

FOURTH DRAFT
For Discussion Purposes Only

December 27, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Revised Draft Letter of Understanding Between NDEP and
Kerr-McGee Chemical Corporation (KMCC) Reflecting
Comments made by the Public and the City of Henderson

Dear Ms. Crowley:

In consideration of comments received by the Division, from the public and the city of Henderson, concerning the items contained in the October 15, 1993 draft letter of understanding, we submit for your review and comment the following modifications to the language of those items. The original language appears in its entirety accompanied by proposed language changes/additions in bold face italics. Those portions of the original language proposed for replacement or removal appear in brackets [....].

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitriified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353 "Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

Provide a work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due South of "Trade Effluent Disposal Ponds:

KMCC will attempt to further delineate this poorly defined historic disposal area and to establish the nature of materials deposited therein. KMCC will

incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" Settling Ponds).

3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) of historical and current air emissions at the KMCC facility. For those emissions which are determined to have been or which are presently depositional in nature, KMCC will provide information regarding patterns of dispersion and probable deposition.

4) Hardesty Chemical Company Site:

Provide analytical data obtained from sampling of the ground water monitoring wells installed on the J.B. Kelley lease site. As these wells were installed for the evaluation of potential hydrocarbon contamination from the underground storage tanks formerly located at the J.B. Kelley site, NDEP may request additional sampling of these wells with an expanded list of analytes.

[Provide a statement which stipulates that available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.]

KMCC will determine whether Hardesty Chemical Company or its corporate successor(s) are still in business. If so, KMCC will contact Hardesty Chemical Company or its successor(s) for the purpose of obtaining information regarding Hardesty Chemical Company's former operations at the BMI Complex including facility location(s), products, wastestreams, manner and place of waste disposal, etc. If Hardesty Chemical Company or its successors are no longer extant, KMCC will determine whether there is a repository of corporate documents or other sources which may provide more information. KMCC may wish to coordinate such efforts with Stauffer Management Company/Pioneer Chlor-Alkali in light of the fact that identical information gathering tasks shall be required of those entities.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues. *For those segments or tributaries identified as having been utilized by KMCC or its tenants exclusively, KMCC will prepare a work plan to*

characterize residual contamination by contaminants of concern which may exist therein.

6) Unnamed Drainage Ditch Segment:

Based upon KMCC's assertion that this ditch is in fact the Northwest Drainage Ditch which received waste streams from more than one BMI company, this area will be addressed as a BMI Common Areas issue.

7) Old P-2 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal action levels.

8) P-3 Pond and Associated Conveyance Facilities:

KMCC will provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal action levels. *As a necessary component of this work plan, KMCC will provide additional information on the location, regulatory/closure status, and release history of this impoundment. KMCC will also provide information on the disposition of contaminated material removed from this pond.*

9) New P-2 Pond and Associated Piping:

Provide engineering specifications of the impoundment including leak detection systems (e.g. double lined with leachate collection) and the location and configuration of monitor wells intended for this purpose. Provide information regarding the operational and regulatory status of this impoundment and release history (if applicable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the

area of the old pad.

- 12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

- 13) Pond S-1:

No further action is required at this time. *A review of the RCRA permit status of this SI may be required pending the outcome of Phase II investigations.*

- 14) Pond P-1, and Associated Conveyance Piping:

KMCC will provide Closure documentation for this impoundment. *A review of the RCRA permit status of this SI may be required pending the outcome of Phase II investigations.* No further action is anticipated at this time.

- 15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is not a violation of State or Federal regulations. Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of material from this unit.

- 16 & 17) Ponds AP-1 and AP-2, and Associated Transfer Lines and Ponds AP-3 and Associated Transfer Lines:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these impoundments. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

Because ammonium perchlorate is highly soluble in water, and due to the fact that the ammonium ion (NH_4^+) may be rapidly transformed to nitrate by the action of indigenous microbes in the soil through the process of nitrification, the AP pond area should be evaluated for potential ground water impacts by nitrates.

Provide an evaluation of the potential reactivity of ammonium perchlorate in the ponds and in site soils.

Provide chromium concentration data for pond contents.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at

the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

18) Pond AP-4:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

19) Pond AP-5:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

20) Pond C-1 and Associated Piping, SWMU KMCC-011:

This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site performed in July of 1993 [of this year] is acceptable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control. The planned closure of this impoundment should be coordinated with the BWPC as well.

21) Pond Mn-1 and Associated Piping:

Reference item 20 above. It is understood that closure of this impoundment is not anticipated by KMCC at this time.

22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

23) Pond WC-2 and Associated Piping:

Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that

pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact ground water with manganese.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

- 25) Process Hardware Storage Area, SWMU KMCC-001:

No further action is required at this time.

- 26) Trash Storage Area:

No further action is required at this time.

- 27) PCB Storage Area, SWMU KMCC-003:

No further action is required at this time.

- 28) Hazardous Waste Storage Area, SWMU KMCC-004

Provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site reconnaissance. This documentation should include confirmatory sampling and analysis using EPA Method 8015 modified for petroleum hydrocarbons.

- 29) Solid Waste Dumpsters, SWMU KMCC-008

No further action is required at this time.

- 30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-0017:

No further action is required at this time.

- 31) Drum Crushing and Recycling Area, SWMU KMCC-018:

Provide documentation of the remediation of minor soil staining in this area.

Provide information regarding improvements in area operating procedures for the removal of residual materials from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials to the ground.

- 32) Ground Water Remediation Unit, SWMU KMCC-019:

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document any modifications made to the remediation unit

for this purpose.

- 33) Sodium Perchlorate Platinum By-Product filter, SWMU KMCC-021

KMCC will provide a written statement describing the repair of floor cracks in this unit. Beyond this, no further action is required at this time.

- 34) Former Manganese Tailings Area, SWMU KMCC-022:

Reference item 24 above.

- 35) Truck Emptying/Dump Site, SWMU KMCC-025:

Provide a sampling plan for assessment/characterization of "unknown" waste materials disposed in this area.

- 36-38) Former Satellite Accumulation Points:

No further action is required at this time.

- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-29:

Provide documentation of remediation of minor spill noted in the Phase I Report. This should include information regarding the association between the spill and the 1,1,1-trichloromethane stored in this area.

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials.

- 40) PCB Transformer Spill:

No further action is required at this time.

- 41) Unit 1 Tenant Stains:

Provide documentation of remediation of hydrocarbon impacted soil in this area.

- 42) Unit 2 Salt Redler:

No further action is required at this time

- 43) Unit 4 and 5 Basements:

Provide a discussion concerning the [practicality] *feasibility* of *characterization and* removal *and/or* stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide, as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and

reinjection zones, influent concentration trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should also be included in this document.

44) Unit 6 Basement:

Provide a technically based discussion of the potential impacts to ground water from manganese bearing solutions and from residual high/low pH contamination in the vadose zone which may have resulted from leakage of the basement of this unit. A discussion is required of the engineering features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.

45) Diesel Storage Tank:

Within 180 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing (including some form of non-destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.

46) Former Old Main Cooling Tower and Recirculation Lines:

No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese ore and or manganese compounds.

48) Leach Plant Anolyte Tanks:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential manganese and pH contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Reference item 48 above.

50) Leach Plant Area Leach Tanks:

Reference item 48 above.

- 51) Leach Plant Area Transfer Lines:

Reference item 48 above.

- 52) AP plant Area Screening Building, Dryer Building and Associated Sump:

Provide documentation of remediation of "minor white staining" from ammonium perchlorate wash downs and modifications to area procedures to mitigate or eliminate further releases of waste materials.

- 53) AP Plant Area Tank Farm:

Provide documentation of remediation of small visible staining and repair or replacement of the concrete pad.

Provide a discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.

- 54) AP Plant Area Change House/Laboratory Septic Tank:

Provide a work plan for assessment/characterization of potential contamination related to waste chemical disposal via the laboratory septic system.

- 55) Area Affected by July 1990 Fire:

Provide documentation of the remediation of the impacted area including specific data (e.g. waste volume, etc.) regarding material disposal at U.S. Ecology.

- 56) AP Plant Area Old Building D-1 -- Washdown:

Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils (see *also the requirements of item # 52 above*).

- 57 & 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:

No further action is required at this time.

- 59) Storm Sewer System:

Reference item #5 of the NDEP/Henderson Industrial Site Steering Committee draft Letter of Understanding dated September 10, 1993.

Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or ground water contamination resulting from waste disposal and storm water discharges through the storm sewer system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the storm sewer system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of 1993 may be used to provide some or all of the requested information.

60) Acid Drain System:

Reference item #5 of the NDEP/Henderson Industrial Site Steering Committee draft Letter of Understanding dated September 10, 1993.

Provide a technically based evaluation of the potential for soil and/or ground water contamination resulting from historic waste disposal through the acid drain system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the acid system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of 1993 may be used to provide some or all of the requested information.

61) Old Sodium Chlorate Plant Decommissioning:

No further action is required at this time.

62) State Industries, Inc. Site, Including Impoundments and Catch Basin:

Provide a work plan for the complete assessment/characterization of the State Industries surface impoundments. Analytes should be selected based upon known or suspected waste streams disposed to these ponds and should include TCLP metals, volatile organic compounds (if applicable), TPH (if applicable), and pH.

63) J.B. Kelley, Inc. Trucking Site:

Provide closure and/or remediation documentation for the underground storage tanks formerly located at this site. Include data from the ground water monitor wells installed by KMCC to evaluate potential hydrocarbon contamination.

Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.

64) Koch Materials Company Site:

Provide documentation of KMCC's efforts, *in conjunction with those of* [to work with] Koch Materials Co., to [for

the purpose of] remediate[ing] hydrocarbon contamination and to develop[ing] operating procedures and/or containment structures to prevent further releases of petroleum hydrocarbons and other wastes.

- 65) Nevada Precast Concrete Products, Green Ventures International, Buckles Construction Company, and Ebony Construction Sites:

Determine whether soil staining identified in this area is coincident with the staining referred to in item 41 above. If the staining is not coincident with this item, provide documentation of KMCC's efforts to work with these tenants for the purpose of remediating hydrocarbon contamination and developing operating procedures and/or containment structures to prevent further releases of hydrocarbon compounds and other waste materials.

- 66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

No further action is required at this time.

- 67) Delbert Madsen and Estate of Delber Madsen Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

- 68) Southern Nevada Auto Parts Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

- 69) Dillon Potter Site:

No further action is required at this time.

Please review each of the proposed language modifications above. These modifications and additions are an outgrowth of input from the public and the city of Henderson and are, of course, subject to discussion.

Should you have any questions or comments regarding any of the items, please contact either Allen Biaggi or myself at (702) 687-5872 extensions 3021 and 3017 respectively.

Sincerely,

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee

Chemical Corporation, Kerr-McGee Center, P.O. Box 25861,
Oklahoma City, Oklahoma 73125

Patrick S. Corbett, Plant Manager, Kerr-McGee Chemical
Corporation, P.O. box 55, Henderson, Nevada 89009-7000

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Division, Kerr-McGee Chemical Corporation, Kerr-McGee Center,
P.O. Box 25861, Oklahoma City, Oklahoma 73125

John Stauter, Kerr-McGee Chemical Corporation, Kerr-McGee
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Comprehensive Planning, 225 Bridger Avenue, 7th Floor, Las
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Verne Rosse, Deputy Administrator

Dick Serdoz, NDEP Las Vegas

Kent Hanson, Deputy Attorney General, NDEP

Allen Biaggi, NDEP

Jeff Denison, NDEP



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

October 6, 1993

RECEIVED
ENVIRONMENTAL
PROTECTION
DIVISION
OCT 11 PM 12:49

Allen Biaggi
State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Biaggi:

Enclosed is a Work Plan describing sampling to be done to investigate the land condition in the areas of Kerr-McGee Chemical Corporation and BMI property. The sampling is expected to start the week of October 11, 1993.

Please feel free to call me if you have any questions or need additional information. Thank you.

Sincerely,

Susan Crowley
Susan Crowley
Staff Environmental Specialist

SMC:j

cc: PSCorbett
RHJones
JCStauter
TReed

Sampling Plan

Northwest Drainage Ditch and Proposed Warm Springs Road Right-of-Way

The Northwest Drainage Ditch was constructed in the early 1940's by the U.S. Government to convey effluent from the BMI Complex to the Lower BMI Ponds. Over time, the ditch was used to convey effluent from several operators within the complex, however, details on the time frame, quantities, and constituents are sketchy.

Currently, remnants of the ditch are located on the northern portion of Kerr-McGee Chemical Corporation's (KMCC) property running in a northwesterly direction starting near the BMI siphon and running the width of the property as shown on the attached map.

The City of Henderson is proposing to develop a portion of the Warm Springs Road adjacent to the historic ditch channel and eventually cross the ditch on the western edge of the property. The road will then proceed across the northern border of the BMI property. Along this section, the road will then cross the old Western Drainage ditch.

Because of historic use of the ditch to convey process effluent, KMCC is proposing the following sampling plan to determine environmental conditions in the right of way and adjacent drainage prior to allowing any work being conducted in these areas.

KMCC proposes to collect samples at three locations in the Northwest Drainage ditch and one location in the Western Drainage ditch, as shown on the attached map. At each location, composite samples will be collected at depths of 0 - 1 foot and 4 - 5 feet. The samples will be analyzed for the constituents listed in Table 1.

In addition to samples collected from the ditch, seven samples will be collected from the surface soil in the proposed right of way. A composite sample from 0 - 1 foot will be collected from each location and analyzed for those parameters in Table 1.

All sampling activities will follow protocols outlined in the Sample and Analysis Plan submitted to the NDEP on August 30, 1993; however, an alternate laboratory may be used to conduct the analytical work.

Stauffer, Montrose
& KMCC

Stauffer &
Montrose works

L. H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

October 18, 1993

Mr. Russell Jones
Staff Environmental Engineer
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Subject: Third Draft of the Kerr-McGee/NDEP Letter of Understanding

Dear Mr. Russell:

The enclosed draft LOU has been partially modified to reflect your recent telephone conversation with Allen Biaggi. Allen and I discussed your proposed changes and agreed upon the following modifications:

- Items 7 & 8) It was felt that limiting the scope of these passages by changing the words "material" to "chromium" would not be appropriate at this time due to outstanding concerns expressed by the City of Henderson.
- Item 15) The last sentence of this passage now reads: *"Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of material from this unit."*
- Item 24) This first paragraph of this passage now reads: *"Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact ground water with manganese."*
- Item 28) The first letter of the first sentence in this passage has been capitalized.
- Items 35-38) This subheading has been corrected to read "36-38)".

Mr. Russell Jones
Kerr-McGee Center
October 18, 1993
Page 2

Item 44) The first sentence of this passage now reads: *"Provide a technically based discussion of the potential impacts to ground water from manganese bearing solutions and from residual high/low pH contamination in the vadose zone which may have resulted from leakage of the basement of this unit."*

Should you have any further questions or comments regarding the draft LOU, please do not hesitate to contact either myself or Allen at (702) 687-5872 extensions 3017 and 3021 respectively.

Sincerely,



Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:ns

cc: Susan Crowley, Kerr-McGee Chemical Corporation, P.O. Box 55, Henderson, Nevada 89009-7000

Barry Conaty, Esq., Cutler & Stanfield, 700 Fourteenth Street, N.W., Washington, D.C. 20005

Jeff C. Harris, Coordinator, Clark County Department of Comprehensive Planning, 225 Bridger Avenue, 7th Floor, Las Vegas, Nevada 89155

Kent Hanson, Deputy Attorney General, NDEP

Allen Biaggi, NDEP

THIRD DRAFT
For Discussion Purposes Only

October 15, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Letter of Understanding Based Upon the June 21 and August 10, 1993 Meetings Between NDEP and Kerr-McGee Chemical Corporation (KMCC)

Dear Ms. Crowley:

It is the Nevada Division of Environmental Protection's understanding, based upon our June 21 meeting with Messrs. Russell Jones, Alan Gaddy, Pat Corbett, John Stauter, Tom Read, Carl Savely, Ms. Patricia Demps, and yourself, and our subsequent meeting on August 10, that Kerr-McGee agrees to provide NDEP with the following documentation, technical discussions, and assessment/characterization work plans associated with or to be performed at KMCC's Henderson, Nevada facility:

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353 "Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

Provide a work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due South of "Trade Effluent Disposal Ponds:

KMCC will incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" settling Ponds).

3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) of historical and current air emissions at the KMCC facility. For those emissions which are determined to have been or which are presently depositional in nature, KMCC will provide information regarding patterns of dispersion and probable deposition.

4) Hardesty Chemical Company Site:

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Provide a statement which stipulates that available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues.

6) Unnamed Drainage Ditch Segment:

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8) P-3 Pond and Associated Conveyance Facilities:

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action levels.

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Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.

12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

13) Pond S-1:

No further action is required at this time.

14) Pond P-1, and Associated Conveyance Piping:

KMCC will provide Closure documentation for this impoundment. No further action is anticipated.

15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is not a violation of State or Federal regulations. Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of material from this unit.

- 16 & 17) Ponds AP-1 and AP-2, and Associated Transfer Lines and Ponds AP-3 and Associated Transfer Lines:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these impoundments. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

Because ammonium perchlorate is highly soluble in water, and due to the fact that the ammonium ion (NH_4^+) may be rapidly transformed to nitrate by the action of indigenous microbes in the soil through the process of nitrification, the AP pond area should be evaluated for potential ground water impacts by nitrates.

Provide an evaluation of the potential reactivity of ammonium perchlorate in the ponds and in site soils.

Provide chromium concentration data for pond contents.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

- 18) Pond AP-4:

Reference items 16 & 17 above . The issue of potential chromium contamination is not applicable to this impoundment.

- 19) Pond AP-5:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

- 20) Pond C-1 and Associated Piping, SWMU KMCC-011:

This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site performed in July of this year is acceptable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control. The planned closure of this impoundment should be coordinated with the BWPC as well.

21) Pond Mn-1 and Associated Piping:

Reference item 20 above. It is understood that closure of this impoundment is not anticipated by KMCC at this time.

22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

23) Pond WC-2 and Associated Piping:

Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact ground water with manganese.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

25) Process Hardware Storage Area, SWMU KMCC-001:

No further action is required at this time.

26) Trash Storage Area:

No further action is required at this time.

27) PCB Storage Area, SWMU KMCC-003:

No further action is required at this time.

28) Hazardous Waste Storage Area, SWMU KMCC-004

Provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site reconnaissance. This documentation should include confirmatory sampling and analysis using EPA Method 8015

modified for petroleum hydrocarbons.

- 29) Solid Waste Dumpsters, SWMU KMCC-008

No further action is required at this time.

- 30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-0017:

No further action is required at this time.

- 31) Drum Crushing and Recycling Area, SWMU KMCC-018:

Provide documentation of the remediation of minor soil staining in this area.

Provide information regarding improvements in area operating procedures for the removal of residual materials from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials to the ground.

- 32) Ground Water Remediation Unit, SWMU KMCC-019:

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document any modifications made to the remediation unit for this purpose.

- 33) Sodium Perchlorate Platinum By-Product filter, SWMU KMCC-021

No further action is required at this time.

- 34) Former Manganese Tailings Area, SWMU KMCC-022:

Reference item 24 above.

- 35) Truck Emptying/Dump Site, SWMU KMCC-025:

Provide a sampling plan for assessment/characterization of "unknown" waste materials disposed in this area.

- 36-38) Former Satellite Accumulation Points:

No further action is required at this time.

- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-29:

Provide documentation of remediation of minor spill noted in the Phase I Report. This should include information regarding the association between the spill and the 1,1,1-trichloromethane stored in this area.

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials.

- 40) PCB Transformer Spill:
No further action is required at this time.
- 41) Unit 1 Tenant Stains:
Provide documentation of remediation of hydrocarbon impacted soil in this area.
- 42) Unit 2 Salt Redler:
No further action is required at this time
- 43) Unit 4 and 5 Basements:
Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide, as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and reinjection zones, influent concentration trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should also be included in this document.
- 44) Unit 6 Basement:
Provide a technically based discussion of the potential impacts to ground water from manganese bearing solutions and from residual high/low pH contamination in the vadose zone which may have resulted from leakage of the basement of this unit. A discussion is required of the engineering features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.
- 45) Diesel Storage Tank:
Within 180 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing (including some form of non-destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.
- 46) Former Old Main Cooling Tower and Recirculation Lines:
No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese ore and or manganese compounds.

48) Leach Plant Analyte Tanks:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential manganese and pH contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Reference item 48 above.

50) Leach Plant Area Leach Tanks:

Reference item 48 above.

51) Leach Plant Area Transfer Lines:

Reference item 48 above.

52) AP plant Area Screening Building, Dryer Building and Associated Sump:

Provide documentation of remediation of "minor white staining" from ammonium perchlorate wash downs and modifications to area procedures to mitigate or eliminate further releases of waste materials.

53) AP Plant Area Tank Farm:

Provide documentation of remediation of small visible staining and repair or replacement of the concrete pad.

Provide a discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.

54) AP Plant Area Change House/Laboratory Septic Tank:

Provide a work plan for assessment/characterization of potential contamination related to waste chemical disposal via the laboratory septic system.

55) Area Affected by July 1990 Fire:

Provide documentation of the remediation of the impacted area including specific data (e.g. waste volume, etc.) regarding material disposal at U.S. Ecology.

56) AP Plant Area Old Building D-1 -- Washdown:

Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils (see item # 52 above).

57 & 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:

No further action is required at this time.

59) Storm Sewer System:

Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or ground water contamination resulting from waste disposal and storm water discharges through the storm sewer system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the storm sewer system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

60) Acid Drain System:

Provide a technically based evaluation of the potential for soil and/or ground water contamination resulting from historic waste disposal through the acid drain system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the acid system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

61) Old Sodium Chlorate Plant Decommissioning:

No further action is required at this time.

62) State Industries, Inc. Site, Including Impoundments and Catch Basin:

Provide a work plan for the complete assessment/characterization of the State Industries surface impoundments. Analytes should be selected based upon known or suspected waste streams disposed to these ponds and should include TCLP metals, volatile organic compounds (if applicable), TPH (if applicable), and pH.

63) J.B. Kelley, Inc. Trucking Site:

Provide closure and/or remediation documentation for the underground storage tanks formerly located at this site. Include data from the ground water monitor wells installed by KMCC to evaluate potential hydrocarbon contamination.

Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.

