ENERGY FUELS RESOURCES CORPORATION

November 12, 2010

Mr. Steve Tarlton, Program Manager
Radiation Control Program
Hazardous Materials & Waste Management Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South HMWMD-B2
Denver, CO 80246-1530

Transmittal: Response to Request For Information #3, Attachment 3, Parts 3 and 4 and Habitat Improvement Plan, Piñon Ridge Mill, Montrose County, Colorado

Dear Steve:

This letter and exhibits (4 copies each) address issues and concerns raised by the Radiation Control Program (RCP) in Parts 3 and 4 of Attachment 3 to your Request For Information #3 (RFI #3) dated August 19, 2010. This submittal also addresses mitigation of the project's ecological impacts. The following documents are included in this submittal.

Exposure Pathways Report (revised 11-11-2010): The Exposure Pathways Report by SENES Consultants Limited (SENES) was submitted on November 5, 2010 in response to Attachment 3 – Part 3 comments. The report has since been revised in response to an initial review by the RCP. A revised version of this report is included in this submittal in both track-change and final formats (see Exhibits 1 and 2, respectively). Responses to the Attachment 3 Part 3 comments were previously provided in our cover letter of November 5, 2010, but are repeated below with several corrections. This response and revised Exposure Pathways Report supersede Energy Fuels Resources Corporation's (Energy Fuels') submittal of November 5, 2010.

Risk Assessment for Proposed Uranium and Vanadium Mill at the Piñon Ridge Property (revised 11-12-2010): A revised Risk Assessment report by SENES that addresses Attachment 3 – Part 4 comments is included along with our specific responses below. The revised report is included in both track-change and final report formats as Exhibits 3 and 4, respectively.

Piñon Ridge Project Habitat Improvement Plan (HIP): The HIP for the project, which is included as Exhibit 5, commits Energy Fuels to provide compensatory mitigation for the loss of approximately 415 acres of wildlife habitat. This plan has been reviewed and approved by the Colorado Division of Wildlife.

The RCP's comments from RFI #3, Attachment 3, Parts 3 and 4 are indented and listed in italics below. Energy Fuels' responses are provided at full page width in regular font.

Comments on Volume 11, Section J3, "Radiological Exposures Pathways Report"

1. *Neither this report nor the Risk Assessment adequately addresses heavy metals that are also associated with uranium recovery. EF must provide an analysis of the non-radiological health hazards, and should include at the least, vanadium, arsenic, lead, molybdenum, and cadmium. This is considered to be a major deficiency in the application.*

Analyses of representative ore samples from the area were reviewed to identify potential heavy metals of concern. These metals were then assessed in Sections 2.2, 5, 8 and 9 of the revised report (Exhibits 1 and 2).

2. *What about organics used in the SX process? What are the hazards of the reagents used at the site? UMTRA is a law that regulates the radiological and non-radiological components of byproduct material. The report is inadequate.*

Organic solvents, acids and caustics are discussed in Sections 2.2 and 5 of the revised report (Exhibits 1 and 2). Air emission controls result in very low emissions of these chemicals to both on-site and off-site receptors. Other risks associated with these chemicals such as their flammability and corrosiveness are discussed in the risk assessment report (Exhibits 3 and 4).

3. *A conceptual site model is normally presented in an analysis of this type. While Figure 3 is beneficial, it is not complete or adequate. For example, there is no groundwater or surface water pathway from spills or leaks, nor is there a direct gamma exposure pathway presented in the figure (e.g., from windblown). Reference to NUREG-0706 is not recommended here due to its being outdated with respect to environmental pathway analysis' standard of care. One can reference the RESRAD manual, or numerous other citations that are more current or germane.*

Conceptual site models for humans and ecological receptors are included in the revised pathways report as Figures 3.1 and 3.2, respectively.

4. *<u>Page 1. Sources of radiation.</u> The first paragraph generally describes the source to receptor relationship: source pass through an exposure medium and produce a radiation dose. This statement would be better if it included the step of a release of a portion of the source material and step of an intake or an uptake rather than just an exposure. Just because there is an exposure, that does not mean necessarily that there is an uptake or an intake (for internal) to cause a dose. This is often overlooked when discussing pathway analysis.*

We agree and SENES has attempted to clarify this aspect in Sections 3 and 4 of the pathways report.

