression should be a last resort.

3

It is vital that the BLM be able to operate under the wide ranging options embodied in Alternative B because the constant introduction of invasive plants, an abnormal cycle of wildfires, over-grazing, and drought have resulted in the fragmentation of desirable plant communities that no longer have a sustainable capacity to provide either native habitats or food sources for grazing animals. To regain a higher percentage of intact, desirable plant communities that are resistant to invasive plants, herbicides must be an option for any integrated vegetation treatment program. An integrated plan must also include appropriate grazing, restorative seeding, mechanical control methods, including, when and where appropriate, the use of fire. Any national policy that does not approve herbicide use, specifically prohibits the use of certain classes of herbicides, or does not allow aerial application under any circumstance is not likely to result in improvement or rehabilitation of the land. Consequently, limiting or stopping use of herbicides on BLM land will result in greater economic hardship for neighboring properties (federal, state, and private) as wildfires, invasive plants, and erosion continue to irreparably destroy an increasing percentage of America's land resources each year.

4

II. <u>Early Detection, Rapid Response is Essential</u>

Not covered in any alternative or appendix of the PEIS is the concept of Early Detection and Rapid Response. As the name implies, this is a system that encourages the management of undesirable vegetation as soon as it is discovered so that its spread is controlled before it develops into a considerably less manageable and clearly more costly situation. The success of such a system is heavily reliant on the timely availability of appropriate herbicide products, coupled with incentives that encourage early detection. Under the system described in the PEIS, it would take over two years to receive an approval for the use of a new herbicide on BLM land. This is clearly an unacceptable time frame for an effective EDRR program. BASF, in its work with numerous state and local weed management organizations, believes it is imperative to have an approved procedure in place that ensures that proper control methods can be approved in a timely manner. BASF recommends that the BLM develop a process similar to the EPA's FIFRA Section 18 Emergency Use, to allow temporary, targeted new herbicide use by limited BLM district(s) while the more formal identification and evaluation of new herbicides proceeds under the protocol described in Appendix D.

see EMC0214

5

III. <u>Support for the process outlined in Appendix D</u>

BASF supports the PROTOCOL FOR IDENTIFYING EVALUATING, AND USING NEW HERBICIDES with **one recommended change**. "*Determining the Need for New Herbicides*" requires an additional, valid reason for considering approval of a new active ingredient "to expand availability of the number of substitute products to avoid resistance". It is understood this could be covered under "*but are not limited to:"*

see EMC0214

6

IV. Positions and Comments on Other Alternatives

7 BASF provides the following comments concerning our non-support of or opposition to Alternatives A, C, D, and E.

Alternative A: No Action

BASF does not support Alternative A.

see EMC0214 Hazardous fuel reduction programs for management of annual bromes in rangeland under the current EIS are ineffective, not sustainable, and constitute a generally poor and scientifically unaccepted environmental practice (Davis 2002[i]). Current practices of disking strips, broadcasting non-selective herbicides, removing brush, or planting green strip species with no control of invading annual bromes does little to reduce the infestation by unwanted vegetation, exacerbating all the negatives associated with

8 uncontrolled vegetation, in particular, the increased threat of wildfires (Jeffress 2003[ii]). BLM operations under Alternative A would likely result in continued catastrophic wildfires with no hope of eventually decreasing these devastating events to an historical size of a few 100 acres and an historical frequency of around 60 years. Current Emergency Stabilization and Rehabilitation efforts are ineffective with annual bromes that out-compete expensive plantings of native grasses and forbs. Of the treatments allowed under Alternative A, none will result in a successful plantings due to the inability of aging chemistry to remain effective at controlling vegetation varieties that have become resistant. Under the current EIS, Alternative A, BLM range specialists appear to be satisfied with a desirable plant establishment rate of 10 percent for soil stabilization purposes. This is not an acceptable rate of achievement. BASF and other industry and academic organizations believe that this rate of success could be markedly improved by the use of appropriate herbicide treatments to control the competing annual brome under Alternative B (Dewy et al[iii], Ditomaso et al[iv], Link and Hill[v], Sebastian and Beck[vi]). Finally, this alternative calls for the treatment of about one third fewer acres as compared to Alternative B, which we believe will only contribute to the accelerated degradation of America's public lands.

Alternative C: No Use of Herbicides

BASF does not support Alternative C.

9 Mechanical methods for weed control on large acres, such as on BLM land, is often cost prohibitive and results in significant soil disturbance. Biological control methods are not available for all invasive plants that infest BLM lands. Cultural control methods are difficult to implement on BLM lands due to contracts and land mass. Combinations of these methods may be feasible for some of the BLM weed infestations; however, funding, local climate, lessee demands and personnel time may prohibit effective implementation of appropriate control programs. Herbicides offer a cost effective, low

impact, low labor control option. Without the use of herbicides, lack of alternative low cost, low labor, low impact control methods will result in BLM land eventually becoming a biological desert, unable to support even livestock. This alternative puts all adjacent lands at great risk, including our National Parks, private property, and Forest Service resources.