64) Koch Materials Company Site:

Provide documentation of KMCC's efforts to work with Koch Materials Co. for the purpose of remediating hydrocarbon contamination and developing operating procedures or containment structures to prevent further releases of petroleum hydrocarbons and other wastes.

65) Nevada Precast Concrete Products, Green Ventures International, Buckles Construction Company, and Ebony Construction Sites:

Determine whether soil staining identified in this area is coincident with the staining referred to in item 41 above. If the staining is not coincident with this item, provide documentation of KMCC's efforts to work with these tenants for the purpose of remediating hydrocarbon contamination and developing operating procedures and/or containment structures to prevent further releases of hydrocarbon compounds and other waste materials.

66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

No further action is required at this time.

67) Delbert Madsen and Estate of Delber Madsen Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

68) Southern Nevada Auto Parts Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

69) Dillon Potter Site:

No further action is required at this time.

In addition to the items outlined above, the Division requests that KMCC provide a description of the sampling protocols and QA/QC procedures used during the July 1993 facility wide sampling of ground water monitor wells.

The information gathering and assessment/remediation tasks enumerated above will be incorporated (by reference) into the forthcoming Phase II Agreement to be negotiated with Kerr-McGee and

the other BMI companies. The Phase II negotiation process should not prevent or delay Kerr-McGee from implementing this work. Since the negotiation process may be lengthy, Kerr-McGee is encouraged to proceed with documentary data gathering and work plan preparation as soon as practicable.

It should be understood, however, that in the absence of a formal Phase II Agreement which stipulates standards for sampling protocols, QA/QC, analytical methods, etc., any physical data gathering (i.e. soil, ground water, and/or material sampling and analysis) which KMCC elects to undertake in the interim, may later be judged to be inappropriate. It should also be understood that all items are subject to further modification as a result of input from the public and local municipalities.

Please review each of the items outlined above to assure that it concurs with your understanding of the points agreed upon during our meetings in June and August. Should you have any questions or comments regarding any of the items, please contact either Allen Biaggi or myself at (702) 687-5872 extensions 3021 and 3017 respectively.

Sincerely,

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Patrick S. Corbett, Plant Manager, Kerr-McGee Chemical Corporation, P.O. box 55, Henderson, Nevada 89009-7000

Thomas W. Read, Senior Hydrologist, Hydrology-Technology Division, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

John Stauter, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Patricia Redd Demps, Esq., Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Carl D. Savely, Esq., Lionel Sawyer & Collins, 1700 Valley Bank Plaza, 300 South fourth Street, Las Vegas, Nevada 89101

Mark T. Calhoun, Director of Public Works, City of Henderson, 243 Water Street, Henderson, Nevada 89015

Barry Conaty, Esq., Cutler & Stanfield, 700 Fourteenth Street, N.W., Washington, D.C. 20005

Jeff C. Harris, Coordinator, Clark County Department of
Comprehensive Planning, 225 Bridger Avenue, 7th Floor, Las
Vegas, Nevada 89155

L.H. Dodgion, Administrator

Verne Rosse, Deputy Administrator

Dick Serdoz, NDEP Las Vegas

Kent Hanson, Deputy Attorney General, NDEP

Allen Biaggi, NDEP

Jeff Denison, NDEP



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

August 31, 1993

Certified Mail No. P 522 703 879

Allen Biaggi
State of Nevada
Division of Environmental Protection
333 Nye Lane
Carson City, Nevada 89710

Dear Mr. Biaggi:

Re: Sampling and Analysis Plan
Henderson, Nevada

Enclosed are two copies of the Sampling and Analysis Plan, August 1993, for Kerr-McGee Chemical Corporation's, Henderson, Nevada Facility. It was the basis for groundwater sampling done in June 1993 and will also support the Work Plan being constructed for Phase II of Kerr-McGee Chemical Corporation's Environmental Conditions Assessment.

The Plan is comprehensive, covering groundwater, surface water, surface and near-surface soils, subsurface soils as well as a QC/QA protocol.

Please feel to call me if you have any questions or comments about the Plan. Thank you.

Very truly yours,

Patrick S. Corbett
Plant Manager

PSC:j

cc: SMCrowley
JCStauter
RHJones
TWReed

2 binders

STATE OF NEVADA

BOB MILLER
Governor

PETER G. MORROS
Director

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex

333 W. Nye Lane

Carson City, Nevada 89710

August 31, 1993

Patrick S. Corbett
Plant Manager
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Semi-Annual Performance Report, Chromium Mitigation Program, KMCC
Henderson, Nevada Facility

Dear Mr. Corbett:

As you know, Allen Biaggi and I have been and continue to be involved in the Phase II negotiations with KMCC and the other BMI Complex companies. We will be the prime points of contact for assessment/remediation (both on-going and new) activities at BMI for the foreseeable future. Accordingly, please address future (non-permit related) correspondence (i.e. performance and system evaluation reports, etc.) concerning the chromium mitigation program to either Allen or myself.

As always, please feel free to contact either myself or Allen at 687-5872 extensions 3017 or 3021 respectively, should you have any questions or comments.

Sincerely,

A handwritten signature in black ink that reads "Edward L. Basham".

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:ns

cc: Susan Crowley, Staff Environmental Specialist, Kerr-McGee Chemical Corporation, P.O.
Box 55, Henderson, Nevada 89009-7000
Allen Biaggi, NDEP
Joe Livak, NDEP

Note: additions/corrections to August 17 draft are shown in bold text.

SECOND DRAFT
For Comment Only

September 2, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Letter of Understanding Based Upon the June 21 and August 10, 1993 Meetings Between NDEP and Kerr-McGee Chemical Corporation (KMCC)

Dear Ms. Crowley:

It is the Nevada Division of Environmental Protection's understanding, based upon our June 21 meeting with Messrs. Russell Jones, Alan Gaddy, Pat Corbett, John Stauter, Tom Read, Carl Savely, Ms. Patricia Demps, and yourself, and our subsequent meeting on August 10, that Kerr-McGee agrees to provide NDEP with the following documentation, technical discussions, and assessment/characterization work plans associated with or to be performed at KMCC's Henderson, Nevada facility:

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitriified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353 "Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

Provide a work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due South of "Trade Effluent Disposal Ponds:

KMCC will incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" settling

Ponds).

- 3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) of historical and current air emissions at the KMCC facility. For those emissions which are determined to have been or which are presently depositional in nature, KMCC will provide information regarding patterns of dispersion and probable deposition.

- 4) Hardesty Chemical Company Site:

Provide analytical data obtained from sampling of the ground water monitoring wells installed on the J.B. Kelley lease site. As these wells were installed for the evaluation of potential hydrocarbon contamination from the underground storage tanks formerly located at the J.B. Kelley site, NDEP may request additional sampling of these wells with an expanded list of analytes.

Provide a statement which stipulates that available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.

- 5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues.

- 6) Unnamed Drainage Ditch Segment:

Based upon KMCC's assertion that this ditch is in fact the Northwest Drainage Ditch which received waste streams from more than one BMI company, this area will be addressed as a BMI Common Areas issue.

- 7) Old P-2 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal action levels.

- 8) P-3 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in

the area of the former pond to confirm that residual material concentrations are below State and Federal action levels.

9) New P-2 Pond and Associated Piping:

Provide engineering specifications of the impoundment including leak detection systems (e.g. double lined with leachate collection) and the location and configuration of monitor wells intended for this purpose. Provide information regarding the operational and regulatory status of this impoundment and release history (if applicable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.

12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

13) Pond S-1:

No further action is required at this time.

14) Pond P-1, and Associated Conveyance Piping:

KMCC will provide Closure documentation for this impoundment. No further action is anticipated.

15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is not a violation of State or Federal regulations. Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or

minimize further releases of waste material.

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Provide an evaluation of the potential reactivity of ammonium perchlorate in the ponds and in site soils.

Provide chromium concentration data for pond contents.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

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This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site performed in July

of this year is acceptable).

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22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

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Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact either human health or the environment.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

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26) Trash Storage Area:

No further action is required at this time.

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No further action is required at this time.

28) Hazardous Waste Storage Area, SWMU KMCC-004

Provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site

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No further action is required at this time.
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- 34) Former Manganese Tailings Area, SWMU KMCC-022:
Reference item 24 above.
- 35) Truck Emptying/Dump Site, SWMU KMCC-025:
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Provide information regarding improvements in area

operating procedures for the purpose of minimizing or eliminating spillage of waste materials.

40) **PCB Transformer Spill:**

No further action is required at this time.

41) **Unit 1 Tenant Stains:**

Provide documentation of remediation of hydrocarbon impacted soil in this area.

42) **Unit 2 Salt Redler:**

No further action is required at this time

43) **Unit 4 and 5 Basements:**

Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide, as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and reinjection zones, influent concentration trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should also be included in this document.

44) **Unit 6 Basement:**

Provide a technically based discussion of the potential impacts to ground water from manganese dioxide and pH residual contamination in the vadose zone from leakage of the basement of this unit. A discussion is required of the engineering features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.

45) **Diesel Storage Tank:**

Within 180 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing (including some form of non-destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.

46) **Former Old Main Cooling Tower and Recirculation Lines:**

No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese ore and or manganese compounds.

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Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential manganese and pH contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

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Reference item 48 above.

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Provide documentation of remediation of "minor white staining" from ammonium perchlorate wash downs and modifications to area procedures to mitigate or eliminate further releases of waste materials.

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Provide documentation of remediation of small visible staining and repair or replacement of the concrete pad.

Provide a discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.

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Provide a work plan for assessment/characterization of potential contamination related to waste chemical disposal via the laboratory septic system.

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Provide documentation of the remediation of the impacted

area including specific data (e.g. waste volume, etc.) regarding material disposal at U.S. Ecology.

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Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils (see item # 52 above).

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No further action is required at this time.

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Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or ground water contamination resulting from waste disposal and storm water discharges through the storm sewer system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the storm sewer system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

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Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.

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Determine whether soil staining identified in this area is coincident with the staining referred to in item 41 above. If the staining is not coincident with this item, provide documentation of KMCC's efforts to work with these tenants for the purpose of remediating hydrocarbon contamination and developing operating procedures and/or containment structures to prevent further releases of hydrocarbon compounds and other waste materials.

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No further action is required at this time.

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In addition to the items outlined above, the Division requests that KMCC provide a description of the sampling protocols and QA/QC procedures used during the July 1993 facility wide sampling of

ground water monitor wells.

The information gathering and assessment/remediation tasks enumerated above will be incorporated (by reference) into the forthcoming Phase II Agreement to be negotiated with Kerr-McGee and the other BMI companies. The Phase II negotiation process should not prevent or delay Kerr-McGee from implementing this work. Since the negotiation process may be lengthy, Kerr-McGee is encouraged to proceed with documentary data gathering and work plan preparation as soon as practicable.

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Please review each of the items outlined above to assure that it concurs with your understanding of the points agreed upon during our meetings in June and August. Should you have any questions or comments regarding any of the items, please contact either Allen Biaggi or myself at (702) 687-5872 extensions 3021 and 3017 respectively.

Sincerely,

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Patrick S. Corbett, Plant Manager, Kerr-McGee Chemical Corporation, P.O. box 55, Henderson, Nevada 89009-7000

Thomas W. Read, Senior Hydrologist, Hydrology-Technology Division, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

John Stauter, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Patricia Redd Demps, Esq., Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Carl D. Savely, Esq., Lionel Sawyer & Collins, 1700 Valley Bank Plaza, 300 South fourth Street, Las Vegas, Nevada 89101

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Comprehensive Planning, 225 Bridger Avenue, 7th Floor, Las
Vegas, Nevada 89155

L.H. Dodgion, Administrator

Verne Rosse, Deputy Administrator

Dick Serdoz, NDEP Las Vegas

Kent Hanson, Deputy Attorney General, NDEP

Allen Biaggi, NDEP

Jeff Denison, NDEP

Allen:
my recommendations
ED

ED: PLEASE MAKE
INDICATED MODS. AND
SEND TO RUSSELL J.

THANKS
- AB -

SECOND DRAFT
For Comment Only

August 31, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Letter of Understanding Based Upon the June 21 and August 10, 1993 Meetings Between NDEP and Kerr-McGee Chemical Corporation (KMCC)

Dear Ms. Crowley:

It is the Nevada Division of Environmental Protection's understanding, based upon our June 21 meeting with Messrs. Russell Jones, Alan Gaddy, Pat Corbett, John Stauter, Tom Read, Carl Savely, Ms. Patricia Demps, and yourself, and our subsequent meeting on August 10, that Kerr-McGee agrees to provide NDEP with the following documentation, technical discussions, and assessment/characterization work plans associated with or to be performed at KMCC's Henderson, Nevada facility:

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353 "Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

Provide a work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due South of "Trade Effluent Disposal Ponds:

KMCC will incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" settling Ponds).

3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) of historical and current air emissions at the KMCC facility. For those emissions which are determined to have been or which are presently depositional in nature, KMCC will provide information regarding patterns of dispersion and probable deposition.

4) Hardesty Chemical Company Site:

Provide analytical data obtained from sampling of the ground water monitoring wells installed on the J.B. Kelley lease site. As these wells were installed for the evaluation of potential hydrocarbon contamination from the underground storage tanks formerly located at the J.B. Kelley site, NDEP may request additional sampling of these wells with an expanded list of analytes.

Provide a statement which stipulates that available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues.

6) Unnamed Drainage Ditch Segment:

Based upon KMCC's assertion that this ditch is in fact the Northwest Drainage Ditch which received waste streams from more than one BMI company, this area will be addressed as a BMI Common Areas issue.

7) Old P-2 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal action levels.

8) P-3 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal

*I say no to both of these!
- There are outstanding questions raise by Cutler & Stanfield
No I agree
AB
LET BACK TO THEM
Chromium*

action levels.

9) New P-2 Pond and Associated Piping:

Provide engineering specifications of the impoundment including leak detection systems (e.g. double lined with leachate collection) and the location and configuration of monitor wells intended for this purpose. Provide information regarding the operational and regulatory status of this impoundment and release history (if applicable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.

12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

13) Pond S-1:

No further action is required at this time.

14) Pond P-1, and Associated Conveyance Piping:

KMCC will provide Closure documentation for this impoundment. No further action is anticipated.

15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is not a violation of State or Federal regulations. Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of waste material. *I would say:*

OK

~~of waste material~~ of ~~material~~ material from this unit.

- 16 & 17) Ponds AP-1 and AP-2, and Associated Transfer Lines and Ponds AP-3 and Associated Transfer Lines:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these impoundments. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

Because ammonium perchlorate is highly soluble in water, and due to the fact that the ammonium ion (NH_4^+) may be rapidly transformed to nitrate by the action of indigenous microbes in the soil through the process of nitrification, the AP pond area should be evaluated for potential ground water impacts by nitrates.

Provide an evaluation of the potential reactivity of ammonium perchlorate in the ponds and in site soils.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

- 18) Pond AP-4:

Reference items 16 & 17 above . The issue of potential chromium contamination is not applicable to this impoundment.

- 19) Pond AP-5:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

- 20) Pond C-1 and Associated Piping, SWMU KMCC-011:

This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site performed in July of this year is acceptable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be

addressed by NDEP's Bureau of Water Pollution control. The planned closure of this impoundment should be coordinated with the BWPC as well.

21) Pond Mn-1 and Associated Piping:

Reference item 20 above. It is understood that closure of this impoundment is not anticipated by KMCC at this time.

22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

23) Pond WC-2 and Associated Piping:

Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact ~~either human health or the environment.~~ ^{ground water with Mn.} *OK*

~~This would save the facility~~
Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information. *even though they may not be fully identified make them!*

25) Process Hardware Storage Area, SWMU KMCC-001:

No further action is required at this time.

26) Trash Storage Area:

No further action is required at this time.

27) PCB Storage Area, SWMU KMCC-003:

No further action is required at this time.

28) Hazardous Waste Storage Area, SWMU KMCC-004

ok Provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site reconnaissance. This documentation should include confirmatory sampling and analysis using EPA Method 8015 modified for petroleum hydrocarbons.

- 29) Solid Waste Dumpsters, SWMU KMCC-008
No further action is required at this time.
- 30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-0017:
No further action is required at this time.
- 31) Drum Crushing and Recycling Area, SWMU KMCC-018:
Provide documentation of the remediation of minor soil staining in this area.

Provide information regarding improvements in area operating procedures for the removal of residual materials from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials to the ground.
- 32) Ground Water Remediation Unit, SWMU KMCC-019:
Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document any modifications made to the remediation unit for this purpose.
- 33) Sodium Perchlorate Platinum By-Product filter, SWMU KMCC-021
No further action is required at this time.
- 34) Former Manganese Tailings Area, SWMU KMCC-022:
Reference item 24 above.
- 35) Truck Emptying/Dump Site, SWMU KMCC-025:
Provide a sampling plan for assessment/characterization of "unknown" waste materials disposed in this area.
- ⁶
~~37~~-38) Former Satellite Accumulation Points:
No further action is required at this time.
- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-29:
Provide documentation of remediation of minor spill noted in the Phase I Report. This should include information regarding the association between the spill and the 1,1,1-trichloromethane stored in this area.

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials.
- 40) PCE Transformer Spill:

No further action is required at this time.

41) Unit 1 Tenant Stains:

Provide documentation of remediation of hydrocarbon impacted soil in this area.

42) Unit 2 Salt Redler:

No further action is required at this time

43) Unit 4 and 5 Basements:

Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide, as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and reinjection zones, influent concentration trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should also be included in this document.

44) Unit 6 Basement:

Provide a technically based discussion of the potential impacts to ground water from manganese dioxide and pH residual contamination in the vadose zone from leakage of the basement of this unit. A discussion is required of the engineering features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.

*READY
gavito's OK
OK*

45) Diesel Storage Tank:

Within 180 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing (including some form of non-destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.

46) Former Old Main Cooling Tower and Recirculation Lines:

No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese ore and or manganese compounds.

48) Leach Plant Analyte Tanks:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential manganese and pH contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Reference item 48 above.

50) Leach Plant Area Leach Tanks:

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51) Leach Plant Area Transfer Lines:

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Sincerely,

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

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Kent Hanson, Deputy Attorney General, NDEP

Allen Biaggi, NDEP

Jeff Denison, NDEP



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

RECEIVED
ENVIRONMENTAL
PROTECTION

Jeff

August 24, 1993

93 AUG 31 AM 9:36

Mr. LaVerne Rosse
Deputy Administrator
State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, NV 89710

Dear Mr. Rosse:

Subject: Closed Hazardous Waste Landfill
1993 Post Closure Monitoring Results

Kerr-McGee Chemical Corporation's (KMCC) Henderson facility conducted RCRA groundwater monitoring as required by 40 CFR 265.92 (d)(1) in July, 1993. The wells sampled are associated with the closed hazardous waste landfill located at the Henderson site. Analytical results were compared with 1982/83 baseline values as required under 40 CFR 265.93 (c).

A statistically significant change from baseline of the upgradient well M-5 was detected in parameters of pH, specific conductance (SpCd), total organic carbon (TOC) and total organic halides (TOX). The change from baseline was trending towards a quality improvement for parameters of pH, SpCd, TOC and TOX.

Notice of a statistically significant change of an upgradient well groundwater quality parameter is made herein pursuant to 40 CFR 265.93 (c)(1). There is no evidence the landfill could affect upgradient water quality parameters.

All statistically significant changes from baseline (Table 1) detected in the downgradient monitoring wells described below reflect a groundwater quality improvement when compared to the 1982/83 baseline values of well M-5. All parameters, pH, SpCd, TOC and TOX moved in the direction of quality improvement in all three downgradient wells, M-6, M-7 and H-28.

Additional groundwater samples were collected as required under 40 CFR 265.93 (c)(2) and analyzed for pH and SpCd at each well.

Statistically, analysis of the resampled parameters did show support for

1. An increase in pH in M-5, M-6A, M-7A and H-28.
2. A decrease in SpCd in M-5, M-6A, M-7A and H-28.

Mr. LaVerne Rosse
Page 2
August 26, 1993

3. A decrease in TOC in M-5, M-6A, M-7A and H-28.

4. A decrease in TOX in M-5, M-6A, M-7A and H-28.


Water levels, statistical comparisons and analytical results are attached as Table 1. Resample results are attached as Table 2.

Based on information herein and the information presented since the June 1984 Closure/Post Closure Plan (revised October 1984) was submitted, the regulated landfill does not affect groundwater quality.

Please feel free to contact S.M. Crowley at 702/651-2234 if you have any questions.