5. *While it doesn't have a very long half life, there should also be some discussion of Po-210. While normally discussed in conjunction with Pb-210, they are often not in equilibrium in the environment after industrial processing. Po-210 is a significant ingestion hazard.*

Po-210 has been added in Section 2.1 of the pathways report.

6. *<u>Page 2, 1st bullet.</u> Default particle size distributions in MILDOSE-AREA need to be compared to expected particle sizes from use of the newer SAG mills vs. older crusher technology. In addition to the smallest particles being exhaled, the smallest particles may also be able to cross the blood barrier, which is of more concern. Dosimetry has progressed significantly since the time of the writing of the guidance, the ICRP 60 et al series incorporates a 5-compartment lung model that is more sophisticated than the 3-compartment model used in ICRP 26/30.*

The effect of particle size on dose was analyzed in the revised MILDOS-AREA modeling report prepared by Dr. Craig Little. This study was submitted to the RCP as Exhibit 4 of Response to RFI #3, Attachment 3 – Parts 1 and 2 on October 18, 2010.

7. *<u>Page 4. 3rd paragraph.</u> How will dust suppression be applied in the winter? There seems to be the potential for a safety hazard if the ore pad is repeatedly sprayed with water during the winter. It should also be noted that only end dumps will be able to use the wall, all side dumps and bottom dumps will have to access the pad to dump their load and then be released from the site.*

The ore pad stockpiles will be sprayed with water for dust suppression purposes during the course of routine operations from a trailer-mounted water cannon and/or from an installed dust suppression piping and spraying system. Non-active ore pad stockpiles will form an ice crust as the temperatures drop below freezing, reducing the requirements for repeated water spraying for dust suppression purposes. Active ore pad stockpiles and travel ways will be sprayed with water as necessary to minimize fugitive dust. The loading and unloading movements of the CAT loader will, in most cases, thaw the ore pad travel-way surfaces to acceptable driving conditions for any ore trucks entering and exiting the ore pad for dumping purposes. Sand will be applied if ice forms in low or rutted areas along ore pad travel ways, especially on the north facing side of stockpiles.

The access road and the gravel portion of the truck dumping platform will be treated with magnesium chloride or equivalent dust suppression chemicals to minimize the need for water application in these areas. These areas are also open and exposed to solar radiation during daylight hours, when most ore will be delivered. Side dumps will have to dump

directly on the ore pad; however, please note that bottom dumps are no longer approved to transport uranium ores and will not be utilized.

8. *Page 5. Tailings Disposal. An important step has been omitted here, i.e., drying out of the tailings impoundments prior to the construction of the cap. It is at this point in time when the possibility of dusting is most acute.*

Dr. Craig Little modeled the tailings for radon emissions assuming a worst-case situation where a 30-acre tailings cell is totally exposed (i.e., no water or soil cover) and no dust control measures are in place. The study was conducted using the MILDOS AREA Model and is presented as part of the Regional Dust Analysis Report found in Exhibit 5 of Response to RFI #3, Attachment 3 – Parts 1 and 2. It is important to note that the assumption that no dust control measures would be in place is contrary to Energy Fuels' operating plan which requires that dust control measures (e.g., water sprays, chemical dust suppressants) be implemented during all phases of operation including the period prior to cover placement.

Dust emissions from the tailings are discussed throughout the revised pathways report (Exhibits 1 and 2). Quantification of the impacts from these emissions is provided in the risk assessment (Exhibits 3 and 4).

9. *Page 6. Equipment released from the mill. Please state that the vehicle will be surveyed after it leaves the truck wash station.*

Section 4.1 of the revised pathways report includes a subsection on "Release of Equipment from the Restricted Area." Radiation surveying of the equipment after washing is included in this description.

10. *Page 6. Sources of Waterborne Radioactivity to Humans. This section is not complete. What about benthic organisms? What about other biota? Just saying that the dose to a human receptor is low is in no way sufficient; biota other than humans should at least be given a discussion. There should at least be a reference to the Risk Assessment, section 3, which has some discussion on this topic.*

These pathways are illustrated in Figures 3.1 and 3.2 and discussed in Sections 4 and 5 of the revised pathways report.

