June 21, 2004

Ms. Susan Crowley
Kerr-McGee Chemical LLC (KM)
PO Box 55
Henderson, Nevada 89009

Re: **Kerr-McGee Chemical Corporation LLC (KM)**
NDEP Facility ID #H-000539
Nevada Division of Environmental Protection Response to:
Site-Related Chemical List

Dear Ms. Crowley,

The Nevada Division of Environmental Protection (NDEP) has reviewed the aforementioned document and provides the following comments:

1. It is indicated that the document is being provided in "draft form". This is not acceptable as the due date for the document was June 15, 2004. This due date was the date that the finalized document was due, not a draft document. Documents submitted to the NDEP on the due date should represent KM's best efforts at providing a document that is approvable. In the future, if KM would like to discuss a document or provide a preliminary draft to the NDEP it is necessary to do this within the constraints of the schedule that has been agreed upon. KM should also realize that the NDEP has limited resources and can not commit to any time frame for the review of preliminary draft documents. As mentioned previously, if the schedule requires adjustment, KM will need to request an amendment to the schedule.
2. It is also indicated that the document includes "PRGs, MCLs and SSLs" as requested by the NDEP. The NDEP feels that there is confusion on this issue as the February 11, 2004 NDEP letter did not request these items be presented with the site-related chemicals list. The presentation of this information may be more

appropriate in an evaluation of screening levels or another document to be prepared by KM. KM should also note that the applicability of various screening levels must be evaluated for site-specific conditions. Also, KM should note that there are additional screening levels that should be evaluated. These levels are not applicable to the site-related chemicals document and should be deleted from the revised submittal.

3. Laboratory limits are not listed for a number of chemicals. Please explain.
4. The NDEP believes that this document does not include a number of chemicals and compounds which appear to be site-related. These chemicals and compounds include (but are not limited to): anti-foam agent, argon, barite, boric acid, calcium chloride, chelant (Nalco 1745), chlorinated organics, chlorinated paraffin, chloride, coagulants, coal, coke, DDD, DDE, ethylbenzene, filter aid, flammables, flocculents, graphite, heavy metal sulfides, 2-hexanone, magnesium, paraffin wax, pH, phosphorous, unknown SVOCs, synthetic detergent, tank mud, tetrachloroethene, tin, titanium tetrachloride, trichloroethene, unknowns, and various lab wastes. It concerns NDEP that magnesium was omitted from the list of site-related chemicals as this site is located on the former plant site of Basic Magnesium Incorporated.
5. Some of the items listed do not appear to list all of the appropriate analytical methods. For example, magnesium perchlorate only includes the analysis for perchlorate by EPA Method 314.0. Please explain how magnesium will be analyzed for. Since this document was submitted in "draft form" NDEP did not verify the applicability of all of the methods listed. Also, as the project progresses towards a data useability assessment and risk assessment the applicability of these methods will need to be revisited.
6. Mixtures
    a. There are a number of mixtures presented on the site-related chemical list and mentioned in comment #4. It is necessary for KM to identify and explain what the components and degradation by-products are of these mixtures.
    b. Examples of mixtures include: anti-foam agent, chelant (Nalco 1745), coagulants, flocculents, glycols, paints, solvents, synthetic detergent, tank mud, and Tumbleaf defoliant.
    c. It is suggested that the components of these mixtures be addressed in a supplementary list as described in comment #16 below.
7. Unknowns
    a. The site-related chemicals pertaining to a number of the activities on the site are unknown.
    b. USEPA guidance (USEPA, April 1992, Guidance for Data Usability in Risk Assessment) states that if historical data are incomplete, a broad spectrum analysis should be performed on selected samples from each sampling location to provide necessary scoping information. The NDEP requests that KM explain what broad spectrum analyses are expected to be performed to address the unknowns at the site.
    c. NDEP requests that KM use Tentatively Identified Compounds (TICs) in their evaluation of unknowns at the site (in accordance with USEPA guidance). KM

should also note that any historic TICs should be identified as a site-related chemical.

d. KM has presented broad classes of chemicals as site-related chemicals. For example, acids, caustics, glycols, insecticides, and pesticides. KM must provide an explanation for how these broad classes of chemicals will be addressed.