Very truly yours,

KERR-McGEE CHEMICAL CORPORATION


Fredrick R. Stater
Operations Manager

SMC:sc

cc: SMCrowley
JCStauter

TABLE 1. KERR-McGEE CHEMICAL CORPORATION - HENDERSON, NV
HAZARDOUS WASTE LANDFILL MONITORING RESULTS

Well #	Date	Water Level (feet)	Total Chromium (ppm)	Iron (ppm)	Manganese (ppm)	Sodium (ppm)	Chloride (ppm)	Sulfate (ppm)	Phenols (ppb)	TOC (ppm)	TOX (ppm)	pH	Specific Conductance (umhos/cm)
M-5	7-13-93	1710.49	ND	9.2	3.1	2000	4900	1600	98	15.8	18.4	7.2	9880
										12.9	14.3	7.1	10130
										16.4	14.2	7.1	10100
										8.3	13.8	7.1	10100
M-5 Average M-5 Standard Deviation Background (M-5) * M-5 t-Test													
M-6A	7-13-93	1681.86	ND	0.1	0.07	1400	2000	1800	26	5.9	1.6	7.5	6510
										3.9	1.6	7.2	6500
										4.0	1.7	7.1	6510
										8.7	1.6	7.1	6500
M-6A Average M-6A Standard Deviation Background (M-6) * M-6A t-Test													
M-7A	7-13-93	1685.35	ND	0.3	0.04	1400	4700	2000	33	1.4	1.9	7.2	7060
										10.6	2.4	7.1	6920
										5.2	1.9	7.0	6750
										4.7	2.0	7.0	6650
M-7A Average M-7A Standard Deviation Background (M-7) * M-7A t-Test													
H-28	7-13-93	1692.18	ND	12	1	1010	2100	980	42	2.9	3.1	7.2	5790
										4.4	2.8	6.8	5740
										2.6	2.9	6.7	5740
										1.6	2.7	6.8	5830
H-28 Average H-28 Standard Deviation Background (M-5) * H-28 t-Test													
Field Blank	7-13-93		ND	0.1	ND	0.6	ND	ND	20	2.0	<0.008	6.5	1

* Values are the result of 16 replicates (4 per quarter from 6/82 to 3/83)

TABLE 2. KERR-McGEE CHEMICAL CORPORATION - HENDERSON, NV
HAZARDOUS WASTE LANDFILL MONITORING - Resample Results

Well #	Date	Water Level (feet)	pH	Specific Conductance (umhos/cm)
M-5	8-17-93	1710.41	7.1	9910
			7.2	10020
			7.1	10100
			7.1	10000
			M-5 Average	
M-5 Standard Deviation		0.0	68	
Background (M-5)		6.34	10469	
M-5 t-Test		5.10	4.40	
M-6A	8-17-93	1681.72	7.3	6600
			7.1	6550
			7.0	6530
			7.1	6570
			M-6A Average	
M-6A Standard Deviation		0.1	25.86020108	
Background (M-5)		6.34	10469	
M-6A t-Test		5.03	37.74	
M-7A	8-17-93	1685.3	7.1	6940
			7.2	7010
			7.1	6830
			7.0	6750
			M-7A Average	
M-7A Standard Deviation		0.1	100	
Background (M-5)		6.34	10469	
M-7A t-Test		4.92	33.65	
H-28	8-17-93	1692.15	6.9	6100
			6.8	6150
			7.0	5850
			6.9	5900
			H-28 Average	
H-28 Standard Deviation		0.1	127	
Background (M-5)		6.34	10469	
H-28 t-Test		3.62	41.15	
Field Blank	8-17-93		6.8	1

* Values are the result of 16 replicates (4 per quarter from 6/82 to 3/83)

SECOND DRAFT
For Comment Only

August 17, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Letter of Understanding Based Upon the June 21 and August 10, 1993 Meetings Between NDEP and Kerr-McGee Chemical Corporation (KMCC)

Dear Ms. Crowley:

It is the Nevada Division of Environmental Protection's understanding, based upon our June 21 meeting with Messrs. Russell Jones, Alan Gaddy, Pat Corbett, John Stauter, Tom Read, Carl Savely, Ms. Patricia Demps, and yourself, and our subsequent meeting on August 10, that Kerr-McGee agrees to provide NDEP with the following documentation, technical discussions, and assessment/characterization work plans associated with or to be performed at KMCC's Henderson, Nevada facility:

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitriified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353 "Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

Provide a work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due South of "Trade Effluent Disposal Ponds:

KMCC will incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" settling Ponds).

3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) of historical and current air emissions at the KMCC facility. For those emissions which are determined to have been or which are presently depositional in nature, KMCC will provide information regarding patterns of dispersion and probable deposition.

4) Hardesty Chemical Company Site:

Provide analytical data obtained from sampling of the ground water monitoring wells installed on the J.B. Kelley lease site. As these wells were installed for the evaluation of potential hydrocarbon contamination from the underground storage tanks formerly located at the J.B. Kelley site, NDEP may request additional sampling of these wells with an expanded list of analytes.

Provide a statement which stipulates that available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues.

6) Unnamed Drainage Ditch Segment:

Based upon KMCC's assertion that this ditch is in fact the Northwest Drainage Ditch which received waste streams from more than one BMI company, this area will be addressed as a BMI Common Areas issue.

7) Old P-2 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal action levels.

8) P-3 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that residual material concentrations are below State and Federal

action levels.

9) New P-2 Pond and Associated Piping:

Provide engineering specifications of the impoundment including leak detection systems (e.g. double lined with leachate collection) and the location and configuration of monitor wells intended for this purpose. Provide information regarding the operational and regulatory status of this impoundment and release history (if applicable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.

12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

13) Pond S-1:

No further action is required at this time.

14) Pond P-1, and Associated Conveyance Piping:

KMCC will provide Closure documentation for this impoundment. No further action is anticipated.

15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is not a violation of State or Federal regulations. Included in this information shall be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of waste material.

- 16 & 17) Ponds AP-1 and AP-2, and Associated Transfer Lines and Ponds AP-3 and Associated Transfer Lines:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these impoundments. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

Because ammonium perchlorate is highly soluble in water, and due to the fact that the ammonium ion (NH_4^+) may be rapidly transformed to nitrate by the action of indigenous microbes in the soil through the process of nitrification, the AP pond area should be evaluated for potential ground water impacts by nitrates.

Provide an evaluation of the potential reactivity of ammonium perchlorate in the ponds and in site soils.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

- 18) Pond AP-4:

Reference items 16 & 17 above . The issue of potential chromium contamination is not applicable to this impoundment.

- 19) Pond AP-5:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

- 20) Pond C-1 and Associated Piping, SWMU KMCC-011:

This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site performed in July of this year is acceptable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be

addressed by NDEP's Bureau of Water Pollution control. The planned closure of this impoundment should be coordinated with the BWPC as well.

21) Pond Mn-1 and Associated Piping:

Reference item 20 above. It is understood that closure of this impoundment is not anticipated by KMCC at this time.

22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

23) Pond WC-2 and Associated Piping:

Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include existing TCLP and EP Toxicity data) to demonstrate that pre-1975 disposal of slurried and solid waste to these areas will not have the potential to impact either human health or the environment.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

25) Process Hardware Storage Area, SWMU KMCC-001:

No further action is required at this time.

26) Trash Storage Area:

No further action is required at this time.

27) PCB Storage Area, SWMU KMCC-003:

No further action is required at this time.

28) Hazardous Waste Storage Area, SWMU KMCC-004

provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site reconnaissance. This documentation should include confirmatory sampling and analysis using EPA Method 8015 modified for petroleum hydrocarbons.

- 29) Solid Waste Dumpsters, SWMU KMCC-008
No further action is required at this time.
- 30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-0017:
No further action is required at this time.
- 31) Drum Crushing and Recycling Area, SWMU KMCC-018:
Provide documentation of the remediation of minor soil staining in this area.

Provide information regarding improvements in area operating procedures for the removal of residual materials from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials to the ground.
- 32) Ground Water Remediation Unit, SWMU KMCC-019:
Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document any modifications made to the remediation unit for this purpose.
- 33) Sodium Perchlorate Platinum By-Product filter, SWMU KMCC-021
No further action is required at this time.
- 34) Former Manganese Tailings Area, SWMU KMCC-022:
Reference item 24 above.
- 35) Truck Emptying/Dump Site, SWMU KMCC-025:
Provide a sampling plan for assessment/characterization of "unknown" waste materials disposed in this area.
- 35-38) Former Satellite Accumulation Points:
No further action is required at this time.
- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-29:
Provide documentation of remediation of minor spill noted in the Phase I Report. This should include information regarding the association between the spill and the 1,1,1-trichloromethane stored in this area.

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials.
- 40) PCE Transformer Spill:

No further action is required at this time.

41) Unit 1 Tenant Stains:

Provide documentation of remediation of hydrocarbon impacted soil in this area.

42) Unit 2 Salt Redler:

No further action is required at this time

43) Unit 4 and 5 Basements:

Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide, as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and reinjection zones, influent concentration trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should also be included in this document.

44) Unit 6 Basement:

Provide a technically based discussion of the potential impacts to ground water from manganese dioxide and pH residual contamination in the vadose zone from leakage of the basement of this unit. A discussion is required of the engineering features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.

45) Diesel Storage Tank:

Within 180 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing (including some form of non-destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.

46) Former Old Main Cooling Tower and Recirculation Lines:

No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese ore and or manganese compounds.

48) Leach Plant Analyte Tanks:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential manganese and pH contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Reference item 48 above.

50) Leach Plant Area Leach Tanks:

Reference item 48 above.

51) Leach Plant Area Transfer Lines:

Reference item 48 above.

52) AP plant Area Screening Building, Dryer Building and Associated Sump:

Provide documentation of remediation of "minor white staining" from ammonium perchlorate wash downs and modifications to area procedures to mitigate or eliminate further releases of waste materials.

53) AP Plant Area Tank Farm:

Provide documentation of remediation of small visible staining and repair or replacement of the concrete pad.

Provide a discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.

54) AP Plant Area Change House/Laboratory Septic Tank:

Provide a work plan for assessment/characterization of potential contamination related to waste chemical disposal via the laboratory septic system.

55) Area Affected by July 1990 Fire:

Provide documentation of the remediation of the impacted area including specific data (e.g. waste volume, etc.) regarding material disposal at U.S. Ecology.

56) AP Plant Area Old Building D-1 -- Washdown:

Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils (see item # 52 above).

- 57 & 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:

No further action is required at this time.

- 59) Storm Sewer System:

Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or ground water contamination resulting from waste disposal and storm water discharges through the storm sewer system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the storm sewer system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

- 60) Acid Drain System:

Provide a technically based evaluation of the potential for soil and/or ground water contamination resulting from historic waste disposal through the acid drain system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the acid system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation conducted in July of this year may be used to provide some or all of the requested information.

- 61) Old Sodium Chlorate Plant Decommissioning:

No further action is required at this time.

- 62) State Industries, Inc. Site, Including Impoundments and Catch Basin:

Provide a work plan for the complete assessment/characterization of the State Industries surface impoundments. Analytes should be selected based upon known or suspected waste streams disposed to these ponds and should include TCLP metals, volatile organic compounds (if applicable), TPH (if applicable), and pH.

- 63) J.B. Kelley, Inc. Trucking Site:

Provide closure and/or remediation documentation for the

underground storage tanks formerly located at this site. Include data from the ground water monitor wells installed by KMCC to evaluate potential hydrocarbon contamination.

Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.

64) Koch Materials Company Site:

Provide documentation of KMCC's efforts to work with Koch Materials Co. for the purpose of remediating hydrocarbon contamination and developing operating procedures or containment structures to prevent further releases of petroleum hydrocarbons and other wastes.

65) Nevada Precast Concrete Products, Green Ventures International, Buckles Construction Company, and Ebony Construction Sites:

Determine whether soil staining identified in this area is coincident with the staining referred to in item 41 above. If the staining is not coincident with this item, provide documentation of KMCC's efforts to work with these tenants for the purpose of remediating hydrocarbon contamination and developing operating procedures and/or containment structures to prevent further releases of hydrocarbon compounds and other waste materials.

66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

No further action is required at this time.

67) Delbert Madsen and Estate of Delber Madsen Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

68) Southern Nevada Auto Parts Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

69) Dillon Potter Site:

No further action is required at this time.

In addition to the items outlined above, the Division requests that KMCC provide a description of the sampling protocols and QA/QC procedures used during the July 1993 facility wide sampling of ground water monitor wells.

The information gathering and assessment/remediation tasks enumerated above will be incorporated (by reference) into the forthcoming Phase II Agreement to be negotiated with Kerr-McGee and the other BMI companies. The Phase II negotiation process should

not prevent or delay Kerr-McGee from implementing this work. Since the negotiation process may be lengthy, Kerr-McGee is encouraged to proceed with documentary data gathering and work plan preparation as soon as practicable.

It should be understood, however, that in the absence of a formal Phase II Agreement which stipulates standards for sampling protocols, QA/QC, analytical methods, etc., any physical data gathering (i.e. soil, ground water, and/or material sampling and analysis) which KMCC elects to undertake in the interim, may later be judged to be inappropriate. It should also be understood that all items are subject to further modification as a result of input from the public and local municipalities.

Please review each of the items outlined above to assure that it concurs with your understanding of the points agreed upon during our meetings in June and August. Should you have any questions or comments regarding any of the items, please contact either Allen Biaggi or myself at (702) 687-5872 extensions 3021 and 3017 respectively.

Sincerely,

Edward L. Basham
Environmental Management Specialist
Remediation Branch
Bureau of Corrective Actions

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

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**KERR MCGEE CHEMICAL CORPORATION SITE
COMMENTS ON RESULTS OF NDEP PHASE 2 NEGOTIATIONS
AUGUST 3, 1993**

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
PRELIMINARY ISSUES	N/A	N/A	<p>What is the purpose of the July 1993 facility wide groundwater sampling program referenced throughout the LOU?</p> <p>Has NDEP been provided the sampling protocols and QA/QC procedures, as requested in the draft LOU?</p> <p>What is the status of the groundwater sampling program?</p> <p>Has the LOU been finalized?</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping.	(# 1) Phase 2 data gathering and analysis is necessary.	<p>1. Provide results of soil sampling performed by Datachem in vicinity of proposed SIs WC-1 and WC-2.</p> <p>2. Provide work plan for characterization of potential contamination in western portion of Trade Effluent Pond area (bet. WC-1 to the east and Hazardous Waste Landfill to West). Historical usage and waste disposal practices are to be used to establish list of analytes.</p>	<p>When does NDEP expect results?</p> <p>KMCC Phase 1 Report notes that the "nature of solid materials/wastes placed within this area at various times between 1945 and 1979 is unknown." (p. 5-42). Thus, a broad sampling and analytical scan appears necessary.</p> <p>Phase 1 Report indicates that area may be filled. (p. 5-42). Thus, testing at depth appears necessary.</p> <p>Phase 1 Report refers to "darker gray colored material" observed during Site Reconnaissance in shallow excavation on western portion of SWMU. (p. 5-42) The workplan should address this issue.</p> <p>We assume that NDEP will address the balance of the SWMU, e.g., area covered now by structures and/or WC-1 and WC-2, in the event such is warranted based on the sampling conducted between WC-1 and the Hazardous Waste Landfill.</p> <p>The conveyance piping route associated with Trade Effluent Ponds also needs to be addressed in the workplan.</p> <p>The seepage areas along base of northern containment dike referenced in the Phase 1 Report (p. 5-44) also need to be addressed.</p>
Open Area Due South of "Trade Effluent" Disposal Ponds	(# 2) Phase 1/2 work is necessary to identify this area.	Incorporate characterization of this area in work plan for Trade Effluent Settling Ponds.	The precise location of this area needs to be identified. Page 3-6 of the Phase 1 Report states only that "solid materials (possibly wastes) were placed in an open area due south of the Trade Effluent ponds and north of the caustic settling ponds."
Air Pollutant Emissions Associated with Industrial Processes	(# 3) This issue was not addressed, as required by the Consent Agreement, in the draft Phase 1 Report.	Provide references to passages in Phase 1 Report (and any other sources of information) which describe the nature and environmental fate of historical and current air emissions at the KMCC facility.	<p>What "other sources of information" has KMCC indicated that they will provide.</p> <p>This issue has not been addressed adequately in Phase 1 with respect to any of the sites except the Chemstar site.</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Hardesty Chemical Company Site	<p>(# 4) Additional work is necessary in Phase 1 or Phase 2 to develop the information required by the Consent Agreement with respect to this site.</p>	<p>1. Provide analytical data obtained from wells installed on J.B. Kelley lease site (petroleum hydrocarbon analytes). NDEP may request add'l sampling of wells with expanded list of analytes.</p> <p>2. Provide statement stipulating that all available information re: Hardesty was included in Phase 1 Report and that a "high degree of uncertainty exists" regarding the location and activities of Hardesty at the site.</p>	<p>How does the J.B. Kelley site relate to the Hardesty site?</p> <p>The KMCC Phase 1 Report (p. 3-7) is fairly specific regarding Hardesty's operations at the KMCC site. (signed 5-year lease in 1945, occupied 8 buildings, including Unit 2, began operations in 1946, produced various chlorinated organics, chlorinated solvents, etc.). This information is potentially inconsistent with information in the Stauffer/Pioneer Phase 1 Report that Hardesty "apparently operated on the [Stauffer/Pioneer] site prior to 1947." The Companies should review, for example, relevant CRC and/or National Archives (War Assets Admin) records/files (reference Appendix A to Common Areas Phase 1 Report).</p>
On-Site Portion of Beta Ditch, including "Small Diversion Ditch" Northwest of Pond C-1	<p>(# 5) Phase 2 data gathering and analysis is necessary.</p>	<p>Identify segments/tributaries which received waste from KMCC or its predecessors/tenants exclusively. Those portions which received waste from two or more BMI Companies will be addressed as Common Areas issues.</p>	<p>Concur with requirements.</p> <p>Will KMCC submit such documentary information as part of the Workplan, or as supplement to Phase 1 Report?</p>
Unnamed Drainage Ditch Segment	<p>(# 6) Phase 2 data gathering and analysis is necessary.</p>	<p>Based upon KMCC's assertion that this ditch is the Northwest Drainage Ditch (common disposal), area will be addressed as part of Common Areas.</p>	<p>Concur with NDEP position. Nonetheless, the issue of identifying and assessing historical segments/tributaries of the ditch network that have been filled in will be important component of Common Areas Phase 2 program.</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Old P-2 Pond and Associated Conveyance Facilities	(# 7) Phase 2 data gathering and analysis is necessary.	Provide workplan for sampling of subsurface soils in area of former pond to confirm that all contaminated materials have been removed.	<p>Phase 1 Report states that Old P-2 SI did not receive RCRA hazardous waste (p. 5-26). Were chromium levels below EP tox cutoff?</p> <p>Draft Phase 1 Report noted that SI is undergoing "clean closure" pursuant to RCRA/NHFDL. Final Phase 1 Report states that SI is "in the process of clean closure per 40 CFR Part 265, Subpart K" (p. 5-26), yet elsewhere states that the SI is currently undergoing closure in accordance with applicable solid waste rules." (p. 5-27). The history and regulatory status of this closure program needs to be more fully explained.</p> <p>The Phase 1 Report notes that decommissioning of Old P-2 SI was commenced in April 1990 (p. 5-25); why has closure not been completed?</p> <p>Is chromium the sole contaminant of concern?</p> <p>Phase 1 Report notes that observed downgradient groundwater "elevated chromium and conductivity values" may "also be partially related to historic leaks from this SI." Whether the existing KMCC chromium pump and treat system satisfactorily addresses this issue needs to be evaluated and addressed in the Phase 2 program.</p> <p>Sampling should address "white crystalline discoloration" of soils in vicinity of Old P-2 and on "floor" of former SI (p. 5-27).</p>
P-3 Pond and Associated Conveyance Facilities	(# 8) Phase 2 data gathering and analysis is necessary.	Provide workplan for sampling of subsurface soils in the area of the former pond to confirm that all contaminated materials have been removed.	<p>This impoundment still is not discussed as a SWMU in the Phase 1 Report. It appears to be mentioned only once in passing (p. 4-8).</p> <p>The regulatory status, closure status and release history of this impoundment needs to be explained. Where is it located? Was SI new P-2 built on top of the former location of P-3 (p. 4-9)?</p> <p>Where were removed "contaminated materials" disposed?</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
New Pond P-2 and Associated Piping	<p>(# 9) The Draft Phase 1 Report provides no information regarding the engineered features, operational status, regulatory status or release history of this SI.</p>	<p>Provide engineering specs for SI and the location and configuration of monitor wells intended for leak detection purposes. Provide information regarding the operational and regulatory status of the SI and release history.</p> <p>Issues exclusively concerning TDS impacts to ground/surface water will continue to be addressed by Bureau of Water Pollution Control.</p>	<p>Concur with NDEP requirements.</p> <p>Required information will need to be assessed prior to developing workplan requirements, if any, for the SI.</p>
Site Hazardous Waste Landfill, SWMU KMCC-013	<p>(# 10) Phase 1/2 work is necessary to clarify the RCRA closure and post-closure permitting status of the unit.</p>	<p>Provide NDEP with correspondence relating to the closure and post-closure status of the landfill. This information should include the post-closure plan.</p>	<p>Concur with NDEP requirements.</p> <p>The Landfill received hazardous waste until January 23, 1983 (p. 5-36). Under 40 C.F.R. § 270.1(c), landfills that received wastes after July 26, 1982 must have a post-closure permit. The <u>post-closure permitting status</u> of this unit needs to be explained.</p> <p>The required information will need to be evaluated before determining whether Phase 2 work is necessary. Location of Landfill on top of former Trade Effluent Pond may be complicating factor.</p> <p>Phase 1 Report notes that "this area received material of unknown origin from prior to November 1960 to at least August 1979" (p. 5-35). Was there any evaluation of the nature of this material prior to the closure of the Landfill?</p> <p>Statement in Phase 1 Report that Landfill was closed "in conformance with the intent of the approved closure/post closure plan" (p. 5-37) remains unexplained.</p>
MU KMCC-005	<p>(# 11) Phase 1/2 work is necessary to evaluate the potential nature and extent of contamination.</p>	<p>Provide information (i.e., volume of material, depth of excavation, cleanup criteria) relating to removal of "old drying pad" and underlying fill material and native soils.</p> <p>Provide evaluation of feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.</p>	<p>In general, concur with NDEP position.</p> <p>SWMU KMCC-005 is a concrete pad 36 feet by 18 feet. Thus, it should be feasible to take confirmatory soil samples on the slant, if necessary.</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Hazardous Waste Storage Area, SWMU KMCC-006	(# 12) No further evaluation of area appears necessary.	No further action is required at this time.	Concur with NDEP position.
Pond S-1	(# 13) Minor additional work is necessary in Phase 1 or 2 to clarify whether the 1985 "clean closure" of the impoundment addressed all appropriate contaminants.	No further action is required at this time.	Closure of the SI was conducted under "interim status standards of 40 CFR Part 265." (p. 5-81). A "professional opinion" (certification?) was rendered at some point in 1985 (id.) that the SI was closed in "conformance with the intent of the approved closure plan." What does this mean? In any regard, 40 C.F.R. § 270.1(c) (certification of closure after Jan. 26, 1983) may subject this SI to post-closure permitting requirements unless KMCC can secure a Part 264 closure equivalency determination under §§ 270.1(c)(5) and (6). This issue needs to be evaluated. There are public notice/hearing requirements associated with same.
Pond P-1 and Associated Conveyance Piping	(# 14) Minor additional work is necessary in Phase 1 or 2 to clarify whether the 1985 "clean closure" of the impoundment addressed all appropriate contaminants.	Pending a review of NDEP files regarding the closure of the SI and in the absence of further evidence suggesting environmental problems related to it, NDEP will not require further action at this time.	Same comments as above (p. 5-83).
Platinum Drying Unit, SWMU KMCC-007	(# 15) Phase 2 evaluation is necessary.	Provide either analytical data or technically-based argument supporting contention that staining of soil around unit is not a threat to human health or the environment and is not a violation of State or federal regulations. Discuss how KMCC has revised housekeeping practices so as to eliminate further releases of waste material.	The statement in the Phase 1 Report that the "area may not be of adequate design for the current use" needs to be addressed.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Ponds AP-1, AP-2, AP-3, and Associated Transfer Lines	(# 16/17) Phase 2 evaluation is necessary.	<p>Provide existing analytical data including TCLP (chromium) for pond contents. If data does not exist, prepare sampling plan.</p> <p>Provide technical evaluation of placement and design criteria for wells used to monitor contaminant migration from SIs. Include list of analytes currently monitored and latest data. July facility-wide hydrologic evaluation data may be used for the required information. The AP pond area should be evaluated for potential groundwater impacts by nitrates.</p> <p>Provide evaluation of potential reactivity of ammonium perchlorate in SIs and in site soils.</p> <p>Provide facility map to identify location of SIs and other waste management units/areas of concern at KMCC facility.</p> <p>Issues re: TDS impacts will continue to be addressed by NDEP's Bureau of Water Pollution Control.</p>	<p>Concur with NDEP position. Historical groundwater monitoring data also would be useful.</p> <p>Has Bureau of Water Pollution Control historically addressed solely TDS impacts from SIs?</p> <p>This issue is important. Is NDEP satisfied that KMCC has identified all current and historical impoundments located at the site?</p>
Pond AP-4 and Associated Transfer Lines	(# 18) Phase 2 evaluation necessary.	Same requirements as above, except issue of potential chromium contamination is not applicable.	Concur with NDEP position.
Pond AP-5 and associated piping	(# 19) Phase 2 evaluation is necessary.	Same requirements as above, except issue of potential chromium contamination is not applicable.	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Pond C-1 and Associated Piping, SWMU KMCC-011	(# 20) Phase 2 work is necessary to evaluate the release history of the unit and to develop and implement a closure plan.	<p>Impoundment has potential to impact groundwater with elevated levels of TDS. With the exception of manganese which has secondary MCL of 50 ppb, no other compounds of concern appear to have been disposed here. The potential presence of manganese in site groundwater should be evaluated (KMCC site hydrologic data evaluation is acceptable to address this issue).</p> <p>Issues re: TDS impacts will continue to be addressed by Bureau of Water Pollution Control. Planned closure of the SI should be coordinated with Bureau as well.</p>	<p>Concur with NDEP position.</p> <p>Is closure plan pending before Bureau of Water Pollution Control (Phase 1 Report notes that "closure of this SI is now planned for 1993" (p. 5-31))? The closure plan should address sludge analysis.</p>
Pond Mn-1 and Associated Piping	(# 21) Minor additional work is necessary in Phase 1 or 2 to clarify the release history of the impoundment.	Same as above.	Same as above.
Pond WC-1 and Associated Piping.	(# 22) No further evaluation appears necessary.	No further action is required at this time.	Concur with NDEP position. Location of impoundments in area of former Trade Effluent Disposal ponds may prove a complicating factor if remediation of area is required.
Pond WC-2 and Associated Piping.	(# 23) Minor additional work is necessary to remediate minor identified release.	<p>Provide information regarding the cleanup of apparently contaminated soil.</p> <p>Provide information regarding housekeeping improvements.</p>	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Leach Beds, Associated Conveyance Facilities, and Manganese Tailings Area, SWMU KMCC-009.	(# 24) Phase 2 evaluation is necessary.	<p>Provide a "technically based argument" (which may include existing TCLP and EP tox data) to demonstrate that pre-1975 disposal of slurred and solid waste will not have the potential to impact human health or the environment.</p> <p>Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor contaminant migration from this area. Include list of analytes which are currently monitored for and the latest data. July hydrologic evaluation data may be used for above purposes.</p>	<p>The Phase 1 Report notes that a "site specific groundwater monitoring system is not in place" for this area and that the current groundwater monitoring program for other nearby units "does not include analyses of heavy metals and other parameters which could be used to evaluate this SWMU." (p. 5-24).</p> <p>The regulatory basis for the operation of the SWMU "under a May 15, 1985 authorization from the NDEP" requires explanation.</p> <p>KMCC has indicated that the SWMU was used for the disposal of (1) the liner, sludge contents, and contaminated soil generated during the closure of Pond P-1, and (2) concrete and underlying soils from the remediation of the Unit 6 basement. The Phase 1 Report indicates that KMCC has developed EP Tox and TCLP data solely for the manganese dioxide tailings currently being disposed at the unit (p. 5-23). In light of this history, a comprehensive Phase 2 sampling program appears necessary.</p>
Process Hardware Storage Area, SWMU KMCC-001	(# 25) No further evaluation of this area is necessary.	No further action required at this time.	Concur with NDEP position.
Trash Storage Area North of Units 1 and 2	(# 26) No further evaluation of this area is necessary.	No further action required at this time.	Concur with NDEP position.
PCB Storage Area, SWMU KMCC-003	(# 27) No further evaluation of this area is necessary.	No further action required at this time.	Concur with NDEP position.
Hazardous Waste Storage Area, SWMU KMCC-004	(# 28) Minor work is necessary to remediate observed release.	Provide documentation of the remediation of hydrocarbon-contaminated soil observed during site reconnaissance. Documentation should include sampling and analysis under EPA Method 8015 modified for petroleum hydrocarbons.	Concur with NDEP position.
Solid Waste Dumpsters, SWMU KMCC-008	(# 29) No further evaluation of this area is necessary.	No further action required at this time.	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Ammonium Perchlorate Area -- Pad 35, SWMU KMCC-017	(# 30) No further evaluation of this area is necessary.	No further action required at this time.	Concur with NDEP position.
Drum Crushing and Recycling Area, SWMU KMCC-018	(# 31) Minor Phase 1/2 work is necessary to verify that soil in the vicinity of the area is not contaminated at levels of concern.	Provide documentation regarding the remediation of minor soil staining in this area. Provide information regarding improvements in area operating procedures for the removal of residual material from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials.	Concur with NDEP position.
Groundwater Remediation Unit, SWMU KMCC-019	(# 32) Minor Phase 1/2 work is necessary to remediate small spills associated with unit.	Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document modifications made to remediation unit for this purpose.	Concur with NDEP position.
Sodium Perchlorate Platinum By-Product Filter, SWMU KMCC-021	(# 33) Minor additional Phase 1/2 work is necessary to repair the containment features of this area.	No further action is required at this time.	Phase 1 Report notes that sealant "was in need of repair in a few of the cracks" in the concrete floor of the unit. (p. 5-74). Has this work been completed?