11 *Page 6. De Minimus Pathways. What value is used to make the determination that a pathway is de minimus? 1 mrem/y? 5 mrem/y? This needs to be further quantified. While these pathways are considered de minimus by the author, many stakeholders have concerns that need to be better addressed in the application by*

providing some quantification of the range of likely exposures (which are partially addressed in the risk assessment).

De minimis pathways for radiological and non-radiological contaminants of potential concern (COPC) are defined in Sections 4.3 and 5.3, respectively, of the pathways report. De minimis radiological pathways are defined as incomplete pathways and pathways with less than 5% contribution to the overall radiological dose. De minimis non-radiological pathways are defined as incomplete pathways or those pathways resulting in exposures that are less than applicable regulatory limits.

12. *This report and the Risk Assessment focus on current land use, population, etc. Yet, the MILDOSE-AREA report data shows that in out years, members of the public may approach the 25 mrem/y organ dose limits at some fence line locations (the MILDOSE report did not discount for time, and so we realize is conservative). Nonetheless, it is difficult for the Department to reconcile the two; a projected dose that approaches a regulatory limit cannot be considered trivial or de minimus. If properties around the mill were to be developed, members of the public will need to meet all dose limits. Please reconcile.*

The MILDOS AREA Model was rerun using modified water cover controls on the tailings facilities and projected radiation levels for both the coarse-grained and fine-grained tailings. The revised "Estimates of Radiation Doses to Members of the Public from the Piñon Ridge Mill" was provided as Exhibit 4 of Response to RFI #3, Attachment 3 – Parts 1 and 2. With the additional water cover controls, the estimated doses at the property boundaries are significantly lower. The projected maximum dose to a hypothetical receptor living on the property boundary is discussed in Section 6.0 of the pathways report.

Currently, the nearest residents to the mill are a little more than two miles from our property boundary, and they are part-time residents. All together, there are currently less than 10 part- and full-time residents within five miles of the mill site. Although there are a number of undeveloped private parcels in the immediate vicinity of the Piñon Ridge site that could be used for future housing development, Energy Fuels believes that it is more likely that they would be used in the future for small-scale commercial purposes, if developed at all.

13. *<u>Page 8. Ore Trucks.</u> It is stated that accidents are possible but unlikely. Reference should be made to Appendix A5 of the Risk Assessment.*

The reference is provided in Section 4.3 of the report.

14. *<u>Page 8.</u> Toxicological Assessment. See comment 1.*

See the response to Comment 1 above.

Comments on Volume 11, Section J4, "Risk Assessment Report"

1. *Page 9. While we agree that currently there is little agriculture in the area, the mill is proposed to last 40 years. As discussed above, the MILDOSE report data shows fence line receptors in out years to approach the 25 mrem/y organ dose limits in some locations. This report should also include a bounding scenario of residential development at adjoining downwind properties.*

Based on the results of the revised MILDOS-AREA modeling presented in Exhibit 4 of Response to RFI #3, Attachment 3 – Parts 1 and 2, the projected dose at the fence line is expected to be well within regulatory limits for a full-time residence at this location. As discussed above, it is unlikely that a residential dwelling would be built immediately adjacent to the mill property. Discussion regarding potential future land use has been added in Section 3.1.1 of the Risk Assessment Report (see Exhibits 1 and 2) and Section 4.3 of the Exposure Pathways Report (see Exhibits 3 and 4).

2. *Page 9. Table 3.2 We note that the supporting MILDOSE reports show organ dose limits at or near the limit for out years. This is reflective of a scenario where tailings cell two is full and half the tailings exposed (drying out while waiting for the cap to be placed) with the third cell tailings half exposed (by this time, cell 1 is closed and capped). See Figure 6, Scenario 2. This is what in fact does happen when a cell is at capacity; it may take more than a year before fill can be placed over the drying tailings. The risk assessment report should evaluate the scenario presented in the MILDOSE report.*

The report "Estimates of Radiation Doses to Members of the Public from the Piñon Ridge Mill", which was recently revised, presents updated MILDOS-AREA Model results for the tailings facilities at those stages where exposed tailings will be at their maximum operating extent. These results have been incorporated into Section 3.1.1 of the revised Risk Assessment (see Exhibits 3 and 4).