8. Metals
   a. It appears that there are a number of compounds which may contain metals that are listed under the general heading of metals and do not belong under this heading. For example, diatomaceous earth, paints, potassium perchlorate, sodium alpha olefin sulfonate and strontium carbonate. Please refer to comment #16 and clarify this issue.
   b. It appears that cyanide would more appropriately be listed as an ion.
   c. The "laboratory limits" for lead in water is listed as 500 ug/L and the MCL is listed as 15 ug/L. Please explain how KM plans to address this issue as it relates to lead and other chemicals (please note that this problem is not specific to metals). For example, selenium in soil, hexavalent chromium in soil, nitrobenzene in soil, acetone in soil, etc., all have laboratory limits greater than their PRG, SSL or MCL.
9. Semi-Volatile Organic Compounds (SVOCs)
   a. The NDEP would like to note that the proposed list of SVOCs may not be adequate for the list of site-related chemicals. There are a number of unknowns at the site and it may be more appropriate to perform a full 8270C (or similar) analysis and supplement this standard list with any non-standard SVOCs that exist at the site. Please see comment #7 regarding unknowns.
   b. No analytical method is listed for nitrobenzene, however, laboratory limits are listed. Please explain.
10. Volatile Organic Compounds (VOCs)
   a. The NDEP would like to note that the proposed list of VOCs may not be adequate for the list of site-related chemicals. There are a number of unknowns at the site and it may be more appropriate to perform a full 8260 (or similar) analysis and supplement this standard list with any non-standard VOCs that exist at the site. Please see comment #7 regarding unknowns.
11. Organophosphorous Pesticides
   a. This row is blank, please provide an explanation for what is planned for organophosphorous pesticides.
12. Chlorinated Herbicides
   a. The analytical method listed is EPA 8051. The NDEP can not find any reference to an EPA Method 8051. There is a method known as Hach Method 8051 for sulfate. There is an EPA method 8151A which is used for chlorinated herbicides. Please explain.
13. Polynuclear Aromatic Hydrocarbons (PAHs)
   a. Please explain the justification for the list of PAHs presented.

b. The method listed is for the analysis of SVOCs. The appropriate method for PAHs is EPA Method 8310.

14. Water Quality Parameters
    a. This row is blank, please provide an explanation for what is planned for water quality parameters.
15. Radionuclides
    a. The February 11, 2004 letter from NDEP to KM stated that the "uranium series, thorium series, radium 226/228 (and all daughter products), as well as potassium 40" be evaluated. The NDEP would like to clarify that this should include the analysis of uranium 235; uranium 236; the uranium 238 decay series; and the thorium 232 decay series. Also, the daughter products of radium 226/228 should be evaluated. If KM is proposing to exclude these items from the site-related chemical list, adequate justification must be provided. Adequate justification may require documentation from a qualified chemist or toxicologist.
    b. The footnote explanation for gross alpha (adjusted) is incorrect. Adjusted gross alpha is defined as the total gross alpha minus contributions from uranium and radon 222. Please verify the method by which gross alpha (adjusted) radionuclides is analyzed and calculated and revise this footnote. Also, please note that the word "form" in this footnote should be replaced with the word "from".
    c. Please note that uranium will likely need to be evaluated from the chemical and radiological risk standpoints. These two risk pathways may require separate analysis. Please verify that the method proposed for uranium analysis is appropriate and discuss.
    d. The method listed for Thorium 230 is DOE EML HASL-30. It appears that this might be a truncated form of DOE EML HASL-300. Please explain.
16. Formatting and Clarity
    a. The NDEP believes that the project would be best served if the site-related chemicals list is as concise and clear as possible. It is the intent that the site-related chemicals list will list each chemical name only once. This list should be supplemented with a "tracking list" which provides all the necessary detail to understand how the site-related chemical list was developed. This "tracking list" could address a number of issues as discussed below and would provide a historic record which documents that KM investigated all compounds, mixtures and chemicals associated with the site.
    b. The "tracking list" could provide the names of the mixtures associated with the site and document what the components and degradation by-products of the mixtures are. These components and their degradation by-products would be addressed by chemicals listed on the site-related chemical list.
    c. The "tracking list" could also include and document the chemicals and compounds which will be addressed by their degradation by-products. For example, sodium chloride could be addressed by sodium and chloride.

This should substantially reduce the number of items presented on the site-related chemicals list. Also, it will provide clarity as to the types of chemicals that will be analyzed for.

d. The "tracking list" could also include chemicals which have no toxicity, rapid breakdown in the environment, insignificant volume of breakdown product, or other factors that eliminate health risks. For example, argon gas.
e. The "tracking list" should include synonyms as applicable.
f. If KM has any questions regarding the formatting of this "tracking list' or what is expected to be included it is suggested that KM contact NDEP to discuss.
g. The site-related chemical list includes the various ranges of hydrocarbons. It is necessary to explain what mixtures (diesel, gasoline, fuel oil, grease, motor oil, etc.) each of the ranges addresses. Some mixtures may also require additional analyses to address their components and degradation by-products. Further justification is needed.
h. Lime is listed under "general chemistry parameters" and "inorganics". Please delete the "general chemistry parameters" entry.
i. The category labeled "Nonhalogenated" appears to be a truncated form of "Nonhalogenated Organics". Please explain.

In summary, the NDEP is concerned that KM does not understand the expectations of the project or is not applying the right personnel to the project. If KM has questions on these expectations a conference call or meeting should be scheduled as soon as possible. If KM does not understand the NDEP's comments, questions should be asked or clarification should be requested. The NDEP is available to address these questions or provide clarifications by telephone, electronic mail, hard-copy mail, or in person.

By **July 22, 2004** KM shall address the issues outlined herein. Should you have any questions or concerns, please do not hesitate to contact me at (702) 486-2870.

Sincerely,

Brian A. Rakvica, P.E.
Staff Engineer III
Remediation and LUST Branch
Bureau of Corrective Actions
NDEP – Las Vegas Office

BAR/bar

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