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Former Manganese Tailings Areas, SWMU KMCC-022	(# 34) Phase 2 data gathering and analysis is necessary.	<p>Provide a "technically based argument" (which may include existing TCLP and EP tox data) to demonstrate that pre-1975 disposal of slurried and solid waste will not have the potential to impact human health or the environment.</p> <p>Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor contaminant migration from this area. Include list of analytes which are currently monitored for and the latest data. July hydrologic evaluation data may be used for above purposes.</p>	<p>The Phase 1 Report discussion regarding these areas (p. 5-75 et seq.) does not indicate whether there are in place any monitoring wells to evaluate the migration of contamination from these areas.</p> <p>The Phase 1 Report indicates that the history of the "eastern" area is "obscure." (p. 5-76). Little appears to be known about the history of the "western" area, other than it appears from aerial photographs, to have been in use from the 1950's (p. 5-75). Referenced EP and TCLP data (p. 5-77) apply only to the tailings material currently being disposed in KMCC-009. Phase 2 Waste/soil sampling appears to be warranted.</p>
Truck Emptying/Dump Site, SWMU KMCC-025	(# 35) Phase 2 data gathering and analysis is necessary.	Provide a sampling plan for the assessment and characterization of "unknown" waste materials disposed in this area.	Concur with NDEP position.
Former Satellite Accumulation Point -- Unit 3, SWMU KMCC-026; Former Satellite Accumulation Point -- Unit 6, SWMU KMCC-027; Satellite Accumulation Point, AP Laboratory, SWMU .CC-028.	(# 36, 37, 38) No further analysis is necessary.	No further action required at this time.	Concur with NDEP position.
Satellite Accumulation Point -- AP Maintenance Shop, SWMU KMCC-029	(# 39) Minor Phase 1/2 work necessary to remediate minor spill and improve housekeeping practices.	<p>Provide documentation of remediation of minor spill, including information regarding the association between the spill and the 1,1,1-trichloroethane stored in this area.</p> <p>Provide information regarding improved housekeeping procedures.</p>	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
PCB Transformer Spill.	(# 40) Minor additional Phase 1/2 work is necessary to evaluate adequacy of remediation of spill area.	No further action is required at this time.	If NDEP is satisfied that area was appropriately remediated, concur with NDEP position.
Unit 1 Tenant Stains	(# 41) Minor additional work is necessary to remediate apparent stained soil areas.	Provide documentation of remediation of hydrocarbon impacted soil in this area.	Concur with NDEP position.
Unit 2 Salt Redler	(# 42) No further evaluation appears necessary.	No further action is required at this time.	Concur with NDEP position.
Unit 4 and Unit 5 Basements	(# 43) Phase 2 data gathering and analysis is necessary.	<p>Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.</p> <p>Provide a full reevaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns, capture and reinjection zones, influent trends, etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & 5 should be included.</p>	<p>Does NDEP's position mean that if KMCC establishes that it is "impractical" (e.g., expensive) to remove or stabilize the chromium contamination, such won't be required. Characterization of the nature and extent of such contamination would appear to be a necessary first step.</p> <p>With respect to the recovery system reevaluation, concur with NDEP's position.</p>

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Unit 6 Basement	(# 44) Phase 2 data gathering and analysis is necessary.	Provide a technically based discussion of the potential impacts to ground water from manganese dioxide residual contamination in the vadose zone or from leakage of the basement of the unit. A discussion is required of the engineered features, leak detection system(s), and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Groundwater monitoring data should be used to document the impacts (or lack thereof) from residual contamination beneath the unit.	Is NDEP concerned about residual manganese sulfate soil contamination beneath Unit 6? Otherwise, concur with NDEP position.
Diesel Storage Tank Area	(# 45) Minor Phase 1/2 work is necessary to remediate apparent soil staining.	Within 60 days, KMCC will provide workplan designed to address visible and potential hydrocarbon contamination of soil and/or groundwater in this area. If KMCC decides to renovate the tank, integrity testing will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.	Concur with NDEP position.
Former Old Main Cooling Tower and Recirculation Lines	(# 46) No further evaluation of this unit appears to be necessary.	No further action is required at this time.	Concur with NDEP position.
Leach Plant Area Manganese Ore Piles	(# 47) Minor additional Phase 1/2 work is necessary to evaluate the potential environmental or health risk posed by the maintenance of these piles.	Provide data/documentation from industrial hygiene studies conducted for the evaluation of the health hazards to on-site workers and off-site residents from exposure to manganese ore and/or manganese compounds.	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Leach Plant Analyte Tanks	(# 48) Phase 2 data gathering and analysis is necessary.	Provide a workplan for the assessment/characterization of the Leach Plant area for potential elevated pH and manganese contamination. Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor contaminant migration from this area. Include list of analytes which are currently monitored for and the latest data. July hydrologic evaluation data may be used for above purposes.	Concur with NDEP position.
Leach Plant Area Sulfuric Acid Storage Tank	(# 49) Phase 2 data gathering and analysis is necessary.	Same as above.	Concur with NDEP position.
Leach Plant Area Leach Tanks	(# 50) Phase 2 data gathering and analysis is necessary.	Same as above.	Concur with NDEP position.
Leach Plant Area Transfer Lines	(# 51) Phase 2 data gathering and analysis is necessary.	Same as above.	Concur with NDEP position.
AP Plant Area Screening Building, Dryer Building and Associated Sump	(# 52) Minor additional work is necessary to remediate the apparent ammonium perchlorate release and to improve housekeeping practices.	Provide a technically based argument regarding the environmental fate of ammonium perchlorate in site soils. Provide documentation of remediation of minor releases and modifications to housekeeping procedures to prevent further releases.	Concur with NDEP position.
AP Plant Area Tank Farm	(# 53) Minor additional work is necessary in Phase 1/2 to remediate environmental contamination associated with historical leaks and spills.	Provide documentation of remediation of visibly stained soil and repair/replacement of concrete pad Provide discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
AP Plant Area Change House/Laboratory Septic Tank	(# 54) Phase 2 data gathering and analysis is necessary.	Provide a work plan for the assessment/characterization of potential waste contamination related to waste chemical disposal via the laboratory septic system.	Concur with NDEP position.
Area Affected by July 1990 Fire	(# 55) Minor additional work is necessary in Phase 1/2 to verify the remediation of all potentially contaminated soils.	Provide documentation of the remediation of the impacted area including specific data regarding material disposed at U.S. Ecology.	Concur with NDEP position.
Plant Area Old Building D-1 -- Washdown	(# 56) Minor additional Phase 1/2 work is necessary to evaluate potential soil contamination in the area outside the building.	Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils.	Does the reference to Item # 52 in Item # 56 in the draft LOU mean the NDEP is requiring KMCC to remediate the soil contamination? If so, concur with NDEP position.
AP Plant Area New Building D-1 -- Washdown	(# 57) No further evaluation is necessary.	No further action is required at this time.	Concur with NDEP position.
AP Plant Transfer Lines to Sodium Chlorate Process	(# 58) No further evaluation of these lines appears necessary.	No further action is required at this time.	Concur with NDEP position.
Storm Sewer System	(# 59) Phase 2 data gathering and analysis is necessary.	Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or groundwater contamination resulting from waste disposal and storm water discharges through the storm sewer system. Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor contaminant migration from the system. Include list of analytes which are currently monitored for and the latest data. July hydrologic evaluation data may be used for above purposes.	The meaning of this LOU requirement is somewhat unclear. Have the referenced system flow/integrity investigations been completed, or is NDEP requiring that they be undertaken? If the technical evaluation concludes that indeed there is a "potential" for soil and/or groundwater contamination, then further investigation is necessary. Does NDEP contemplate environmental sampling as part of this "technical evaluation"? Does KMCC have in place a network of wells placed and designed to monitor contaminant migration from the storm sewer system?

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Acid Drain System	(# 60) Phase 2 data gathering and analysis is necessary.	<p>Provide a technically based evaluation of the potential for soil and/or ground water contamination resulting from historic waste disposal through the acid drain system.</p> <p>Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor contaminant migration from the system. Include list of analytes which are currently monitored for and the latest data. July hydrologic evaluation data may be used for above purposes.</p>	Same comments as above.
Old Sodium Chlorate Plant Decommissioning	(# 61) No further evaluation appears necessary.	No further action is required at this time.	Concur with NDEP position.
State Industries, Inc. Site, Including Impoundments and Catch Basin	(# 62) Phase 2 data gathering and analysis is necessary.	Provide a workplan for the complete assessment/characterization of the State Industries surface impoundments. Analytes should be selected based upon known or suspected waste streams disposed to these impoundments and should include TCLP metals, VOCs, TPH, and pH.	<p>Concur with NDEP position.</p> <p>The issue of characterization of westernmost impoundment (over which a warehouse structure was constructed in 1983 (p. 7-15)) needs to be addressed.</p> <p>Whether the former impoundments are the sole potential environmental concerns associated with the State Industries site needs to be evaluated.</p>
J.B. Kelley, Inc. Trucking Site	(# 63) Phase 2 data gathering and analysis is necessary.	<p>Provide closure and/or remediation documentation for the USTs formerly located at the site. Include data from groundwater monitoring wells installed by KMCC to evaluate potential hydrocarbon contamination.</p> <p>Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.</p>	Concur with NDEP position.

UNIT/ISSUE	DECEMBER 1992 RECOMMENDATION	JUNE 29, 1993 DRAFT LOU REQUIREMENT(S)	COMMENTS
Koch Materials Company Site	(# 64) Phase 2 data gathering and analysis is necessary.	Provide documentation of KMCC's efforts to work with Koch for the purpose of remediating hydrocarbon contamination and developing operating procedures or containment structures to prevent further releases.	The LOU provision implies that remediation has been undertaken. Is this correct?
Nevada Precast Concrete Products, Green Ventures International, Parkes Construction Company, and Ebony Construction Company Sites	(# 65) No further evaluation necessary with exception of minor surface oil stains observed north of Unit 1.	Determine whether soil staining is same as that referred to above near Unit 1 (# 41). If staining is not coincident, provide documentation of KMCC's efforts to work with tenants to remediate and develop operating procedures or containment structure to prevent further releases.	Concur with NDEP position.
Above-Ground Diesel Storage Tank Leased by Flintkote.	(# 66) Minor additional work is necessary to verify that the soil in the vicinity of the former tank location is not contaminated	No further action is required at this time.	Work is necessary to verify that the soil in the vicinity of the former tank is not contaminated.
Delbert Madsen and Estate of Delbert Madsen Site	(# 67) Minor Phase 1/2 work is necessary to evaluate the site.	Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.	Phase 1 Report indicates that the site is potentially contaminated (p. 7-26). This site should be addressed in KMCC's Phase 2 work plan.
Southern Nevada Auto Parts Site	(# 68) Minor Phase 1/2 work is necessary to evaluate the site.	Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.	Phase 1 Report indicates that the site is potentially contaminated (p. 7-27/8). This site should be addressed in KMCC's Phase 2 work plan.
London Potter Site	(# 69) No further evaluation appears necessary.	No further action is required at this time.	Concur with NDEP position.

DRAFT

June 29, 1993

Susan Crowley
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009-7000

Subject: Letter of Understanding Based Upon the June 21, 1993
Meeting Between NDEP and Kerr-McGee Chemical Corporation
(KMCC)

Dear Ms. Crowley:

It is the Nevada Division of Environmental Protection's understanding based upon our June 21, meeting with Messrs. Russell Jones, Alan Gaddy, Pat Corbett, John Stauter, Tom Read, Carl Savely, Ms. Patricia Demps, and yourself, that Kerr-McGee agrees to provide NDEP with a comprehensive work plan which incorporates the following agreed upon documentation and assessment/remediation activities to be performed at KMCC's Henderson, Nevada facility:

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping, SWMU KMCC-014:

Provide the results of soil sampling performed by Datachem (KMCC Final Phase I Report Reference K353" Analytical reports of soil samples taken in the vicinity of proposed SIs WC-1 and WC-2").

A work plan for characterization of potential contamination in the western portion of the KMCC "Trade Effluent" pond area (that area which lies west of Ponds WC-1 and WC-2 and east of the earthen berm which defines the eastern margin of the On-site Hazardous Waste Landfill. Historical usage and waste disposal practices are to be used to establish the list of analytes to be evaluated.

- 2) Open Area Due south of "Trade Effluent: Disposal Ponds:

Incorporate characterization of this area in the work plan for #1 above ("Trade Effluent" settling Ponds).

3) Air Pollutant Emissions Associated with Industrial Processes:

Provide specific references to those passages in KMCC's Final Phase I report (and any other sources of information) which describe the nature (vapor, particulate, etc.) and environmental fate of historical and current air emissions at the KMCC facility.

4) Hardesty Chemical Company Site:

Provide analytical data obtained from sampling of the ground water monitoring wells installed on the J.B. Kelley lease site. AS these wells were installed for the evaluation of potential hydrocarbon contamination from the underground storage tanks formerly located at the J.B. Kelley site, NDEP may request additional sampling of these wells with an expanded list of analytes.

Provide a statement which stipulates that all available information concerning Hardesty Chemical Co. was included in the KMCC Final Phase I report and that a high degree of uncertainty exist regarding the location and activities of Hardesty at the site.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Identify segments or tributaries of these conveyances (if any) which received waste streams from KMCC or its predecessors/tenants exclusively. Those portions of the conveyances which historically received waste streams from two or more of the BMI companies, will be addressed as BMI Common Areas Issues.

6) Unnamed Drainage Ditch Segment:

Based upon KMCC's assertion that this ditch is in fact the Northwest Drainage Ditch which received waste streams from more than one BMI company, this area will be addressed as a BMI Common Areas issue.

7) Old P-2 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that all contaminated materials have been removed.

8) P-3 Pond and Associated Conveyance Facilities:

Provide a work plan for sampling of subsurface soils in the area of the former pond to confirm that all contaminated materials have been removed.

9) New P-2 Pond and Associated Piping:

Provide engineering specifications of the impoundment including leak detection systems (e.g. double lined with leachate collection) and the location and configuration of monitor wells intended for this purpose. Provide information regarding the operational and regulatory status of this impoundment and release history (if applicable).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control.

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Provide the Division with copies of correspondence relating to the closure and post closure status of the landfill. This information should include the post-closure plan.

11) SWMU KMCC-005:

Provide specific information (i.e. volume of material, depth of excavation, criteria used to determine extent of contamination, etc.) relating to the removal of the "old drying pad" and underlying fill material and native soils. Provide an evaluation of the feasibility of collecting confirmatory samples of soil from beneath the area of the old pad.

12) Hazardous Waste Storage Area, SWMU KMCC-006:

No further action is required at this time.

13) Pond S-1:

No further action is required at this time.

14) Pond P-1, and Associated Conveyance Piping:

Pending a review of our files regarding the closure of this impoundment and in the absence of further evidence suggesting environmental problems related to it, the Division will not require further action at this time.

15) Platinum Drying Unit, SWMU KMCC-007:

KMCC will provide either analytical data or a technically based argument supporting their contention that minor staining of the soil surrounding this unit is not a threat to either human health or the environment and is

not a violation of State or Federal regulations, included in this information should be a discussion of how KMCC has revised housekeeping practices so as to eliminate or minimize further releases of waste material.

- 16 & 17) Ponds AP-1 and AP-2, and Associated Transfer Lines and Ponds AP-3 and Associated Transfer Lines:

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these impoundments. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation to be conducted in July may be used to provide some or all of the requested information. Because ammonium perchlorate is highly soluble in water, and due to the fact that the ammonium ion (NH_4^+) may be rapidly transformed to nitrate by the action of indigenous microbes in the soil through the process of nitrification, the AP pond area should be evaluated for potential ground water impacts by nitrates.

Provide an evaluation of the potential reactivity of ammonium perchlorate in those ponds and in site soils.

Provide a summary diagram/facility map which more accurately identifies the location of the AP impoundments and the other waste management units/areas of concern at the KMCC facility. Modification of Plate 3-2 of the KMCC final Phase I report would be acceptable for this purpose.

Issues exclusively concerning total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution Control.

- 18) Pond AP-4:

Reference items 16 & 17 above . The issue of potential chromium contamination is not applicable to the impoundment.

- 19) Pond AP-5:

Reference items 16 & 17 above. The issue of potential chromium contamination is not applicable to this impoundment.