As discussed in Appendix E "Tailings Facility Operating Procedures" of the revised Facility Operating Plan, a water pool will be maintained over the finer-grained tailings during operations to minimize radon flux. As a tailings cell nears its full capacity, it will enter into a pre-closure period where the water pool is gradually reduced while coarser tailings are deposited over the finer tailings using a system of internal berms. During this time, tailings solution will continue to be applied to exposed beach sands to keep them saturated thus minimizing radon flux. Once tailings deposition has ceased, a minimum of five feet of the coarser perimeter tailings will be graded over the top of the central portion of the cell to provide added stability and radon attenuation prior to placement of the interim soil cover.

Difficulties in placing the soil cover over tailings impoundments were relatively common with historic facilities. This often resulted in extended periods of time before the finer-grained tailings could be dewatered and consolidated sufficiently to allow for earthmoving equipment to place the cover. Energy Fuels believes that the current design of the Piñon Ridge tailings cells will facilitate relatively rapid placement of the closure cover. The cells are much smaller (i.e., 30 acres) than many historic impoundments that covered 80 acres or more. Furthermore, the cells include distributed deposition systems (i.e., multiple perimeter spigots) that will allow for more uniform deposition of tailings and an under-drain system that allows for removing excess water from the tailings

3. *Page 10. 1st full paragraph. This paragraph well-describes the behavior of uranium and radium. It should also discuss thorium-230, lead-210 and Po-210, as these too will be present in significant amounts and can be a hazard.*

In addition to uranium and radium, Section 3.1.1 discusses that soil around the mill can also contain Th-230, Pb-210 and Po-210 particles in the form of ore dust or tailings dust that could impact humans as a result of the ingestion or inhalation of soil or resuspended radionuclides. Those particles can be resuspended into the air by winds, vehicle traffic, or construction activities. Resuspended radionuclides are not considered a major pathway to animals or humans because the air emission levels, and consequently surface deposition levels, are both very low and the radionuclides are diluted in the soil particles and dust.

4. *Page 10. last paragraph. It is understood that bird balls will be used on the saturated portions of the cells, but what about the exposed beaches? What are the risks to wildlife from exposed tailings beaches?*

This is addressed in Section 3.1.1 of the revised Risk Assessment Report. An eight-foot-high chain link fence topped by three strands of barbed wire will be installed around the entire perimeter of the tailings cells and evaporation ponds. The fence will be inspected daily and repaired, as necessary, to prevent access to the area by wildlife. It is recognized that some wildlife are attracted to salt (e.g. deer), which could be a potential issue for the beach sands. However, the restricted area fencing is sufficient to prevent mammals from accessing the beach sands.

Birds will still be able to land on the beach sands where they could be exposed to elevated concentrations of radionuclides and metals in tailings water that collects within small depressions on the surface of the sands. Birds could be exposed by directly drinking the water or by preening wet and encrusted feathers. However, Energy Fuels believes that birds will tend to avoid the tailings beaches because these areas will not support a food source for the birds and the noise and movements associated with mill activity may also act as a deterrent. In the event that monitoring indicates that this is not

the case, hazing of the birds in combination with the construction of an alternate water source (e.g., pond) away from the mill have proven to be effective at similar facilities.

5. *Page 12 Section 3.2.1. 2nd paragraph. The statement is made here and elsewhere that the site is designed to mitigate emissions, which is very apparent. The correspondence between Energy Fuels and the Air Pollution Control Division relative to the RACT analysis since the submittal of the application shows that the design of the plant is very robust with respect to reduction of volatile organics (e.g., covered tanks, additional filters), and should be recognized. Even with the RACT technology, about 36 tons per year of volatiles will be emitted (e.g., in Raffinate) and fugitive emissions will be down to 162 tons per year. Some analysis of the impacts from volatiles should be presented for perspective for normal operations and for accident scenarios in later sections.*

Impacts from volatiles and organic vapors are described in Section 3.2.1 of the Risk Assessment Report for normal operations and 5.4.3 under accident conditions. The process vessels in the leach and SX circuits are covered to minimize emissions of acid mists and fumes and organic vapors within the mill area. Offsite receptors may also be exposed to very low concentrations of organic vapors emitted from the SX circuits and evaporation ponds.