9

Alternative D: No Aerial Applications

BASF does not support Alternative D

see EMC0214

With today's technology for improved aerial spray techniques (including booms, nozzles, GIS capability), aerial application of herbicides is more targeted, more efficient, creates fewer adverse effects and can be more cost effective than ground applications. "Greater Drift" effect is minimized by use of selective herbicides and new application technology. Any program designed to effectively treat large numbers of acres must have aerial application methods as an available option. Aerial application ensures that areas that cannot undergo ground treatment applications will be covered, this ensuring the most comprehensive approach.

10

Not all BLM land in need of a vegetation treatment has terrain conducive to ground application. In fact, it is estimated that 391,960 acres are untreatable due to terrain, cost or remoteness (BLM PEIS 4-142). Use of manual or ground application equipment to spray rough terrain can cause herbicide overlap and skips, resulting in either damage to desired vegetation or leaving invasive plants to re-populate the area. Uneven terrain can also cause inaccurate application of herbicides when applied with ground equipment. Under application of product results in re-sprays, resulting in extra dollars to complete the project. Over application of product results in greater herbicide use and potential need of restoration from desired plant injury, resulting in greater use of funds. Either scenario results in a poor economic decision in comparison to an aerial application. Some critical habitat areas are only accessible for vegetation treatment by air. Some invasive plants, such as large stands of saltcedar and Russian olive, are best treated by air when considering an economical and effective treatment. The EIS correctly outlines the reasons why aerial application is more cost effective than ground application. Specifically written bid requirements can help to avoid off target damage by assuring best aerial application technology and applicators with reputations for accurate applications.

11

To predict the outcome of adopting this alternative, one could examine the current USDA's Forest Service program and evaluate their cost and vegetation management effectiveness.

12

Example 1. At this time, the Forest Service has stopped all prescribed burns in Routt and Medicine Bow National Forest because the burns release annual brome rather than improve wildlife habitat and forage. Due to the rough terrain, manual or ground treatments cannot be made to control the annual brome and release the desired grass **(**Routt and Medicine Bow National Forest and Thunder Basin National Grasslands PEIS development).

13

see EMC0214

14

Example 2. Invasive plants in rough terrain go uncontrolled. Shoshone National Forest has rough terrain areas with high enough populations of Dalmatian toadflax that biological control beetles will not disperse, rendering them a poor management tool. Manual and ground herbicide application is too dangerous due to the steep slope. The toadflax population has gone unchecked and is now spreading in to Wilderness and Yellowstone National Parks. **(**Vollmer et al[vii])

15

Example 3. In situations where the Forest Service must use aerial application, a separate EIS is required at a cost of $100,000 to $200,000 per project. This unnecessary expense diverts funds away from budgets that account for fuel management programs, grazing programs, and other valuable resource management efforts (Cota 2004[viii]).

Alternative E : No Use of Acetolactate Synthase-inhibiting Herbicides

BASF strongly opposes Alternative E

16

Alternative E, as outlined in Appendix G, has numerous important points about basing vegetation management decisions on priorities, goals, scientifically proven methods and emphasis on prevention. However, the methods outlined result in unreasonable restrictions for BLM to effectively manage the nation's public rangeland. The most restrictive language with regard to the "Vegetation Treatments Using Herbicides PEIS" is "*Prohibit use of sulfonylurea herbicides and other acetolactate synthase-inhibitng* (ALS or AHAS) *herbicides . . .*" This statement goes against the sixth most identified key issue during scoping, *"Use newer, less toxic herbicides where feasible"*. The new, less toxic herbicides are the ALS inhibiting mode-of-action class. ALS herbicides inhibit an enzyme that only exists in plants, thereby greatly reducing health risks to animals. Herbicides in this family control invasive plants that no other herbicides listed in the PEIS will selectively control, including weeds listed among the top problematic plants in the PEIS responsible for degradation of BLM lands (halogeton, medusa head, and *Bromus* species). The only herbicide control option for perennial pepper weed and white top, major western invasive weeds, are ALS class herbicides. A selective ALS inhibitor, imazamox, to be registered within the next two years, may be the only alternative to floridone to prevent hydrilla resistance. Removing the option of all ALS inhibitors will result in no option for control of some weeds, no herbicide option for control of other weeds, and only one herbicide option for control of a majority of weeds. Having only one herbicide option gives BLM land managers no ability for resistance management.