- 20) Pond C-1 and Associated Piping, SWMU KMCC-011:

This impoundment has the potential to impact ground water with elevated levels of total dissolved solids. With the exception of manganese which has a secondary MCL of 50 ug/L, no other compounds of concern appear to have been disposed here. The potential presence of manganese in ? ground water should be evaluated (reference to the KMCC hydrologic evaluation of the site to be performed in July is acceptable to address this issue).

Issues exclusively concerning Total Dissolved Solids impacts to ground or surface water will continue to be addressed by NDEP's Bureau of Water Pollution control. The planned closure of this impoundment should be coordinated with the BWPC as well.

21) Pond Mn-1 and Associated Piping:

Reference item 20 above.

22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

No further action is required at this time.

23) Pond WC-2 and Associated Piping:

Provide information regarding the clean up of apparently contaminated soil referred to in the KMCC Final Phase I Report.

24) Leach Beds, Associated Conveyance Facilities ? Tailings Area, SWMU KMCC-009:

Provide a technically based argument (which may include a existing TCL: and EP Toxicity data) to demonstrate ? pre-1975 disposal of slurried and solid waste ? areas will not have the potential to impact either human health or the environment.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from these waste management units. Include a list of the analytes which are currently monitored for and the latest monitoring data. Reference to the facility wide hydrologic evaluation to be conducted in July may be used to provide some or all of the requested information.

25) Process Hardware Storage Area, SWMU KMCC-001:

No further action is required at this time.

26) Trash Storage Area:

No further action is required at this time.

27) PCB Storage Area, SWMU KMCC-003:

No further action is required at this time.

28) Hazardous Waste Storage Area, SWMU KMCC-004

provide documentation of the remediation of hydrocarbon contaminated soil observed during Kleinfelder's site reconnaissance. this documentation should include confirmatory sampling and analysis using EPA Method 8015 modified for petroleum hydrocarbons.

29) Solid Waste Dumpsters, SWMU KMCC-008

No further action is required at this time.

30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-0017:

No further action is required at this time.

31) Drum Crushing and Recycling Area, SWMU KMCC-018:

Provide documentation of the remediation of minor soil staining in this area.

Provide information regarding improvements in area operating procedures for the removal of residual materials from drums prior to storage and crushing so as to minimize or eliminate spillage of waste materials to the ground

32) Ground Water Remediation Unit, SWMU KMCC-019:

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials to the ground. Document any modifications made to the remediation unit for this purpose.

33) Sodium Perchlorate Platinum By-Product filter, SWMU KMCC ___?___

No further action is required at this time.

34) Former Manganese Tailings Area, SWMU KMCC-022:

Reference item 24 above.

- 35) Truck Emptying/Dump Site, SWMU KMCC-025:

Provide a sampling plan for assessment/characterization of "unknown" waste materials disposed in this area.

- 35-38) Former Satellite Accumulation Points:

No further action is required at this time.

- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-29:

Provide documentation of remediation of minor spill noted in the Phase I Report. This should include information regarding the association between the spill and the 1, 1, 1-trichloromethane stored in this area.

Provide information regarding improvements in area operating procedures for the purpose of minimizing or eliminating spillage of waste materials.

- 40) PCE Transformer Spill:

No further action is required at this time.

- 41) Unit 1 Tenant Stains:

Provide documentation of remediation of hydrocarbon impacted soil in this area.

- 42) Unit 2 Salt Redler:

No further action is required at this time

- 43) Unit 4 and 5 __?__

Provide a discussion concerning the practicality of removal or stabilization of residual chromium contamination in the unsaturated zone beneath these units.

Provide as a stand alone document, a full re-evaluation of the effectiveness of the chromium recovery system. Included should be such items as aquifer properties and characteristics, ground water flow patterns capture and reinjection zones:, influent trends, Etc. A discussion of the transport and fate of chromium within the shallow aquifer and within the vadose zone beneath units 4 & % should be included in this document.

- 44) Unit 6 Basement:

Provide a technically based discussion of the potential

impacts to ground water from manganese dioxide residual contamination in the vadose zone for from leakage of the basement of this unit. A discussion is required of the engineering features leak detection systems (s) , and periodic maintenance of the basement liner and any other appropriate method of addressing the issue of potential on-going releases. Ground water monitoring data should be used to document impacts (or lack thereof) from residual contamination beneath the unit.

45) Diesel Storage Tank:

Within 60 days of receipt of this letter of understanding, KMCC will provide the Division with a work plan designed to address visible and potential hydrocarbon contamination of soil and/or ground water in this area. If KMCC decides to renovate the tank, integrity testing(including some for of non destructive testing of the tank bottom) will be performed. If KMCC decides to discontinue tank use, the tank will be removed and the area assessed for contamination.

46) Former Old Main Cooling Tower and Recirculation Lines:

No further action is required at this time.

47) Leach Plant Area Manganese Ore Piles:

Provide data/documentation from industrial hygiene studies to on-site workers and off-site residents from exposure to manganese pre and or manganese compounds.

48) Leach Plant Anolyte Tanks:

Provide a work plan for assessment/Characterization of the Leach Plant area for potential elevated pH and manganese contamination.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from this area. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation to be conducted in July may be used to provide some or all of the requested information.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Reference item 48 above.

50) Leach Plant Area Leach Tanks:

Reference item 48 above.

- 51) Leach Plant Area Transfer Lines:
Reference item 48 above.
- 52) AP plant Area Screening Building, Dryer Building and Associated Sump:
Provide documentation of remediation of "minor white staining" iron ammonium perchlorate wash downs and modifications to area procedures to mitigate or eliminate further releases of waste materials.
- 53) AP Plant Area Tank Farm:
Provide documentation of remediation of small visible staining and repair or replacement of the concrete pad.
Provide a discussion of procedural changes intended to mitigate or eliminate further releases of waste materials.
- 54) AP Plant Area Change House/Laboratory Septic Tank:
Provide a work plan for assessment/characterization of potential contamination related to waste chemical disposal via the laboratory septic system.
- 55) Area Affected by July 1990 Fire:
Provide documentation of the remediation of the impacted area including specific data (e.g. waste volume, etc.) regarding material disposal at U>S. Ecology.
- 56) AP Plant Area Old Building D-1 -- Washdown:
Provide a technically based discussion concerning the environmental fate of ammonium perchlorate in site soils (see item # 52 above).
- 57 & 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:
No further action is required at this time.
- 59) Provide documentation of system flow/integrity investigations as part of a technical evaluation concerning the potential for soil and/or ground water contamination resulting from waste disposal and storm water discharges through the storm sewer system.
Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the storm sewer system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation to be conducted in July may be used to provide some or all of the requested information.

60) Acid Drain System:

Provide a technically based evaluation of the potential for soil and/or ground water contamination resulting from historic waste disposal through the acid drain system.

Provide a technical evaluation of the appropriateness of the placement and design criteria for wells used to monitor potential contaminant migration from the acid system. Include a list of the analytes which are currently monitored for and the latest data. Reference to the facility wide hydrologic evaluation to be conducted in July may be used to provide some or all of the requested information.

61) Old Sodium Chlorate Plant Decommissioning:

No further action is required at this time.

62) State Industries, Inc. Site, Including Impoundments and Catch Basin:

Provide a work plan for the complete assessment/characterization of the State Industries surface impoundments. Analytes should be selected based upon known or suspected waste streams disposed to these impoundments and should include TCLP metals, volatile organic compounds TPH, and pH.

63) J.B. Kelley, Inc. Trucking Site:

Provide closure and/or remediation documentation for the underground storage tanks formerly located at this site. Include data from the ground water monitor wells installed by KMCC to evaluate potential hydrocarbon contamination.

Provide an assessment plan to characterize areas potentially impacted by truck washing rinsate and liquids and sludges present in the concrete vaults at this site.

64) Koch Materials Company Site:

Provide documentation of KMCC's efforts to work with Koch Materials Co. for the purpose of remediating hydrocarbon contamination and developing operating procedures or containment structures to prevent further releases of petroleum hydrocarbons and other wastes.

65) Nevada Precast Concrete Products, Green Ventures International, Buckles Construction Company, and Ebony Construction Sites:

Determine whether soil staining identified in this area is coincident with the staining referred to in item 41 above. If the staining is not coincident with this item, provide documentation of KMCC's efforts to work with these tenants for the purpose of remediating hydrocarbon

contamination and developing operating procedures and/or containment structures to prevent further releases of hydrocarbon compounds and other waste materials.

- 66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

No further action is required at this time.

- 67) Delbert Madsen and Estate of Delber Madsen Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

- 68) Southern Nevada Auto Parts Site:

Provide documentation of KMCC's efforts to work with the tenant to further assess and characterize contamination which may be present at this location.

- 69) Dillon Potter Site:

No further action is required at this time.

In addition to the items outlined above, the Division requests that KMCC provide a description of the sampling protocols and QA/QC procedures to be used during the July, 1993 facility wide sampling of ground water monitor wells.

The information gathering and assessment/remediation tasks enumerated above will be incorporated (by reference) into the forthcoming Phase II Agreement to be negotiated with Kerr-McGee and the other BM ? companies. The Phase II negotiation process should not prevent or delay Kerr-McGee from implementing this work. Since this process may be lengthy, Kerr-McGee is encouraged to proceed with the preparation of the comprehensive work plan as soon as practicable.

Please review each of the items outlined above to assure that it concurs with your understanding of the points agreed upon during our June meeting. Should you have any questions or comments regarding any of the items, please contact either Allen Biaggi or myself at (702) 687-5872 extensions 3021 and 3017 respectively.

Sincerely,

Edward L. Basham
Environmental Management Specialist
Site Assessment/Corrective Action Branch
Bureau of Chemical Hazards Management

ELB:klh

cc: Russell Jones, Staff Environmental Engineer, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Patrick S. Corbett, Plant Manager, Kerr-McGee Chemical Corporation, P.O. box 55, Henderson, Nevada 89009-7000

Thomas W. Read, Senior Hydrologist, Hydrology-Technology Division, Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

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Patricia Redd Demps, Esq., Kerr-McGee Chemical Corporation, Kerr-McGee Center, P.O. Box 25861, Oklahoma City, Oklahoma 73125

Carl D. Savely, Esq., Lionel Sawyer & Collins, 1700 Valley Bank Plaza, 300 South fourth Street, Las Vegas, Nevada 89101

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Barry Conaty, Esq., Cutler & Stanfield, 700 Fourteenth Street, N.W., Washington, D.C. 20005

Jeff C. Harris, Coordinator, Clark County Department of Comprehensive Planning, 225 Bridger Avenue, 7th Floor, Las Vegas, Nevada 89155

L.H. Dodgion, Administrator

Verne Rosse, Deputy Administrator

Allen Biaggi, NDEP

Jeff Denison, NDEP

ENVIRONMENTAL CONDITIONS ASSESSMENT
 REVIEW MEETING

6/21/93

KMCC TRAINING CENTER

<u>NAME</u>	<u>COMPANY / AGENCY</u>	<u>TELEPHONE</u>
Russell Jones	KMCC, OKLAHOMA CITY	(405) 270-2665
Alan J. Gaddy	Environmental Technologies	702/734-5400
Susan Crowley	KMCC, Henderson	(702) 651-2234
Pat Corbett	KMCC Henderson	702 651 2283
JOHN STAUTER	KMC - OKC	405 270-2623
Patricia Demps	KMC - OKC	405 270-2840
Carl Savely	LS&C - Las Vegas	702 383-8874
DICK SERDOZ	NDEP - LAS VEGAS	702-486-7010
MARK T. CALHOUN	city of Henderson	702-565-2106
Jeff DENISON	NDEP - C.C.	702-687-5872
ALLEN BIALY	NDEP - CC	702 687-6872 x3021
Edward L. Basham	NDEP - CC	" " " 3017
HOLLY LAMBERT	NDEP - CC	" " " x3040
Tom Reed	KMCC - Hydrologist	

L. H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

May 10, 1993

Mr. Alan Gaddy
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009

Subject: Priority Rankings for Kerr-McGee Chemical Company Waste Management Units/Areas of Concern

Dear Mr. Gaddy:

The Nevada Division of Environmental Protection (NDEP) has completed the preliminary scoring and priority ranking of the areas of concern outlined in the Division's recommendations based upon Kerr-McGee's (KMCC) Phase I (ECA) Report. Enclosed are two spread sheets (sorted by raw score and by NDEP recommendation number) which indicate the respective rankings of the various units/areas of concern.

As indicated above, these rankings are preliminary, and as such are subject to discussion. Decisions as to further assessment/remediation will not be based solely upon a particular area's priority ranking. Our upcoming meeting with KMCC (to be scheduled) will provide a forum for discussion of the rankings as well as other issues. In some instances, clarification of minor points may suffice to reduce the ranking priority of some units. The scoring system is inherently sensitive to certain unit characteristics (categories) and a certain degree of adjustment of scores (up or down) may be appropriate given additional information.

Mr. Alan Gaddy
Kerr-McGee Chemical Corporation
May 10, 1993
Page 2

Please feel free to contact either myself or Mr. Allen Biaggi at 687-5872 extensions 3017 and 3021 respectively, should you have any questions regarding the Division's preliminary ranking of areas of concern at KMCC's Henderson facility.

Sincerely,



Edward L. Basham
Environmental Management Specialist
Site Assessment/Corrective Action Branch
Bureau of Chemical Hazards Management

ELB:ns

cc: w/enclosures

L.H. Dodgion, Administrator

Verne Rosse, Deputy Administrator

Mr. Barry Conaty, Esq., Cutler & Stanfield, 700 Fourteenth Street, N.W., Washington,
D.C. 20005

Allen Biaggi, NDEP

Jeff Denison, NDEP

05/07/93

NDEP BMI Complex Area/Waste Management Unit Listing with Screening Score and

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-006	0.0	NFA	KM-12
Kerr-McGee	Pond WC-1 and Associated Piping, SWMU KMCC-015	0.0	NFA	KM-22
Kerr-McGee	Process Hardware Storage Area, SWMU KMCC-001	0.0	NFA	KM-25
Kerr-McGee	Trsh Storage Area N. of Units 1 & 2, SWMU KMCC-002	0.0	NFA	KM-26
Kerr-McGee	PCB Storage Area, SWMU KMCC-003	0.0	NFA	KM-27
Kerr-McGee	Solid Waste Dumpsters, SWMU KMCC-008	0.0	NFA	KM-29
Kerr-McGee	Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017	0.0	NFA	KM-30
Kerr-McGee	Former Satellite Accumulation Pt. Unit 3, KMCC-026	0.0	NFA	KM-36
Kerr-McGee	Former Satellite Accumulation Pt. Unit-6, KMCC-027	0.0	NFA	KM-37
Kerr-McGee	Satellite Accumulation Pt., AP Laboratory KMCC-028	0.0	NFA	KM-38
Kerr-McGee	PCB Transformer Spill	0.0	NFA	KM-40
Kerr-McGee	Unit 2 Salt Redler	0.0	NFA	KM-42
Kerr-McGee	Former Old Main Cooling Tower and Recirc. Lines	0.0	NFA	KM-46
Kerr-McGee	AP Plant Area New Building D-1, Washdown	0.0	NFA	KM-57
Kerr-McGee	AP Plant Transfer Lines to Sodium Chlorate Process	0.0	NFA	KM-58
Kerr-McGee	Old Sodium Chlorate Plant Decommissioning	0.0	NFA	KM-61
Kerr-McGee	Dillon Potter Site	0.0	NFA	KM-69
Kerr-McGee	Nevada Precast Concrete, Green Ventures Int. et al	11.0	Low	KM-65
Kerr-McGee	Ground Water Remediation Unit, SWMU KMCC-019	16.0	Low	KM-32
Kerr-McGee	Unit 1 Tenant Stains	16.0	Low	KM-41
Kerr-McGee	J.B. Kelley, Inc. Trucking Site	17.0	Low	KM-63
Kerr-McGee	Diesel AST Leased by Flintkote Company	17.0	Low	KM-66
Kerr-McGee	Pond WC-2 and Associated Piping	18.0	Low	KM-23
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-004	18.0	Low	KM-28
Kerr-McGee	Koch Materials Company Site	18.0	Low	KM-64
Kerr-McGee	Diesel Storage Tank Area	19.0	Medium	KM-45
Kerr-McGee	Pond Mn-1 and Associated Piping	20.0	Medium	KM-21
Kerr-McGee	Unit 6 Basement	20.0	Medium	KM-44
Kerr-McGee	Leach Plant Area Leach Tanks	21.0	Medium	KM-50
Kerr-McGee	Satellite Accumulation Pt. AP Maint. Shop KMCC-029	22.0	Medium	KM-39
Kerr-McGee	Leach Plant Area Transfer Lines	22.0	Medium	KM-51
Kerr-McGee	AP Plant Area Change House/Laboratory Septic Tank	22.0	Medium	KM-54
Kerr-McGee	Storm Sewer System	22.0	Medium	KM-59
Kerr-McGee	Delbert Madsen & Estate Site	22.0	Medium	KM-67
Kerr-McGee	SWMU KMCC-005	23.0	Medium	KM-11
Kerr-McGee	Leach Plant Area Anolyte Tanks	23.0	Medium	KM-48
Kerr-McGee	Leach Plant Area Sulfuric Acid Storage Tank	23.0	Medium	KM-49
Kerr-McGee	AP Plant Area Old Building D-1, Washdown	23.0	Medium	KM-56
Kerr-McGee	Acid Drain System	23.0	Medium	KM-60
Kerr-McGee	Southern Nevada Auto Parts Site	23.0	Medium	KM-68
Kerr-McGee	Pond C-1 and Associated Piping, SWMU KMCC-011	24.0	Medium	KM-20
Kerr-McGee	Former Manganese Tailings Area, SWMU KMCC-022	24.0	Medium	KM-34
Kerr-McGee	AP Plant Area Screening Bld., Dryer Bld., & Sump	24.0	Medium	KM-52
Kerr-McGee	New P-2 Pond and Associated Piping	26.0	Medium	KM-09
Kerr-McGee	Leach Plant Area Manganese Ore Piles	26.0	Medium	KM-47
Kerr-McGee	On-Site Hazardous Waste Landfill, SWMU KMCC-013	27.0	Medium	KM-10
Kerr-McGee	Platinum Drying Unit, SWMU KMCC-007	27.0	Medium	KM-15
Kerr-McGee	Leach Beds, & Mn Tailings Area SWMU KMCC-009	27.0	Medium	KM-24
Kerr-McGee	Sodium Perchlorate Platinum By-Product Filter 021	27.0	Medium	KM-33
Kerr-McGee	Unnamed Drainage Ditch Segment	28.0	Medium	KM-06
Kerr-McGee	Pond P-1, and Associated Conveyance Piping	28.0	Medium	KM-14
Kerr-McGee	Drum Crushing and Recycling Area, SWMU KMCC-018	28.0	Medium	KM-31
Kerr-McGee	Unit 4 and Unit 5 Basements	28.0	Medium	KM-43
Kerr-McGee	Hardesty Chemical Company Site	29.0	High	KM-04
Kerr-McGee	Pond S-1	29.0	High	KM-13
Kerr-McGee	Pond AP-3 and Associated Transfer Lines	29.0	High	KM-17
Kerr-McGee	Trade Effluent Ponds/Vitrified Cly Piping KMCC-014	30.0	High	KM-01
Kerr-McGee	Pond AP-4	30.0	High	KM-18
Kerr-McGee	AP Plant Area Tank Farm	30.0	High	KM-53
Kerr-McGee	Area Affected by July 1990 Fire	30.0	High	KM-55
Kerr-McGee	Open Area South of Trade Effluent Disposal Ponds	31.0	High	KM-02
Kerr-McGee	Ponds AP-1 and AP-2, and Assoc. Transfer Lines	31.0	High	KM-16

05/07/93

NDEP BMI Complex Area/Waste Management Unit Listing with Screening Score and

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Pond AP-5	31.0	High	KM-19
Kerr-McGee	Old P-2 Pond and Associated Conveyance Facilities	32.0	High	KM-07
Kerr-McGee	P-3 Pond & Associated Conveyance Facilities	32.0	High	KM-08
Kerr-McGee	Truck Emptying/Dump Site, SWMU KMCC-025	32.0	High	KM-35
Kerr-McGee	State Industries Site: Impoundments & Catch Basin	32.0	High	KM-62
Kerr-McGee	Air Emissions Associated with Industrial Processes	35.0	High	KM-03
Kerr-McGee	Beta Ditch inc. Small Divers Ditch NW of Pond C-1	38.0	High	KM-05