Among hazardous materials stored and used on site, the consequence of accidents involving anhydrous ammonia were determined to potentially bound the consequences of scenarios involving other volatiles and organic vapors. Catastrophic failure of an ammonia storage tank is a very unlikely scenario. However, in a more probable accident, it is possible that the line connected to the storage tank could be ruptured as discussed in Section 5.4.3 of the Risk Assessment Report.

6. *Page 14. Section 4. We note that the office worker at the administration building was modeled in the MILDOSE report. While not discussed in the text, the admin building was included in the modeling. It is noted that members of the public at the admin building can receive a measureable dose from tailings; therefore, we do not agree with the exposure routes for the office worker at the mill. For example, in scenario 2, the office worker is projected to receive 21.2 mrem/y to the bone. Similar results were given for other scenarios. The total doses did not change much, which indicate particulate rather than radon may be the source. Include ore or tailings dust in the evaluation of the office worker at the mill.*

Section 4.1.1 of the revised Risk Assessment Report (see Exhibits 3 and 4) addresses estimated doses to office workers from ore and tailings dust. It is important to note that the MILDOS-AREA Model estimates the dose based on a 24-hour/7-day-per-week basis (i.e., 168 hours per week) while office workers would be present on site for only 40 to 50 hours per week resulting in a much lower dose. Additionally, only the inhalation pathway

would be relevant for the office worker further reducing the dose relative to a residential exposure scenario. (No ingestion pathway; cloud shine and ground shine greatly reduced by the structure within which the office worker resides most of the time.)

7. *Page 15. Last bullet. Please note that the Department considers the MSHA standards to not be protective of workers in that it does not provide for summing of internal and external doses, could allow for up to 10 rem/y TEDE and uses outdated dosimetry (MPCs) from ICRP 2, and does not adopt the ALARA principle.*

We recognize that the MSHA standards may not be as protective of workers as CDPHE and NRC regulations in that MSHA does not require the summing of internal and external doses and MSHA regulations are based on older dosimetry models. However, radiological dosimetry methods including assessment, recording and reporting of worker doses will be executed in compliance with CDPHE 6 CCR 1007 -1, Part 4 -*Standards for Protection Against Radiation.* A cautionary note has been added in Section 4.1.1 to the listing of the applicable MSHA regulations.

8. *Page 17. Rather than compare to exposures from 30 years ago, what are the comparative doses from White Mesa?*

For workers at the White Mesa Mill, the average individual radiation dose was 110 mrem in 1999. This information has been added to Section 4.1.1 of the revised Risk Assessment Report. References to the older data have been deleted.

9. *Page 17. Comparison to Cotter occupational doses. Cotter has specifically requested and was granted permission to use ICRP 68 dose conversion factors, which greatly reduce the calculated inhalation dose. Energy Fuels, based on our review of the application, made no such request. Dose conversion factors in form ICRP 26/30 (e.g. FGR 11) therefore must be used to calculate dose. It should be noted that for calendar year 1999, about a third of the Cotter workers received over 1 rem TEDE using ICRP 26/30 DCFs.*

We recognize and understand that initially, dose conversion factors based on ICRP 26/30 (e.g., Federal Guidance Report 11) must be used. However, it is EFR's intention to request use of ICRP 68 dose conversion factors through a future license amendment.

10. *Page 18. Section 4.1.2 Transportation. The analysis described on Pages 80 and 81 was conducted assuming transport of yellowcake to Metropolis. It is just as likely that the yellowcake will go to Cameco, which is farther away in Port Hope, Ontario, Canada. What is the difference in the frequency of an accident and how many more waterways could be affected using Cameco vs. Honeywell?*

Analysis of the probability of transport accidents associated with the transport of yellowcake to Cameco's Port Hope conversion facility has been added in Section 5.4.12 of the risk assessment. The detailed analysis, including all assumptions and parameters used, is presented in Appendix A5.