17

Several topics addressed in Appendix G of Alternative E are controversial. BASF would not support "restoration" of BLM lands, but would agree with "rehabilitation". BASF would not support exclusive use of "native" vegetation, but would agree with use of desirable plant mixes that include appropriate introduced and native vegetation to achieve the most resilient plant community to invasive plants while still meeting land use goals.

see EMC0214

BASF agrees with the need to monitor, but time lines need to be realistic, based on personnel time and funding. With regard to herbicide use, several points in the RESTORATION section could be eliminated and replaced with "Follow label Directions" rather than the restrictions that either mimic or exceed EPA restrictions. In addition, all treatment methods should be given equal priority to assure that the soundest environmental treatment is identified and used. BASF agrees that herbicide treatments should be used in conjunction with other vegetation treatments such as cultural, mechanical, or biological control methods to assure the greatest long-term control possible.

17

V. Comments on Tables

TABLE 2-7

Social and Economic Values Bullet *"Provide public educational programs on the herbicides proposed for local use to minimize fears based on lack of information"* Along with education about the herbicide it is essential to educate the public about the need for the vegetation treatment and why the use of a wide array of herbicides is a part of the best choice treatment.

18

TABLE 2-8

Table 2-8 is misleading in adequately depicting comparative risks. Effects appear to be based solely on erroneously equating greater number of treated acres with increased adverse effects. There is no description of greater or lesser magnitude of the actual effects.

19

Example: Effects for Alternative D appear to assume all aerial applications will result in negative effect drift. In reality, drift from aerial application can be negligible or have no adverse effects, depending on the herbicide applied and the area impacted by the drift.

20

Effects on Wildlife / Effects on Livestock and Wild Animals

The claim that "All treatments could kill or harm wildlife and adversely impact their habitats," is false, unless it is the actual application – *tractor running over grouse or planes crashing in to herds of elk* – that is being referred to. What incidences can be sited where any of the purposed terrestrial herbicides, used according to label directions, have killed or harmed wildlife? Examples for herbicide benefits to wildlife are numerous and are mainly attributed to increasing or rehabilitating habitat (Hedberg et al 2005[ix]) Benefits versus adverse impacts are misleading for all alternatives.

21

Example: No action alternative would have greater impact than the Purposed alternative due to the number of applications that would be needed to accomplish the same vegetation management. In addition, less acres treated means greater adverse impact to those lands that are left to further degrade due to lack of tools for beneficial treatment. The section also neglects to quantify the benefits versus adverse effects. Example: on a scale of 0 to 100, where Wildlife Benefits for the Purposed action may be "87", adverse

22

see EMC0214

22

effects may be “4”, as compared to No Action Alternative where Benefits may be “34”, adverse effects “3.9”.

Aesthetic Effects

23

This section does not take in to account that a new herbicide used under Alternative B is applied as a pre-emergence product resulting in no unsightly dead or dieing vegetation. By comparison, the No Action Alternative where the vegetation treatment will need to be a post-emergence, non-selective herbicide, burning, or disking, leaving an unsightly landscape prone to erosion to achieve lesser results. Under the No Action Alternative fewer acres may be treated, but that means hundreds of thousands of acres left in their unsightly state.

---

[i] Davis, J. N. 2002. Downy Brome Trends in Range, Drought & Grazing Affects. Research Results, Utah Big Game Range Trend Studies, State of Utah Natural Resources. Restoration Strategic Planning Meeting.

[ii] J. Jeffress. 2003. Oral Communication. Wildlife Biologist, Retired Nevada Division of Wildlife.

[iii] Dewey, S. A., R. W. Mace, and T. M. Osmond. 2003. Downy brome control with imazapic on arid rangeland. Res. Prog. Rep. West. Soc. Weed Sci. p. 2.

[iv] Ditomaso, J. M., M. L. Brook, E. B. Allen, R. Minnich. 2005. The Use of Fire as a Tool For Controlling Invasive Weeds. Center for Invasive Plant Management, http://ucce.ucdavis.edu/files/filelibrary/5319/19050.pdf p. 29

[v] Link, S. O. and R. W. Hill. 2005. Effects on Herbicides on a shrub-steppe plant community after a prescribed fire. Shrub-steppe Ecology, Washington State University Joint Fire Science Program Research, http://www.tricity.wsu.edu/shrub_steppe/effects%20herbicides10-17-05.pdf

[vi] Sebastian, J. R. and K. G. Beck. 2004. Downy brome control on Colorado rangeland with imazapic. Res. Prog. Rep. West. Soc. Weed Sci. p. 1.

[vii] Vollmer J. L. , J. Shorb, W. Hartuung, R. Parsons, D. Baren and J. G. Vollmer. 2004. Reclaiming Land from Dalmatian Toadflax in Park County, WY: Research and Operational Program. Invasive Weed Symposium.

[viii] Cota J. 2004. Oral Communication. US Forest Service

[ix] Hedberg R., J. Randall, Jeff Schardt, Bruce Pavlik, Susan Wilde. 2005. Implementing the Endangered Species Act: Managing Invasive Species to Enhance Habitat and Improve Endangered Species Recovery. House Resource Committee Briefing