05/07/93

NDEP BMI Complex Area/Waste Management Unit Listing with Screening Score and

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Trade Effluent Ponds/Vitrified Cly Piping KMCC-014	30.0	High	KM-01
Kerr-McGee	Open Area South of Trade Effluent Disposal Ponds	31.0	High	KM-02
Kerr-McGee	Air Emissions Associated with Industrial Processes	35.0	High	KM-03
Kerr-McGee	Hardesty Chemical Company Site	29.0	High	KM-04
Kerr-McGee	Beta Ditch inc. Small Divers Ditch NW of Pond C-1	38.0	High	KM-05
Kerr-McGee	Unnamed Drainage Ditch Segment	28.0	Medium	KM-06
Kerr-McGee	Old P-2 Pond and Associated Conveyance Facilities	32.0	High	KM-07
Kerr-McGee	P-3 Pond & Associated Conveyance Facilities	32.0	High	KM-08
Kerr-McGee	New P-2 Pond and Associated Piping	26.0	Medium	KM-09
Kerr-McGee	On-Site Hazardous Waste Landfill, SWMU KMCC-013	27.0	Medium	KM-10
Kerr-McGee	SWMU KMCC-005	23.0	Medium	KM-11
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-006	0.0	NFA	KM-12
Kerr-McGee	Pond S-1	29.0	High	KM-13
Kerr-McGee	Pond P-1, and Associated Conveyance Piping	28.0	Medium	KM-14
Kerr-McGee	Platinum Drying Unit, SWMU KMCC-007	27.0	Medium	KM-15
Kerr-McGee	Ponds AP-1 and AP-2, and Assoc. Transfer Lines	31.0	High	KM-16
Kerr-McGee	Pond AP-3 and Associated Transfer Lines	29.0	High	KM-17
Kerr-McGee	Pond AP-4	30.0	High	KM-18
Kerr-McGee	Pond AP-5	31.0	High	KM-19
Kerr-McGee	Pond C-1 and Associated Piping, SWMU KMCC-011	24.0	Medium	KM-20
Kerr-McGee	Pond Mn-1 and Associated Piping	20.0	Medium	KM-21
Kerr-McGee	Pond WC-1 and Associated Piping, SWMU KMCC-015	0.0	NFA	KM-22
Kerr-McGee	Pond WC-2 and Associated Piping	18.0	Low	KM-23
Kerr-McGee	Leach Beds, & Mn Tailings Area SWMU KMCC-009	27.0	Medium	KM-24
Kerr-McGee	Process Hardware Storage Area, SWMU KMCC-001	0.0	NFA	KM-25
Kerr-McGee	Trsh Storage Area N. of Units 1 & 2, SWMU KMCC-002	0.0	NFA	KM-26
Kerr-McGee	PCB Storage Area, SWMU KMCC-003	0.0	NFA	KM-27
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-004	18.0	Low	KM-28
Kerr-McGee	Solid Waste Dumpsters, SWMU KMCC-008	0.0	NFA	KM-29
Kerr-McGee	Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017	0.0	NFA	KM-30
Kerr-McGee	Drum Crushing and Recycling Area, SWMU KMCC-018	28.0	Medium	KM-31
Kerr-McGee	Ground Water Remediation Unit, SWMU KMCC-019	16.0	Low	KM-32
Kerr-McGee	Sodium Perchlorate Platinum By-Product Filter 021	27.0	Medium	KM-33
Kerr-McGee	Former Manganese Tailings Area, SWMU KMCC-022	24.0	Medium	KM-34
Kerr-McGee	Truck Emptying/Dump Site, SWMU KMCC-025	32.0	High	KM-35
Kerr-McGee	Former Satellite Accumulation Pt. Unit 3, KMCC-026	0.0	NFA	KM-36
Kerr-McGee	Former Satellite Accumulation Pt. Unit-6, KMCC-027	0.0	NFA	KM-37
Kerr-McGee	Satellite Accumulation Pt., AP Laboratory KMCC-028	0.0	NFA	KM-38
Kerr-McGee	Satellite Accumulation Pt. AP Maint. Shop KMCC-029	22.0	Medium	KM-39
Kerr-McGee	PCB Transformer Spill	0.0	NFA	KM-40
Kerr-McGee	Unit 1 Tenant Stains	16.0	Low	KM-41
Kerr-McGee	Unit 2 Salt Redler	0.0	NFA	KM-42
Kerr-McGee	Unit 4 and Unit 5 Basements	28.0	Medium	KM-43
Kerr-McGee	Unit 6 Basement	20.0	Medium	KM-44
Kerr-McGee	Diesel Storage Tank Area	19.0	Medium	KM-45
Kerr-McGee	Former Old Main Cooling Tower and Recirc. Lines	0.0	NFA	KM-46
Kerr-McGee	Leach Plant Area Manganese Ore Piles	26.0	Medium	KM-47
Kerr-McGee	Leach Plant Area Anolyte Tanks	23.0	Medium	KM-48
Kerr-McGee	Leach Plant Area Sulfuric Acid Storage Tank	23.0	Medium	KM-49
Kerr-McGee	Leach Plant Area Leach Tanks	21.0	Medium	KM-50
Kerr-McGee	Leach Plant Area Transfer Lines	22.0	Medium	KM-51
Kerr-McGee	AP Plant Area Screening Bld., Dryer Bld., & Sump	24.0	Medium	KM-52
Kerr-McGee	AP Plant Area Tank Farm	30.0	High	KM-53
Kerr-McGee	AP Plant Area Change House/Laboratory Septic Tank	22.0	Medium	KM-54
Kerr-McGee	Area Affected by July 1990 Fire	30.0	High	KM-55
Kerr-McGee	AP Plant Area Old Building D-1, Washdown	23.0	Medium	KM-56
Kerr-McGee	AP Plant Area New Building D-1, Washdown	0.0	NFA	KM-57
Kerr-McGee	AP Plant Transfer Lines to Sodium Chlorate Process	0.0	NFA	KM-58
Kerr-McGee	Storm Sewer System	22.0	Medium	KM-59
Kerr-McGee	Acid Drain System	23.0	Medium	KM-60
Kerr-McGee	Old Sodium Chlorate Plant Decommissioning	0.0	NFA	KM-61
Kerr-McGee	State Industries Site: Impoundments & Catch Basin	32.0	High	KM-62

05/07/93

NDEP BMI Complex Area/Waste Management Unit Listing with Screening Score a

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	J.B. Kelley, Inc. Trucking Site	17.0	Low	KM-63
Kerr-McGee	Koch Materials Company Site	18.0	Low	KM-64
Kerr-McGee	Nevada Precast Concrete, Green Ventures Int. et al	11.0	Low	KM-65
Kerr-McGee	Diesel AST Leased by Flintkote Company	17.0	Low	KM-66
Kerr-McGee	Delbert Madsen & Estate Site	22.0	Medium	KM-67
Kerr-McGee	Southern Nevada Auto Parts Site	23.0	Medium	KM-68
Kerr-McGee	Dillon Potter Site	0.0	NFA	KM-69

15141-1

Notes on Draft Recommendations/Company Responses
Kerr-McGee Chemical Company

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping, SWMU KMCC-014:

Priority: High, Score 30.0

The size of these ponds and the potential volume of waste material disposed here is the main reason for this unit's High Priority ranking. This area received facility solid wastes from 1945 to 1979. The nature of these wastes is unknown. Liquid wastes disposed in these ponds during government operations consisted of acid effluent and waste caustic liquor.

This appears to be predominantly a pH issue at least for the government period. The nature of solid wastes disposed here requires clarification. In the absence of further documentary evidence, a limited sampling plan should be developed to establish the presence or absence of potential contaminants in this area. This may be possible in conjunction with characterization of adjacent and/or physically and temporally superimposed units.

WHAT ABOUT KMCC OP? WASTE TYPES?
GIVE A SOW FOR UNDERGROUND. WHAT
KIND OF G.N.?
GIVE US DATA FROM REPORT 150
(A 353)
WHAT ABOUT WESTERN PORTION OF THE
POND AREA?

- 2) Open Area Due South of "Trade Effluent" Disposal Ponds:

Priority: High, Score 31.0

The High Priority is due to "unknown" contaminants. KMCC claims this area would be characterized during studies of adjacent and superimposed units such as the Trade Effluent Ponds and the Beta Ditch. We should see that any work plan for these areas includes an investigation of this area.

WHAT INV. OVERLAP THIS? WHICH
ACCOMPLISH THIS. UNLESS DE WASTE
TYPES. HOW WHAT TO LOOK FOR.

3) Air Pollutant Emissions Associated with Industrial Processes:

Priority: High, Score 35.0

High priority due to unknown nature and potential for widespread contamination.

All of the companies claim that none of their air emissions were depositional in nature and in any case have long since dissipated. I would think that it would be very difficult to chase after historical air emissions at this site. Short of modeling the dispersion patterns and sampling potential fallout areas, I think on site sampling in association with other unit characterizations will probably address this issue. I think some more definitive documentation to back up the "non-depositional" claim is necessary. (Any investigation of depositional air emissions may better be addressed as a "Common Area" issue).

OK ~~WHAT ARE EMISSIONS? HAVE TREES~~
~~BEEN~~ OUTLINED WHY THEY WERE NOT
DEPOSITIONAL IN NATURE - IF ALL WERE
WHY SHOULD WE NOT BE CONCERNED

4) Hardesty Chemical Company Site:

Priority: High, Score 29.0

High priority due to "unknown" contaminant type. There is no surficial evidence of contamination. Use of potentially hazardous materials does not necessary mean that a release has occurred. I would recommend limited sampling to put this issue to bed. This may be a Stauffer/Kerr McGee issue.

~~WHAT DID THEY MAKE?~~
RECOMMEND LIMITED SOIL FOR FURTHER
ACTION

HOW TO HANDLE THE ISSUE OF OVERLAP
STAUFFER / KNCC

- 5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Priority: High, Score 38.0

Because of the multi-use character of the Beta Ditch, segments down flow of the Stauffer/Montrose facilities should be studied on a complex wide basis. Segments originating on the various company properties which received discharges from that property only, should be identified and characterized by the property owner. An example would be the portions of the Beta Ditch (or tributaries) which lie wholly on the former Montrose property should be characterized by Montrose. Those portions of the Beta Ditch on KMCC property which received "common" discharges should be characterized by the BMI companies jointly.

STUDY YOUR OWN TRIB. IS PREFERABLE TO
KNCC, OTHERS TO COMMON AREAS.
PLATINUM, Cr^{++} , NA PERMUTATE, NA
CHLORIDE, HCL, . . .

- 6) Unnamed Drainage Ditch Segment:

Priority: Medium, Score 28.0

KMCC states that this is the Northwest Drainage Ditch. This is a BMI Common Areas issue.

TO COMMON AREA INVEST.

7) Old P-2 Pond and Associated Conveyance Facilities:

Priority: High, Score 32.0

High Priority due to possible Cr+6 contamination due to liner failures. Liner, sludge, and adjacent and underlying soils have been removed to U.S. Ecology. Confirmatory sampling of subsurface soils is required to characterize past impacts to soil/GW. Work Plan to this end should be developed.

JUSTIFICATION SAMPLE FOR POND
CLOSURE.

8) P-3 Pond and Associated Conveyance Facilities:

Priority: High, Score 32.0

Comments in Recommendations are appropriate.

Lead

9) New P-2 Pond and Associated Piping:

Priority: Medium, Score 26.0

Comments in Recommendations are appropriate. Score reflects possible presence of Cr+6.

Has this been closed? When?
Data needed? Documentation
needed

10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:

Priority: Medium, Score 27.0

Closure approved by NDEP in 1986. Post Closure monitoring ongoing. Post Closure permit pending. Documentation of status should be reviewed. **Does Jeff have these documents?** INTERVIEW

- Turn over to Jeff -
- Phase I report was partial fulfillment of closure
permitting process - Approved plan for post closure
monitoring - Jeff says permit may be withheld
pending Phase II results.

11) SWMU KMCC-005:

Priority: Medium, Score 23.0

Old drying pad demolition material sent to U.S. Ecology. No analytical data presented in Phase I report. Since it went to Beatty, U.S. Ecology should have required characterization. No confirmatory sampling of soil after removal of old pad. What

regulatory agency (if any) oversaw remediation of the old pad area?

~~SEE~~ ITEM 7

12) Hazardous Waste Storage Area, SWMU KMCC-006:

Priority: None, Score 0.0

No Further Action required.

13) Pond S-1:

Priority: High, Score 29.0

NDEP acknowledged proper closure of this impoundment on 12/5/85. No further action should be required.

DISLIKES THIS WITH JEFF.

14) Pond P-1, and Associated Conveyance Piping:

Priority: Medium, Score 28.0

NDEP acknowledged proper closure of this impoundment on 12/5/85. No further action should be required.

DISCUSSED W/ JEFF

15) Platinum Drying Unit, SWMU KMCC-007:

Priority: Medium, Score 27.0

This unit's score reflects the possible presence of Cr+6. Due to documented spillage of platinum and possibly chromium bearing filter cake material, a limited amount of sampling should be undertaken to establish the impact to the environment of such spillage.

WHY IS SPILLAGE OF F. CAKE NOT A PROBLEM. IF ARGUMENT ISN'T SATIS. SAMPLE.

16) Ponds AP-1 and AP-2, and Associated Transfer Lines:

Priority: High, Score 31.0

The score reflects the possible presence of Cr+6. The location of these ponds is not adequately indicated on facility diagrams. The Ponds area and transfer line areas should be sampled for TCLP chromium and possibly for perchlorates and chlorates (reactivity?).

WHY NOT LOOK FOR REACTIVITY?
WHERE IS IT??
CR⁶ IN G.W. (ONLY DATA)

IF HOUSEKEEPING LEADUP IS TO BE
DO LE NEED A SOW.

17) Pond AP-3 and Associated Transfer Lines:

Priority: High, Score 29.0

Score reflects possible chromium contamination. See #16.

NEED I.D.
(NOT I.D. ISSUE)

18) Pond AP-4:

Priority: High, Score 30.0

Score reflects possible hazardous nature due to reactivity. Barring this, probably only a TDS issue. Discussion of reactivity issue required. Better location identification required.

NEED I.D.

19) Pond AP-5:

Priority: High, Score 31.0

Score reflects possible hazardous nature due to reactivity. Barring this, probably only a TDS issue. Discussion of reactivity issue required. Better location identification required.

CEC 17
No CE^b problem?

20) Pond C-1 and Associated Piping, SWMU KMCC-011:

Priority: Medium, Score 24.0

TDS issue.

Typical TDS issue
BCHM or WPC?

21) Pond Mn-1 and Associated Piping:

Priority: Medium, Score 20

Based upon the list of materials disposed to this impoundment, this is a TDS issue and falls within the realm of Water Pollution Control.

~~SEE~~ 20

~~22)~~ Pond WC-1 and Associated Piping, SWMU KMCC-015:

Priority: NFA Score 0.0

~~23)~~ Pond WC-2 and Associated Piping:

Priority: Low, Score 18.0

KMCC states that it will remediate the small stains caused by treatment chemicals used in the WC impoundments. Recommend No Further Action. Water Pollution Control should continue to regulate.

NFA - Containment Slab Installed - to submit

- 24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Priority: Medium, Score 27.0

TCLP and EP TOX testing demonstrates this area does not contain leachable metals. Other issues concern TDS and possibly pH. KMCC agrees that this area should be sampled to determine whether pre-1975 disposal of slurried Mn waste to the leach beds has impacted soil or ground water. A soil sampling plan for TCLP metals and pH should be developed.

DO BORING FOR TC IN PRE-1975

SLUDGES

IF LEACHABLES FOUND, REVIEW G/L

NO - SYSTEM AND ANALYSES.

- 25) Process Hardware Storage Area, SWMU KMCC-001:

No Further Action.

- 26) Trash Storage Area:

No Further Action.

- 27) PCB Storage Area, SWMU KMCC-003:

No Further Action.

- 28) Hazardous Waste Storage Area, SWMU KMCC-004:

Priority: Low, Score 18.0

Recommendations appropriate. KMCC says "oil stained" cleanup has been carried out. Cleanup documentation? Otherwise, No Further Action.

GET DOCUMENTATION - DISPOSAL
INFO.

29) Solid Waste Dumpsters, SWMU KMCC-008:

No Further Action.

30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017:

No Further Action.

31) Drum Crushing and Recycling Area, SWMU KMCC-018:

Priority: Medium, Score 28.0

KMCC states that it will remove minor soil staining in area and revise its practices to residual material in drums prior to crushing. This appears satisfactory. Provide documentation of both.

PROVIDE DOC. AND HOW PROCEDURES
WILL BE IMPLEMENTED.

32) Ground Water Remediation Unit, SWMU KMCC-019:

Priority: Low, Score 16.0

KMCC states in their response that the small spills will be cleaned up. No Further Action appears warranted.

~~CRS~~ 31

✓ 33)

Sodium Perchlorate Platinum By-Product Filter, SWMU KMCC-021:

Priority: Medium, Score 27.0

Material is discharged directly to containers for shipment. No free liquids. Floor seams have been repaired according to KMCC. No Further Action appears warranted.

NEA

✓ 34)

Former Manganese Tailings Area, SWMU KMCC-022:

Priority: Medium, Score 24.0

See comment #24 above.

~~CRS~~ 24

35) Truck Emptying/Dump Site, SWMU KMCC-025:

Priority: High, Score 32.0

Disposal of "unknown" wastes during period 1969-1991. Area unlined. Further Characterization of materials disposed here is required. In the absence of this, sampling to determine character should be required. Sampling may be required in any event.

UNKNOWN SOLID WASTE DISP. AREA
WHAT WAS IT? IF STILL UNKN., BURE

36, 37, 38) Former Satellite Accumulation Points:

No Further Action per recommendations.

39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-029:

Priority: Medium, Score 22.0

KMCC states in their response that they will cleanup small stained area referenced in Recommendations. They should also revise their practices regarding drum storage of 1,1,1 TCA (and other hazardous materials) on bare ground so as to avoid further/future spillage.

HAS IT BEEN CLEANED UP?

HOW WILL PRACTICES BE MODIFIED?

40) PCB Transformer Spill:

No Further Action based upon information presented in Final Phase I Report.

41) Unit 1 Tenant Stains:

Priority: Low, Score 16.0

TPH stains. KMCC states in their response that stained soil has been removed. Documentation?

DOCUMENT IT !!
- confirmatory!

42) Unit 2 Salt Redler:

No Further Action.

43) Unit 4 and 5 Basements:

Priority: Medium, Score 28.0

Residual contaminants in unsaturated soils beneath these units. What can reasonably be done? KMCC falls back on their ground water (chromium) intercept and remediation system. Perhaps we could make KMCC stipulate that upon closure of these units, they will be demolished and the soil beneath them assessed for residual contamination and if necessary, excavated and disposed of.

Are the conditions going up?
- Can this be stabilized.

44)

Unit 6 Basement:

Priority: Medium, Score 20.0

Is the GW remediation system capturing and addressing contamination from this unit? See note 43 above. KMCC states that a liner has been installed in the basement of Unit 6 and that during this operation "a significant quantity of soil was removed". Does this "indoor" impoundment or sump have a leak detection system?

IS REMEDIATION SYSTEM ADDRESSING
WASTEWATER? IS IT A PROBLEM? HOW IS
THE LINER MONITORED.

A THIS ISSUE??

45)

Diesel Storage Tank:

Priority: Medium, Score 19.0

KMCC states that it plans to remove this tank in the near future and that they will remediate impacted soil. Tank closure/soil remediation documentation including a schedule should be provided to NDEP.

DOCUMENT

46) Former Old Main Cooling Tower and Recirculation Lines:

No Further Action.

47) Leach Plant Area Manganese Ore Piles:

Priority: Medium, Score 26.0

KMCC states this material is insoluble and therefore poses not environmental threat. Manganese has a secondary MCL of 50 ppb. A soil action level would therefore be 5 ppm. Is this material really an issue? The material is ore and therefore is not a solid waste (and by inference not a hazardous waste). Is residue or leachate from "ore" storage a solid waste? I would guess that it is exempt.

Mn EXPOSURE TO WORKERS/OFFSITE?
IS THE HYGIENE STUDY DONE?
IF NO - DOCUMENT.

48) Leach Plant Anolyte Tanks:

Priority: Medium, Score 23.0

General concurrence on further study. KMCC states that Leach plant process tanks have been replaced and that new tanks have secondary containment. Soil surrounding tank area should be characterized for pH and Mn. Sulfuric acid may have mobilized Mn.

PROVIDE A SOIL FOR STUDY.

UMP
18-51
014/11/11
EVAL

✓1) Leach Plant Area Transfer Lines:

Priority: Medium, Score 22.0

KMCC states that investigations related to item 48 will cover the transfer line area. This appears adequate. A work plan incorporating all the leach plant units/areas of concern is required.

✓2) AP Plant Area Screening Building, Dryer Building and Associated Sump:

Priority: Medium, Score 24.0

KMCC states in their response that the minor white staining resulting from ammonium perchlorate wash downs will be cleaned up and they will evaluate their housekeeping practices and modify them as needed. I think they should go into a little more detail regarding this. Otherwise, No Further Action appears necessary.

HOW REVIEWED, HOW MODIFIED
HOW DISPOSED:

IS AP IN MOL DANGEROUS?

✓3) AP Plant Area Tank Farm:

Priority: High, Score 30.0

Score reflects presence of strong oxidizing compounds. KMCC states in their response

that they will remove small visual stains and repair or replace the concrete pad. Characterization of area contamination for "reactive" may be appropriate? In any event, documentation of stained area clean up and pad repair is necessary.

✓54) AP Plant Area Change House/Laboratory Septic Tank:

Priority: Medium, Score 22.0

General Concurrence that the Lab septic system should be investigated to determine whether disposal of lab chemicals has impacted soil or GW.

GIVE US A SOW.

✓55) Area Affected by July 1990 Fire:

Priority: High, Score 30.0

KMCC states in their response that the area impacted by the fire has been remediated and that soils were removed and disposed of at U.S. Ecology. Was a remediation report prepared? Was sampling of the soil (characterization and confirmatory) conducted or was visibly impacted soil just arbitrarily excavated and shipped to Beatty? A little more detailed documentation is required.

MORE INFO REQ. VERIFICATION/COMPLY??

56) AP Plant Area Old Building D-1 -- Washdown:

Priority: Medium, Score 23.0

KMCC in their response claims that releases are minor and do not pose a threat to the environment. This claim requires substantiation (technically based argument or limited sampling).

WHY HAS THIS SITE NOT CONTAM.
SOILS? DOCUMENT! IF CAN'T DO
IT, SAMPLE.

57 and 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:

No Further Action per Recommendations.

59) Storm Sewer System:

Priority: Medium, Score 22.0

KMCC states that no further study is recommended. historic leaks from this system may have impacted soil and/or GW. Segments of the system which are or have been used by other BMI companies should be addressed as a BMI Common Areas issue. - Discrete (KMCC use only) segments should be evaluated for potential contaminant type and release potential. Some segments may require adjacent soil boring and sampling.

PRE-1977 (NPDES) WASTES?

MORE INFO. NEEDED.

1) I.D. KMCC USED SELF ONLY

2) I.D. HISTORICAL USE SELF AND WASTE STREAMS.

OPERATIONAL WAY BEFORE NPDES

USE BY KMCC AND PREVIOUSLY. HOW DID THEY TRAIL AND FLOW?

60)

Acid Drain System:

Priority: Medium, Score 23.0

The issue is not current discharges but potential impacts from historic use. KMCC says NFA. [See note #59 above. pH issue. Possibly other contaminants as well.]

SEE 59

61)

Old Sodium Chlorate Plant Decommissioning:

No Further Action per Recommendations.

62)

State Industries, Inc. Site, Including Impoundments and Catch Basin:

Priority: High, Score 32.0

Characterization of impoundments and Catch Basin is required. Additional information on potential contaminants should be gathered if possible in order to limit analyses. Otherwise, a full screen may be necessary. KMCC agrees that the ponds need additional assessment.

PH ISSUE GIVES A GO!

✓ 63) J.B. Kelley, Inc. Trucking Site:

Priority: Low, Score 17.0

The underground vault water/sludge and soil potentially impacted by rinsate should be sampled and analyzed. A schedule and documentation of UST closure and associated soil and/or GW remediation should be provided to NDEP.

CLAD

64) Koch Materials Company Site:

Priority: Low, Score 18.0

Characterization and remediation of hydrocarbon contamination is required. Storage tanks should be provided with concrete secondary containment structures.