11. *Page 18. Transportation. These transportation reviews (including the work in the Environmental Report) usually include an analysis of rail crossings and the probability of a truck/train accident (this is germane to shipping of yellowcake). Update to include those data.*

These analyses were performed and the results are summarized in Section 5.4.12 of the revised Risk Assessment Report with the detailed analysis presented in Appendix A5.

12. *Page 19/appendix A3. Please provide a printout of the Microshield runs for the files.*

The MICROSHIELD printout is provided in Appendix A6 of the revised Risk Assessment Report.

13. *Page 19. Table 4.5 Truck Driver. You report 48 mrem/y for a driver transporting ore based on Microshield calculations, and also cite the DOE EIS for uranium leasing at 14 mrem/y for an ore truck driver. Please note that DOE has been sued over that EIS document for numerous inadequacies, and the court has allowed the suit to move forward. Caveat Emptor (Unit staff has concerns about that report as well). However, DOE in a separate report estimated up to 220 mrem/y for a driver hauling mill tailings for 1,000 hours per year[1]. Since the primary pathway is gamma, please reconcile this large variance in calculated exposures. We note that the drivers are not under the EF license, and this comment is to put relative exposures into perspective.*

The 2007 Programmatic Environmental Assessment (PEA) prepared by the DOE based its dose calculations for truck drivers on an exposure of 1,000 hours per year and a 10-foot distance between the driver and the trailer containing the uranium ore. This resulted in a calculated dose rate in the truck cab of 0.014 mrem per hour. The DOE did not indicate which code was used to make the estimate; however, they reference using both MICROSHIELD AND RISKIND codes for other dose estimates in the document. SENES included the DOE estimate in the Risk Assessment to demonstrate that their estimate was conservative. With regard to the Environmental Impact Statement (EIS) prepared for the Moab tailings removal project, the 2005 Final EIS estimated that the

[1] *Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah Draft Environmental Impact Statement.*
http://nepa.energy.gov/nepa_documents/docs/deis/eis0355d/Vol_1/chap4-4.pdf

maximum radiation dose to a truck driver would be 26 mrem/yr rather than the 220 mrem/y quoted in the draft document. The DOE estimates and SENES estimate are within the same order of magnitude and the differences are attributable primarily to the assumptions made in the calculations (e.g., exposure time, exposure distance, shielding considerations, etc).

Energy Fuels respectfully disagrees with the assertion that the 2007 PEA has "numerous inadequacies." Federal NEPA documents such as the 2007 PEA are written for the layman and would not normally provide the level of technical detail that is required within the CDPHE or NRC technical review process. That doesn't necessarily make them poor documents, as they serve a different purpose. The environmental groups that sued the DOE asserted that DOE failed to follow various NEPA requirements and that an EIS rather than an EA should have been prepared.

A detailed analysis of the assessment of dose to truck drivers is presented in Appendix A3 and the MICROSHIELD printout is provided as Appendix A6.

14. *Page 22. Section 5. 3rd paragraph. The Department has learned over the years that not exceeding a dose limit is not sufficient to protect the public or the environment. While releases may not be of particular health risk, the financial risks of cleanup of spills and accidents can be considerable when protecting the soil, air and water from degradation. This approach has been recognized by NRC as being weak, see SECY-03-069 and follow up documents relative to large cleanups required from chronic releases.*

Energy Fuels agrees that a major or chronic release of radiological and/or non-radiological contaminants can result in considerable cleanup costs to meet regulatory standards. However, economic considerations are not within the scope of this risk assessment.

15. *Page 23. Hazard Identification. A fourth category is of major importance: energy sources. You must evaluate the risks from unintended releases of energy.*

Electrical hazards have been added to the discussion of hazards in Section 5.2 of the risk assessment. The assessment of bounding case accident scenarios is discussed in detail in section 5.4. These scenarios include those events initiated by unintended releases of energy including fires and explosions.

16. *Page 24. Table 5.1 Construction. Due to the nature of the collapsible soils at the site, the scenario should also include excavation accidents such as trench failure.*

Trench failures ("collapse of soil") have been added to the identified accident scenarios associated with construction activities in Table 5.1.