REQUEST A SOIL FROM KIMBLE
TANKS

✓ 65) Nevada Precast Concrete, etc....

Priority: Low, Score 11.0

Hydrocarbon staining north of Unit 1 should be remediated.

~~63~~ 63

✓ 66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

Priority: Low, Score 17.0

Exact former location unknown, but no visible staining present. No Further Action appears warranted.

✓ 67) Delbert Madsen and Estate of Delbert Madsen Site:

Priority: Medium, Score 22.0

Assessment of tenant site is required. Possible asbestos, lead, hydrocarbons.

~~GIVE US A SOW~~
~~TALK TO YOUR TENANT~~

68) Southern Nevada Auto Parts Site:

Priority: Medium, Score 23.0

This is a wrecking yard. Operation of such a business is inherently dirty. Should characterization and remediation be pursued prior to change of parcel use. To let it go is inconsistent with our requirements for other sites.

~~TALK TO TENANT~~
~~IF CHANGE OF USE, CLEAN IT UP.~~

69) Dillon Potter Site:

No Further Action per Recommendations.

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-006	0.0	NFA	KM-12
Kerr-McGee	Pond WC-1 and Associated Piping, SWMU KMCC-015	0.0	NFA	KM-22
Kerr-McGee	Process Hardware Storage Area, SWMU KMCC-001	0.0	NFA	KM-25
Kerr-McGee	Trsh Storage Area N. of Units 1 & 2, SWMU KMCC-002	0.0	NFA	KM-26
Kerr-McGee	PCB Storage Area, SWMU KMCC-003	0.0	NFA	KM-27
Kerr-McGee	Solid Waste Dumpsters, SWMU KMCC-008	0.0	NFA	KM-29
Kerr-McGee	Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017	0.0	NFA	KM-30
Kerr-McGee	Former Satellite Accumulation Pt. Unit 3, KMCC-026	0.0	NFA	KM-36
Kerr-McGee	Former Satellite Accumulation Pt. Unit-6, KMCC-027	0.0	NFA	KM-37
Kerr-McGee	Satellite Accumulation Pt., AP Laboratory KMCC-028	0.0	NFA	KM-38
Kerr-McGee	PCB Transformer Spill	0.0	NFA	KM-40
Kerr-McGee	Unit 2 Salt Redler	0.0	NFA	KM-42
Kerr-McGee	Former Old Main Cooling Tower and Recirc. Lines	0.0	NFA	KM-46
Kerr-McGee	AP Plant Area New Building D-1, Washdown	0.0	NFA	KM-57
Kerr-McGee	AP Plant Transfer Lines to Sodium Chlorate Process	0.0	NFA	KM-58
Kerr-McGee	Old Sodium Chlorate Plant Decommissioning	0.0	NFA	KM-61
Kerr-McGee	Dillon Potter Site	0.0	NFA	KM-69
Kerr-McGee	Nevada Precast Concrete, Green Ventures Int. et al	11.0	Low	KM-65
Kerr-McGee	Ground Water Remediation Unit, SWMU KMCC-019	16.0	Low	KM-32
Kerr-McGee	Unit 1 Tenant Stains	16.0	Low	KM-41
Kerr-McGee	J.B. Kelley, Inc. Trucking Site	17.0	Low	KM-63
Kerr-McGee	Diesel AST Leased by Flintkote Company	17.0	Low	KM-66
Kerr-McGee	Pond WC-2 and Associated Piping	18.0	Low	KM-23
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-004	18.0	Low	KM-28
Kerr-McGee	Koch Materials Company Site	18.0	Low	KM-64
Kerr-McGee	Diesel Storage Tank Area	19.0	Medium	KM-45
Kerr-McGee	Pond Mn-1 and Associated Piping	20.0	Medium	KM-21
Kerr-McGee	Unit 6 Basement	20.0	Medium	KM-44
Kerr-McGee	Leach Plant Area Leach Tanks	21.0	Medium	KM-50
Kerr-McGee	Satellite Accumulation Pt. AP Maint. Shop KMCC-029	22.0	Medium	KM-39
Kerr-McGee	Leach Plant Area Transfer Lines	22.0	Medium	KM-51
Kerr-McGee	AP Plant Area Change House/Laboratory Septic Tank	22.0	Medium	KM-54
Kerr-McGee	Storm Sewer System	22.0	Medium	KM-59
Kerr-McGee	Delbert Madsen & Estate Site	22.0	Medium	KM-67
Kerr-McGee	SWMU KMCC-005	23.0	Medium	KM-11
Kerr-McGee	Leach Plant Area Anolyte Tanks	23.0	Medium	KM-48
Kerr-McGee	Leach Plant Area Sulfuric Acid Storage Tank	23.0	Medium	KM-49
Kerr-McGee	AP Plant Area Old Building D-1, Washdown	23.0	Medium	KM-56
Kerr-McGee	Acid Drain System	23.0	Medium	KM-60
Kerr-McGee	Southern Nevada Auto Parts Site	23.0	Medium	KM-68
Kerr-McGee	Pond C-1 and Associated Piping, SWMU KMCC-011	24.0	Medium	KM-20
Kerr-McGee	Former Manganese Tailings Area, SWMU KMCC-022	24.0	Medium	KM-34
Kerr-McGee	AP Plant Area Screening Bld., Dryer Bld., & Sump	24.0	Medium	KM-52
Kerr-McGee	New P-2 Pond and Associated Piping	26.0	Medium	KM-09
Kerr-McGee	Leach Plant Area Manganese Ore Piles	26.0	Medium	KM-47
Kerr-McGee	On-Site Hazardous Waste Landfill, SWMU KMCC-013	27.0	Medium	KM-10
Kerr-McGee	Platinum Drying Unit, SWMU KMCC-007	27.0	Medium	KM-15
Kerr-McGee	Leach Beds, & Mn Tailings Area SWMU KMCC-009	27.0	Medium	KM-24
Kerr-McGee	Sodium Perchlorate Platinum By-Product Filter 021	27.0	Medium	KM-33
Kerr-McGee	Unnamed Drainage Ditch Segment	28.0	Medium	KM-06
Kerr-McGee	Pond P-1, and Associated Conveyance Piping	28.0	Medium	KM-14
Kerr-McGee	Drum Crushing and Recycling Area, SWMU KMCC-018	28.0	Medium	KM-31
Kerr-McGee	Unit 4 and Unit 5 Basements	28.0	Medium	KM-43
Kerr-McGee	Hardesty Chemical Company Site	29.0	High	KM-04
Kerr-McGee	Pond S-1	29.0	High	KM-13
Kerr-McGee	Pond AP-3 and Associated Transfer Lines	29.0	High	KM-17
Kerr-McGee	Trade Effluent Ponds/Vitrified Cly Piping KMCC-014	30.0	High	KM-01
Kerr-McGee	Pond AP-4	30.0	High	KM-18
Kerr-McGee	AP Plant Area Tank Farm	30.0	High	KM-53
Kerr-McGee	Area Affected by July 1990 Fire	30.0	High	KM-55
Kerr-McGee	Open Area South of Trade Effluent Disposal Ponds	31.0	High	KM-02
Kerr-McGee	Ponds AP-1 and AP-2, and Assoc. Transfer Lines	31.0	High	KM-16

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Pond AP-5	31.0	High	KM-19
Kerr-McGee	Old P-2 Pond and Associated Conveyance Facilities	32.0	High	KM-07
Kerr-McGee	P-3 Pond & Associated Conveyance Facilities	32.0	High	KM-08
Kerr-McGee	Truck Emptying/Dump Site, SWMU KMCC-025	32.0	High	KM-35
Kerr-McGee	State Industries Site: Impoundments & Catch Basin	32.0	High	KM-62
Kerr-McGee	Air Emissions Associated with Industrial Processes	35.0	High	KM-03
Kerr-McGee	Beta Ditch inc. Small Divers Ditch NW of Pond C-1	38.0	High	KM-05

Facility	Area or Unit Name	Score	Priority	Recomm_no
Kerr-McGee	Trade Effluent Ponds/Vitrified Cly Piping KMCC-014	30.0	High	KM-01
Kerr-McGee	Open Area South of Trade Effluent Disposal Ponds	31.0	High	KM-02
Kerr-McGee	Air Emissions Associated with Industrial Processes	35.0	High	KM-03
Kerr-McGee	Hardisty Chemical Company Site	29.0	High	KM-04
Kerr-McGee	Beta Ditch inc. Small Divers Ditch NW of Pond C-1	38.0	High	KM-05
Kerr-McGee	Unnamed Drainage Ditch Segment	28.0	Medium	KM-06
Kerr-McGee	Old P-2 Pond and Associated Conveyance Facilities	32.0	High	KM-07
Kerr-McGee	P-3 Pond & Associated Conveyance Facilities	32.0	High	KM-08
Kerr-McGee	New P-2 Pond and Associated Conveyance Facilities	26.0	Medium	KM-09
Kerr-McGee	On-Site Hazardous Waste Landfill, SWMU KMCC-013	27.0	Medium	KM-10
Kerr-McGee	SWMU KMCC-005	23.0	Medium	KM-11
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-006	0.0	NFA	KM-12
Kerr-McGee	Pond S-1	29.0	High	KM-13
Kerr-McGee	Pond P-1, and Associated Conveyance Piping	28.0	Medium	KM-14
Kerr-McGee	Platinum Drying Unit, SWMU KMCC-007	27.0	Medium	KM-15
Kerr-McGee	Ponds AP-1 and AP-2, and Assoc. Transfer Lines	31.0	High	KM-16
Kerr-McGee	Pond AP-3 and Associated Transfer Lines	29.0	High	KM-17
Kerr-McGee	Pond AP-4	30.0	High	KM-18
Kerr-McGee	Pond AP-5	31.0	High	KM-19
Kerr-McGee	Pond C-1 and Associated Piping, SWMU KMCC-011	24.0	Medium	KM-20
Kerr-McGee	Pond Mn-1 and Associated Piping	20.0	Medium	KM-21
Kerr-McGee	Pond WC-1 and Associated Piping, SWMU KMCC-015	0.0	NFA	KM-22
Kerr-McGee	Pond WC-2 and Associated Piping	18.0	Low	KM-23
Kerr-McGee	Leach Beds, & Mn Tailings Area SWMU KMCC-009	27.0	Medium	KM-24
Kerr-McGee	Process Hardware Storage Area, SWMU KMCC-001	0.0	NFA	KM-25
Kerr-McGee	Trsh Storage Area N. of Units 1 & 2, SWMU KMCC-002	0.0	NFA	KM-26
Kerr-McGee	PCB Storage Area, SWMU KMCC-003	0.0	NFA	KM-27
Kerr-McGee	Hazardous Waste Storage Area, SWMU KMCC-004	18.0	Low	KM-28
Kerr-McGee	Solid Waste Dumpsters, SWMU KMCC-008	0.0	NFA	KM-29
Kerr-McGee	Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017	0.0	NFA	KM-30
Kerr-McGee	Drum Crushing and Recycling Area, SWMU KMCC-018	28.0	Medium	KM-31
Kerr-McGee	Ground Water Remediation Unit, SWMU KMCC-019	16.0	Low	KM-32
Kerr-McGee	Sodium Perchlorate Platinum By-Product Filter 021	27.0	Medium	KM-33
Kerr-McGee	Former Manganese Tailings Area, SWMU KMCC-022	24.0	Medium	KM-34
Kerr-McGee	Truck Emptying/Dump Site, SWMU KMCC-025	32.0	High	KM-35
Kerr-McGee	Former Satellite Accumulation Pt. Unit 3, KMCC-026	0.0	NFA	KM-36
Kerr-McGee	Former Satellite Accumulation Pt. Unit-6, KMCC-027	0.0	NFA	KM-37
Kerr-McGee	Satellite Accumulation Pt., AP Laboratory, KMCC-028	0.0	NFA	KM-38
Kerr-McGee	Satellite Accumulation Pt. AP Maint. Shop KMCC-029	22.0	Medium	KM-39
Kerr-McGee	PCB Transformer Spill	0.0	NFA	KM-40
Kerr-McGee	Unit 1 Tenant Stains	16.0	Low	KM-41
Kerr-McGee	Unit 2 Salt Redler	0.0	NFA	KM-42
Kerr-McGee	Unit 4 and Unit 5 Basements	28.0	Medium	KM-43
Kerr-McGee	Unit 6 Basement	20.0	Medium	KM-44
Kerr-McGee	Diesel Storage Tank Area	19.0	Medium	KM-45
Kerr-McGee	Former Old Main Cooling Tower and Recirc. Lines	0.0	NFA	KM-46
Kerr-McGee	Leach Plant Area Manganese Ore Piles	26.0	Medium	KM-47
Kerr-McGee	Leach Plant Area Sulfuric Acid Storage Tank	23.0	Medium	KM-48
Kerr-McGee	Leach Plant Area Leach Tanks	23.0	Medium	KM-49
Kerr-McGee	Leach Plant Area Leach Lines	21.0	Medium	KM-50
Kerr-McGee	AP Plant Area Transfer Lines	22.0	Medium	KM-51
Kerr-McGee	AP Plant Area Screening Bld., Dryer Bld., & Sump	24.0	Medium	KM-52
Kerr-McGee	AP Plant Area Tank Farm	30.0	High	KM-53
Kerr-McGee	AP Plant Area Change House/Laboratory Septic Tank	22.0	Medium	KM-54
Kerr-McGee	Area Affected by July 1990 Fire	30.0	High	KM-55
Kerr-McGee	AP Plant Area Old Building D-1, Washdown	23.0	Medium	KM-56
Kerr-McGee	AP Plant Area New Building D-1, Washdown	0.0	NFA	KM-57
Kerr-McGee	AP Plant Transfer Lines to Sodium Chlorate Process	0.0	NFA	KM-58
Kerr-McGee	Storm Sewer System	22.0	Medium	KM-59
Kerr-McGee	Acid Drain System	23.0	Medium	KM-60
Kerr-McGee	Old Sodium Chlorate Plant Decommissioning	0.0	NFA	KM-61
Kerr-McGee	State Industries Site: Impoundments & Catch Basin	32.0	High	KM-62

Facility	Area or Unit Name	Score	Priority	Recommendation
Kerr-McGee	J.B. Kelley, Inc. Trucking Site	17.00	Low	KM-63
Kerr-McGee	Koch Materials Company Site	18.00	Low	KM-64
Kerr-McGee	Nevada Precast Concrete, Green Ventures Int'l et al	11.00	Low	KM-65
Kerr-McGee	Diesel AST Leased by Flintkote Company	17.00	Low	KM-66
Kerr-McGee	Delbert Madsen & Estate Site	22.00	Medium	KM-67
Kerr-McGee	Southern Nevada Auto Parts Site	23.00	Medium	KM-68
Kerr-McGee	Dillon Potter Site	0.00	NFA	KM-69

L. H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor


PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 685-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

April 22, 1993

Alan Gaddy
Kerr-McGee Chemical Co.
P.O. Box 55
Henderson, NV 89009

Dear Mr. Gaddy:

The Nevada Division of Environmental Protection has received the final Phase I Assessment Reports from all of the companies involved with the BMI Complex located in Henderson, Nevada.

As outlined in our March 11, 1993 meeting with all of the companies, the Division will be identifying all of the units of concern for each property owner as well as the common areas and ranking them in terms of potential impacts to public health and environmental quality. This information, along with our recommendations for Phase II will provide the basis for our individual meetings with each company. The purpose of these meetings is to reach a consensus with regard to the scope of work for Phase II. The City of Henderson and Clark County will be invited to participate.

Once the Division and the firms have reached a tentative consensus, public meetings will be held to gather public input and concerns for inclusion for the final negotiations of the Phase II agreement.

We hope to begin the individual company meetings in early May, with a break of 1 to 2 weeks between firms to allow us time to evaluate the available information, acquaint ourselves with the specific issues of the site and rank the units. The order of the meetings is scheduled as follows: Chemstar, Timet, Kerr-McGee, Stauffer/Pioneer, Montrose and the BMI Common Areas.

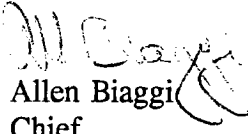
Alan Gaddy
Kerr-McGee Chemical Co.
April 22, 1993
Page 2

The preliminary Ranking System, developed by the City of Henderson and modified by the NDEP, to be used for evaluating individual units is attached for your information. We are still refining this system, therefore the final methodology may vary slightly from this version.

We look forward to meeting with you in a spirit of cooperation and the desire to achieve a mutually agreeable solution to these problems.

If questions or comments arise, please feel free to contact me.

Sincerely,



Allen Biaggi
Chief

Bureau of Chemical Hazards Management

AJB:gf

cc: L.H. Dodgion, Administrator
Verne Rosse, Deputy Administrator
Jeff Denison, RCRA Permitting
Ed Basham, Corrective Action
Jeff Harris, Clark County Comprehensive Planning
Mark Calhoun, City of Henderson



KERR-MCGEE CHEMICAL CORPORATION

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93 APR 19 PM 12:32

April 15, 1993

Mr. Jeffery Denison
State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Denison:

Re: Response to NDEP Recommendations
Dated December 16, 1992
KMCC Draft ECA Report

Kerr-McGee Chemical Corporation (KMCC) submits for your consideration its response to your letter dated December 16, 1992: Recommendations based on Phase 1 Report. Although your letter requested a response by February 1, 1993, the Division subsequently agreed to an extension to accommodate a meeting between the Division and the Henderson Steering Committee concerning the response format and discuss future activities. That meeting was held on March 11, 1993 and the date of April 15, 1993 was established for a response to the NDEP Draft Recommendations.

KMCC carefully reviewed the recommendations and submits the attached. Some of the Division's recommendations were incorporated into the KMCC ECA Final Report. Other recommendations which request additional study on areas where remedial activity is in progress or on areas where small inconsequential spills required only improved housekeeping are essentially addressed in this letter.

We reiterate at this time that our reports, responses to NDEP questions and recommendations and future plans result from having amassed and presented the most extensive information ever assembled regarding our Henderson facility. In preparing the report, KMCC and Kleinfelder have inspected, interpreted, or analyzed information spanning the 50 year history of the site because we support the public health and environmental quality objectives of the NDEP.

KMCC looks forward to meeting with NDEP to discuss the Agency's recommendations and to assure the continued success of the ECA process.

Sincerely,

Patrick S. Corbett
Plant Manager

PSC:j

RESPONSE TO RECOMMENDATIONS FROM THE NDEP
REGARDING THE KMCC ENVIRONMENTAL CONDITIONS ASSESSMENT

Item 1: Trade Effluent Ponds

KMCC agrees further study is recommended to evaluate the current status of the area from past U. S. Government Operations.

Item 2. Open Area South of Trade Effluent Ponds

No further study is recommended. NDEP Comments ask that we clarify whether SWMU-0014 includes the BMI Landfill. This area does not include the BMI Landfill, rather it was mentioned in the U.S. EPA Aerial Reconnaissance of the BMI Complex. Any impacts from this area would be identified in studies of the Trade Effluent Ponds and Beta Ditch.

Item 3. Air Pollutant Emission Sources

We propose no further study. The KMCC ECA report has been revised to include air emissions sources. There is no reason to believe emissions through permitted control devices or fugitive emissions from final product handling have impacted the environment.

Item 4. Hardesty Chemical Company

No further study is recommended. Exhaustive records search has found no further information about Hardesty Chemical Company. Should additional information become available in the future, from now unknown sources, the information will be assessed accordingly.

Item 5: Beta Ditch

KMCC agrees that additional sampling in this area is appropriate. Since the Beta Ditch segment on KMCC property was used by several operators within the BMI complex, KMCC recommends that sampling of this area be done in conjunction with a broader study of the overall ditch system (see recommendation number 3.0 in the response to the BMI Common Areas Report). This study area would include the Small Diversion Ditch.

Item 6: Unnamed Ditch Segment

The ditch in this comment is the Northwest Drainage Ditch. See response to Item 5 above.

Item 7: Old P-2 Pond

Residual materials from this pond have been removed. KMCC agrees sampling is needed to verify whether or not contaminated materials remain. However, KMCC believes that any historic releases from this unit would be intercepted by the ground water recovery system which is directly down gradient of this unit. The term "clean closure", refers to removal of contaminated material and testing of immediately underlying soils prior to final contouring of the site.

Item 8: P-3 Pond

See response to Item 7 above.

Item 9. New P-2 Pond

No further study is recommended. The New P-2 Pond is monitored through KMCC's NPDES program. This is a double lined pond over an existing liner and no leaks are indicated by the current leak detection monitoring system.

Item 10. On-site Hazardous Waste Landfill

No further study is recommended. This Landfill was properly closed under RCRA interim status regulations and is now under post-closure monitoring according to an NDEP approved program. The closure/post closure plan was submitted on June 13, 1984. On January 17, 1986, KMCC received notification from NDEP that closure was approved. NDEP also instructed KMCC to commence monitoring in accordance with the approved post-closure plan. The Phase I final Environmental Conditions Assessment report will provide the needed information to obtain the post-closure permit.

Item 11. Drying Pad area (SWMU KMCC-005)

No further study is recommended. Section 5 of the report has been revised to include a description of the disposal of material from the previous drying pad. There was no sign of environmental impact when the area was cleared to construct

the new unit (tank). In addition, all the material associated with the old pad foundation was removed and disposed of at the U.S. Ecology facility in Beatty. The unit is also upgradient of the chromium recovery plant.

Item 12. Hazardous Waste Storage Area

No further evaluation recommended by NDEP

Item 13 and 14. Closed Ponds S-1 and P-1

No Further Study is recommended. Both the S-1 and P-1 Ponds were NDEP certified "clean closed" in 1985. Comments in the closure documents regarding "with the intent of" do not reflect negatively on the method of closure. In addition, the ponds are upgradient of the chromium recovery plant.

Item 15. Platinum Drying Unit

No Further Study is recommended. There is currently no requirement to provide secondary containment for this recycling unit and reference to such was removed from our report. In an effort to present a thorough picture of the environmental conditions at the site, KMCC and its contractor recorded in the report visual observations at this and other SWMU's including small stains or discoloration even though their potential to impact human health or the environment was negligible. Operating practices have been revised to control the quantity of material in this SWMU. In addition, as a housekeeping measure the minor staining adjacent to the unit has been removed.