17. *<u>Page 24. Table 5.1 Ore Handling and Grinding.</u> Acid burns are a problem in this area. A loss of time accident happened at Cotter in the recent past in this area.*

Worker injuries due to contact with acid have been added to the Leaching and CCD accident scenario column in Table 5.1. Leak detection systems and process monitoring instrumentation in the Piñon Ridge Mill are designed to minimize the potential for an accidental release of acid from these circuits.

18. *<u>Page 26. Identified bounding scenarios.</u> The Department is concerned that these scenarios are evaluated in isolation; that is, there could be cumulative or multiple events that can lead to compounded effects. Uncontrolled wildfire is a real concern in the area; if there is not sufficient time to put the plant in standby, a wildfire could overwhelm the facility. In addition to the environmental damage of the fire, it is possible that explosions and fire from hazardous substances could occur, including the propane tanks, ammonia tanks, reagents, etc. Wildfires on the west end can break out quickly, with little warning; they are not adequately addressed in this report.*

Common cause and cumulative accident scenarios are evaluated and discussed in general terms in Section 5.4.15 of the revised Risk Assessment Report. Many combinations of events could be developed and evaluated; however, it was determined that these types of catastrophic accident scenarios are extremely rare. Energy Fuels is committed to analyzing these types of compound scenarios in more detail during final design, so that an accident in one area of the mill would have minimal impact on other areas of the mill. In the specific case of a wildfire, the local fire departments would be called in and the Emergency Response Plan would be activated**.**

19. *<u>Page 29. Section 5.4.1.</u> What are the probabilities of those risks and how are they managed? Just because they are no different than in other plants doesn't mean they don't need to be evaluated and addressed. How does MSHA relate to this topic?*

MSHA will be responsible for enforcing non-radiological health and safety regulations during the construction, operation, and closure of the mill. Energy Fuels' Safety Department will be responsible for ensuring that the mill is a compliance with MSHA and CDPHE regulations and that mill personnel are properly trained to minimize the potential for accidents of both a radiological and non-radiological nature. The Health and Safety Plan includes the Hazard Communication Program and General Health and Safety Procedures that address non-radiological safety concerns in the mill. References to MSHA and the Health and Safety Plan have been incorporated into this section along with a general discussion of the fatal injuries attributable to conventional accidents.

20. *<u>Page 39. 1st full paragraph.</u> It is our understanding that solvent fires should not be fought with water. Either a foam or CO_2 system is recommended by NFPA.*

Provide documentation showing that a conventional sprinkler system is adequate for the SX circuit or re-design that system to current standards of care. Cotter uses a CO_2 system for its solvent extraction circuit.

A letter from our Fire Protection Consultants, Rolf Jensen & Associates, Inc. was previously included in Response to Request for Additional Information No. 3, Attachment 3 – Parts 1 and 2 explaining that a water mist system, deluge foam system, or open-head water sprays could be employed in the SX building. The water mist system selected for fire protection purposes will be reevaluated during final design.

21. *Page 40. Tornado and High Wind. While the applicant has made a reasonable attempt at showing tornados are not likely at the site, it did not address high wind events. This is of import not as much due to the accident scenario, but for dust loading into the atmosphere during dust storms. "Red dust" storms are becoming common on the western slope, and as commented earlier, need to be addressed better in the application. See comment #6 for the MILDOSE-AREA report.*

Discussions of high winds have been added to Section 5.4.9 of the risk assessment. High winds were considered in the meteorological data used in the MILDOS analysis. An event of a magnitude greater than the Design Basis Wind (DBW) would be considered a very low probability event and its effects would be mitigated by implementation of the Emergency Response Plan. Dust storms are further analyzed in the Regional Dust Analysis Report prepared by Kleinfelder that was submitted as Exhibit 5 of the Response to Request for Additional Information No. 3, Attachment 3 – Parts 1 and 2.

22. *Page 41. Building Fire. As mentioned elsewhere, water is not the proper remedy for a solvent fire. These would be considered Class B fires by NFPA. See comment 20 above.*

See response to comment 20 above.

Please contact me if you have any questions or need additional information.

Sincerely,

Frank Filas, P.E.
Environmental Manager

Attachments: Exhibits 1 - 5

Cc: S. Brown (SENES)
B. Monok, Z. Rogers, S. Antony (Energy Fuels)