Items 16, 17, 18, and 19. AP Process Ponds AP-1,2,3,4, and 5

No further study is recommended. Visibly stained soils around the ponds consist of minor spills which will be addressed through housekeeping and cleanup. All but one of the ponds are double lined and all are monitored for leaks. A leak in the first liner in AP-1 has been detected and work is underway to repair this leak. AP-2 is the only single lined pond and is monitored as part of the facility NPDES permit.

Item 20. Pond C-1

No further study is recommended. When the pond is decommissioned, KMCC will evaluate the site for proper closure. NDEP also requested clarification of cathode wash solution prior to 1975. The KMCC report has been revised to reflect the fact that no copper cathodes were used before 1975. As a result, the manganese dioxide cathode wash solution was not generated.

Item 21. Pond Mn-1

No further study is recommended. The KMCC report has been revised to include information from a study of the release history of Pond Mn-1 from 1983 to 1991.

Item 22. Pond WC-1

No further evaluation is recommended by NDEP.

Item 23. Pond WC-2

No further study is recommended. KMCC will remediate the very small stains created by treatment chemicals used in the surface impoundments.

Item 24: Leach Beds Manganese Tailings

This area will be included as part of the overall study of the manganese area. Water has not been used to move tailings to these areas for 17 years. The current practice is to haul solid tails containing only minimal moisture to the tailings area for disposal. Because the manganese ore is thoroughly leached in the process, metals remaining in the solids are generally insoluble. This fact has been confirmed by the EP toxicity and TCLP tests conducted on these materials. Given this fact and the low rainfall generally occurring in the Henderson vicinity, the probability of significant concentrations of elements moving from the tailings area is remote.

Items 25,26, and 27. Process Hardware Storage Area, Trash Storage Area North of Units 1 and 2, and PCB Storage Area.

No further evaluation recommended by NDEP.

Item 28. Hazardous Waste Drum Storage Area

No further evaluation recommended by NDEP. KMCC has cleaned up the small stains of oil observed near the Hazardous Waste storage pad.

Item 29 and 30. Solid Waste Dumpsters, Ammonium Perchlorate Area.
No further evaluation recommended by NDEP.

Item 31. Drum Crushing and Recycling Area
No further evaluation recommended by NDEP. KMCC will develop a formal recycling procedure to remove residual materials in the drums brought to the drum crushing area. Minor soil staining in the area will be removed.

Item 32 Ground Water Remediation Unit
No further study is recommended. Small spills referred to in the ECA report are related to housekeeping. The spills, which are non-hazardous, will be cleaned up and practices will be modified to prevent future spills.

Item 33: Sodium Chlorate Platinum By-product Filter
No further study is recommended. The solid material from the sodium chlorate platinum by-product filter does not contain free liquid. The material is discharged directly into a container which is sealed and stored for shipment to a platinum recovery facility. A release from this unit is highly unlikely. In addition, the seam seals and berms around the filter press have been repaired and are inspected routinely.

Item 34: Former Manganese Tails
See Response to Item 24 above.

Item 35: Truck Emptying Area
No further study is recommended. The small piles believed to be soda ash and lime left in the area from the haul trucks were blended into the soil and vehicular access to the area has been restricted.

Item 36,37, and 38: Former Satellite Accumulation Points, Unit 3, Unit 6 and AP Laboratory.
No Further evaluation recommended by NDEP.

Item 39. AP Maintenance Shop- Satellite Accumulation Point
No further evaluation recommended by NDEP. KMCC will clean the small stain described in the KMCC report for the Satellite Accumulation Point at the AP Shop.

Item 40. PCB Transformer Spill
No further study is recommended. KMCC has revised the report to describe the disposal location of clean-up material. The report also clarifies that all contaminated material was removed, and only clean soil was disposed with the contaminated concrete.

Item 41: Unit 1 Tenant Stains
No further study is recommended. The small amounts of oil stained dirt observed during the site reconnaissance have been removed.

Item 42. Unit 2 Salt Redler
No further evaluation recommended by NDEP.

Item 43: Unit 4 and 5 Basements
KMCC disagrees with the recommendation that additional study is needed for these Units. Unit 4 and 5 basements were the subject of an extensive study in the mid 1980's which resulted in KMCC entering into a consent agreement with the State to remediate chromium contamination in the ground water. Process fluids in the basements were identified as the source of the chromium. This source has since been stopped and thus the mechanism for contaminant recharge and movement into the subsurface has been eliminated. The intercept trench and chromium remediation system have been effective in remediating chromium in the ground water at the site. Therefore, extensive investigation of the soils underneath the Units to determine the possible extent of soil contamination is not warranted.

Item 44: Unit 6 Basement

KMCC disagrees with the recommendation that additional study is needed for this Unit. The source of contaminants from the Unit 6 basement has been eliminated through the installation of a synthetic liner in the basement of the Unit. During the installation, a significant quantity of soil was removed. The liner is now monitored and maintained in accordance with stipulations in the 1986 consent agreement. With the source of the contamination now cut off, there is no mechanism to cause residual contamination to move into the ground water.

Additional investigation underneath the Unit to determine the nature and extent of contamination in the soil will not improve on measures already taken to mitigate the release.

Item 45: Diesel Storage Tank

No Further study is recommended. KMCC is planning to remove this tank in the near future, at which time, KMCC will remediate impacted soil.

Item 46. Former Old Main Cooling Tower

No further evaluation recommended by NDEP.

Item 47. Manganese Dioxide Ore Piles

No further study is recommended. Ore stored in the stock piles is insoluble in water, as such, KMCC does not believe that they pose a public health or environmental risk. Exposure to employees will be evaluated as part of KMCC's industrial hygiene program.

Item 48: Leach Plant Anolyte Tanks

Further Study is recommended. The leach plant anolyte tanks and other process tanks in the manganese leach area have been replaced and the new tanks provided with secondary containment. KMCC will conduct some additional studies to determine potential impacts of past operations in this area.

Item 49: Leach Plant Sulfuric Acid Tank

See response to Item 48 above.

Item 50: Leach Plant Leach Tanks

See response to Item 48 above.

Item 51: Leach Plant Transfer Lines

Further study is planned. KMCC does not believe that releases from the transfer lines present a significant source of contamination to the area. However, investigations carried out in response to Item 48 above will include this area.

Item 52: AP Plant Screening Building, Dryer Building, and Sump

No further study is recommended. The stains identified in the report are small and will be removed. KMCC will evaluate its housekeeping practices and modify them as needed.

Item 53: AP Plant Tank Farm

No further study is recommended. KMCC will remove small visual stains from this area, and the concrete pad will be repaired or replaced as needed.

Item 54: AP Laboratory Septic Tank

Further study is recommended. KMCC agrees that additional investigation of this area is required.

Item 55: AP Fire Area

No further study is recommended. The area impacted by the fire has been remediated. Soils were removed and disposed of at U.S. Ecology's facility at Beatty, Nevada.

Item 56: AP old building D-1 Wash Down

No further study is recommended. Releases to this area have been minor and do not pose a threat to the environment.

Item 57 and 58. AP Plant area New Building D-1 (washdown), AP Plant Transfer Lines to Sodium Chlorate Process

No further evaluation is recommended By NDEP.

Item 59. Storm Sewer System

No further study is recommended. The portion of the Storm Sewer system requires no further study. The system is intact because small sources of stabilized water flow can be traced back to their origin. KMCC monitors its property and this system in accordance with the facility NPDES permit.

Item 60. Acid Sewer System

No further study is recommended. The Acid Drain System is no longer in use. The portion of the Acid Sewer system on KMCC property was intact based upon the ability to trace small flows of water that previously entered the system from State Industries. The outfall of the Acid Sewer system is monitored in accordance with KMCC's NPDES permit which established the Acid Sewer outfall as NPDES Outfall 003. See Item 59 above.

Item 61: Old Sodium Chlorate Plant Decommissioning

No further evaluation recommended by NDEP.

Item 62. State Industries

Additional assessment of the soil in the former pond locations will be conducted.

Item 63. J.B. Kelley, Inc. Trucking

KMCC will request the tenant improve housekeeping and evaluate their environmental conditions.

ITEM 64. Koch Materials

KMCC will request the tenant improve housekeeping and evaluate their environmental conditions.

Item 65. Nevada Precast Concrete

No further evaluation recommended by NDEP. KMCC will request the tenant to improve housekeeping and clean up minor stains.

Item 66. Above Ground Diesel Storage Tank Leased By FlintKote Co.

No further study is recommended. While the exact location of the former tank is unknown, there are no visible stains in the general area where the tank was reportedly located.

Item 67. Delbert Madsen & Estate of Delbert Madsen Site

KMCC will request the tenant improve housekeeping and evaluate their environmental conditions.

Item 68. Southern Nevada Auto Parts

KMCC will request the tenant improve housekeeping and evaluate their environmental conditions.

Item 69. Dillon Potter Site

No further evaluation recommended by NDEP.

*** ACTIVITY REPORT ***

PRINT TIME 04/15 '93 15:58 ID:Kerr-McGee-Hen

702-651-2310

TX TOTAL PAGES 34
RX TOTAL PAGES 7

No.	START TIME	MODE	LOCATION	STORE PAGE	TX PAGE	RX PAGE	TOTAL TIME	CODE
1	04/15 10:42	RX	01234567899876543210		0	2	01'22"	OK
2	04/15 10:46	TX	K-M Gen	ADF	12	0	04'58"	OK
3	04/15 13:04	RX			0	2	01'51"	OK
4	04/15 13:20	TX	K-M Gen	ADF	2	0	01'07"	OK
5	04/15 14:43	TX	97957161	ADF	11	0	06'01"	OK
6	04/15 15:28	RX	7026434141		0	3	02'29"	OK
7	04/15 15:50	TX	K-M Gen	ADF	2	0	01'04"	OK
8	04/15 15:53	TX	NDEP HAZ WASTE	ADF	7	0	04'46"	OK



KERR-McGEE CHEMICAL CORPORATION

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93 MAR 18 PM 12:12

March 15, 1993

Mr. Edward L. Basham
State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Basham:

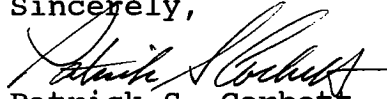
Kerr-McGee Chemical Corporation's (KMCC), Henderson, Nevada facility has received your February 10, 1993 request concerning current methods of data management.

Our facility currently utilizes two (2) types of management systems for groundwater quality tracking. The groundwater data is currently sent to NDEP with monthly DMR's and is generated in compliance with the facility NPDES permit and the Groundwater Remediation Program. Data on soil sampling is very limited and is not automated.

KMCC uses Lotus and PFS:First Choice for file data storage and file conversion.

Should you have any questions, please call me or Alan Gaddy at 702/651-2200.

Sincerely,


Patrick S. Corbett
Plant Manager

PSC:j
BASHAM3.10

cc: AJGaddy



KERR-McGEE CHEMICAL CORPORATION

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93 MAR -1 PM 4: 56

February 25, 1993

Ms. Alene Coulson
Program Development Branch
State of Nevada
Division of Environmental Protection
333 W. Nye Lane
Carson City, NV 89710

Dear Ms. Coulson:

Re: Manifest Warning Letter of 2-12-93.

Kerr-McGee Chemical Corporation (KMCC) has received the subject correspondence and has attached a corrected manifest copy with the required information.

KMCC was involved with a contracted clean-up project when the manifest was generated and inadvertently omitted the required information.

KMCC has reviewed all manifests associated with the project and identified one (1) additional manifest (#00602) lacking the same information. Both of the corrected manifests are attached.

Should you have questions regarding this information, please contact me or Alan J. Gaddy at 702-651-2200.

Sincerely,

Patrick S. Corbett
Plant Manager

PSC:j
AJG#2/COULSON2.24

cc: Bridgit Coyle - U.S. EPA
Jolaine Johnson - NDEP
PBDizikes
JCStauter
AJGaddy

88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV-D-0-0-8-2-9-0-3-3-0

Manifest Document No.
00-602

2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Kerr-McGee Chemical Corporation
P.O. Box 55, Henderson, NV 89015-0055

4. Generator's Phone (702) 565-8901

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
Cummings U.S. Ecology

US EPA ID Number
NV T 330 010 000
~~CAD 9-8-3-5-6-7-2-7-2~~

C. State Transporter's ID

D. Transporter's Phone (800) 232-5287

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
U.S. Ecology, Beatty, Nevada Site
Highway 95
Beatty, NV 89003

10. US EPA ID Number
NV-T-3-3-0-0-1-0-0-0-0

G. State Facility's ID

H. Facility's Phone (702) 553-2203

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type
13. Total Quantity
14. Unit Wt/Vol
15. Waste No.

a. X RQ Hazardous Waste Solid, n.o.s.,
ORM-E, NA 9189 (D007)

001 DT 18 Y D007

b.
c.
d.

J. Additional Descriptions for Materials Listed Above
WS No. 07-009-2358
Cummings trucks leased to U.S. Ecology

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
RETURN TO GENERATOR IF UNDELIVERABLE.
EMERGENCY CONTACT (702) 565-8901

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.
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Printed/Typed Name
Alan J. Gaddy

Signature
Alan J. Gaddy

Month Day Year
10/11/92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Blew Boner

Signature
Blew Boner

Month Day Year
10/11/3/92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Michael E. Stueker

Signature
Michael E. Stueker

Month Day Year
10/11/3/92

GENERATOR

TRANSPORTER

FACILITY

125

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV.D.0.0.8.2.9.0.3.3.0

Manifest Document No.
00804

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Kerr-McGee Chemical Corporation
P.O. Box 55, Henderson, NV 89015-0055

4. Generator's Phone (702) 565-8901

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
Cummings U.S. Ecology

US EPA ID Number
N.V.T.3.3.0.0.1.0.0.0.0

C. State Transporter's ID
D. Transporter's Phone (800) 232-5287

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
U.S. Ecology, Beatty, Nevada Site
Highway 95
Beatty, NV 89003

10. US EPA ID Number
N.V.T.3.3.0.0.1.0.0.0.0

G. State Facility's ID
H. Facility's Phone (702) 553-2203

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12. Containers No. Type
13. Total Quantity
14. Unit Wt/Vol
15. Waste No.

a. X RQ Hazardous Waste Solid, n.o.s.,
ORM-E, NA 9189 (D007)

001 DT 18 Y D007

b.

c.

d.

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WS No. 07-009-2358
Cummings trucks leased to U.S. Ecology

K. Handling Codes for Wastes Listed Above

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Printed/Typed Name
Alan J. Gaddy

Signature
Month Day Year
10/11/92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Mike Ritchie

Signature
Month Day Year
11/11/92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name

Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
Phil Minns

Signature
Month Day Year
10/11/92

GENERATOR

TRANSPORTER

FACILITY

H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

5-111 file 4K
PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

February 12, 1993

WARNING LETTER

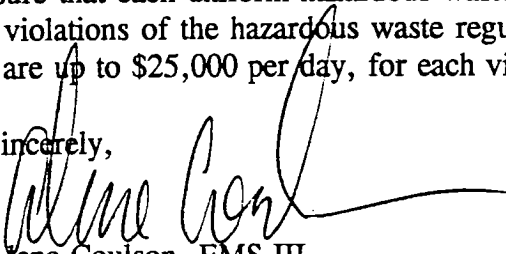
Mr. Alan Gaddy
Kerr McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89015-0055

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Division of Environmental Protection (DEP) has received a copy of Uniform Hazardous Waste Manifest, Document Number 00601, which is attached and hereby made a part of this Warning Letter. Blocks #12, #13, and #14 are blank and do not list the required information. Based on information provided on Uniform Hazardous Waste Manifest Number 00601, DEP has determined that Kerr McGee Chemical Corporation is allegedly in violation of Nevada Administrative Code (NAC) 444.8632; Compliance with the 40 Code of Federal Regulations (CFR) Part §262.20 by failure to prepare a manifest according to the instructions included in the appendix to part 262.

You are hereby directed to insure that each uniform hazardous waste manifest is filled out properly. Please be advised that violations of the hazardous waste regulations may result in the assessment of penalties, which are up to \$25,000 per day, for each violation.

Sincerely,

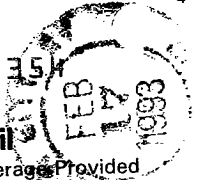

Aene Coulson, EMS III
Program Development Branch
Bureau of Waste Management

↑
AC:ns

cc: Bridgit Coyle, US EPA
Jolaine Johnson, DEPI

Certified Mail # P 019 041 354
attachment

P 019 041 351



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)



ENV. PROT.

PS Form 3800, June 1991

Sent to Mr. Alan Gaddy	
Street and No. Kerr McGee Chemical	
P.O., State and ZIP Code P.O. Box 55, Henderson, NV 89015-0055	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

Waste - Alene Couser

85 -

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV-D-0-0-8-2-9-0-3-3-0

Manifest Document No.
00-502

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Kerr-McGee Chemical Corporation
P.O. Box 55, Henderson, NV 89015-0055

4. Generator's Phone (702) 565-8901

5. Transporter 1 Company Name
Cummings U.S. Ecology

6. US EPA ID Number
NV-T-3-3-0-0-1-0-0-0-0

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
U.S. Ecology, Beatty, Nevada Site
Highway 95
Beatty, NV 89003

10. US EPA ID Number
NV-T-3-3-0-0-1-0-0-0-0

A. State Manifest Document Number

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone (800) 232-5287

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone (702) 553-2203

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. X RQ Hazardous Waste Solid, n.o.s.,
ORM-E, NA 9189 (D007)

12. Containers	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
No.	Type		
			D007

b.

c.

d.

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WS No. 07-009-2358
Cummings trucks leased to U.S. Ecology

K. Handling Codes for Wastes Listed Above

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Printed/Typed Name
Alan J. Gaddy

Signature
Alan J. Gaddy

Month Day Year
10/11/92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Blaw Boner

Signature
Blaw Boner

Month Day Year
10/11/3/92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
Michael E. Stucker

Signature
Michael E. Stucker

Month Day Year
10/11/3/92

GENERATOR

TRANSPORTER

FACILITY

L. H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

February 10, 1993

Mr. Alan Gaddy
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009

Subject: Environmental Data Management

Dear Mr. Gaddy:

The Nevada Division of Environmental Protection (NDEP) is presently evaluating the utility and practicality of automating and integrating environmental data related to past and present waste production, storage, and disposal (including inadvertent release) activities of the various companies which have operated at the BMI Complex. We are also exploring the potential utility of GIS (Geographic Information System) based data management for the complex. The Division is therefore requesting the companies which are parties to the Consent Agreement to submit information regarding their current methods of environmental data storage/management.

If the information is computer managed, we would ask that you describe the format/software utilized and the type of data stored. Examples would be Lotus or Excel spreadsheets and DBASE or Foxpro files and ground water and soil sampling data. If only some of the information is automated (for example ground water monitoring data), please specify this as well. Should all or some of the BMI data be available as database or spreadsheet files and are in compatible formats, it will greatly assist the Division in developing an integrated database for the complex as a whole. Our oversight of assessment/corrective action activities may be enhanced by the development of an integrated environmental database for BMI.

Mr. Gaddy
February 10, 1993
Page 2

Please feel free to contact either myself or Mr. Allen Biaggi at 687-5872 extensions 3017 and 3021 respectively, should you have any questions regarding our request.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward L. Basham". The signature is fluid and cursive, with a long horizontal stroke at the end.

Edward L. Basham
Environmental Management Specialist
Site Assessment/Corrective Action Branch
Bureau of Chemical Hazards Management

ELB:hml

cc: Allen Biaggi, NDEP

Jeff Denison, NDEP

Donna Keats, NDEP

L. H. DODGION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

PETER G. MORROS
Director

Administration (702) 687-4670
Air Quality 687-5065
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Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856



Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex
333 W. Nye Lane
Carson City, Nevada 89710

February 8, 1993

Marc Horn
Horn Environmental Consulting Group, Inc.
P.O. Box 50886
Amarillo, TX 79159-0886

RE: BMI Complex

Dear Mr. Horn:

The Nevada Division of Environmental Protection has reviewed your request for clarification regarding the BMI Complex, specifically regarding the request by Clark County District Health Department, dated September 19, 1992.

Based on discussions with the RCRA Permitting Branch, the Nevada Division of Environmental Protection will require you to respond to the requests and requirements of the Clark County District Health Department.

If you have any questions please contact me at (702) 687-5872, extension 3037.

Sincerely,


Jim Najima
Supervisor
UST/LUST Branch
Bureau of Chemical Hazards Management

JN:slg

cc: J. Denison ✓
S. Henke, CCDHD



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

January 20, 1993

RECEIVED
ENVIRONMENTAL
PROTECTION
90 JAN 25 PM 12:54

Mr. Joe Livak
State of Nevada
Division of Environmental Protection
333 West Nye Lane
Carson City, Nevada 89710

Dear Mr. Livak:

SUBJECT: Second Half 1992 Performance Report
for the Chromium Mitigation Program

Enclosed are two copies of the Semi-Annual Chromium Mitigation Program for
Kerr-McGee Chemical Corporation's Henderson Facility.

Should you have questions or comments about this Performance Report, please
contact Alan J. Gaddy at 702-651-2234.

Sincerely,

Patrick S. Corbett
Plant Manager

PSC:j
LIVAK1.93

cc: AJGaddy
WJGanus
JCStauter

Notes on Draft Recommendations/Company Responses
Kerr-McGee Chemical Company

- 1) On-Site Portions of "Trade Effluent" Settling Ponds and Associated Vitrified Clay Piping, SWMU KMCC-014:

Priority: High, Score 30.0

The size of these ponds and the potential volume of waste material disposed here is the main reason for this unit's High Priority ranking. This area received facility solid wastes from 1945 to 1979. The nature of these wastes is unknown. Liquid wastes disposed in these ponds during government operations consisted of acid effluent and waste caustic liquor.

This appears to be predominantly a pH issue at least for the government period. The nature of solid wastes disposed here requires clarification. In the absence of further documentary evidence, a limited sampling plan should be developed to establish the presence or absence of potential contaminants in this area. This may be possible in conjunction with characterization of adjacent and/or physically and temporally superimposed units.

- 2) Open Area Due South of "Trade Effluent" Disposal Ponds:

Priority: High, Score 31.0

The High Priority is due to "unknown" contaminants. KMCC claims this area would be characterized during studies of adjacent and superimposed units such as the Trade Effluent Ponds and the Beta Ditch. We should see that any work plan for these areas includes an investigation of this area.

- 3) Air Pollutant Emissions Associated with Industrial Processes:

Priority: High, Score 35.0

High priority due to unknown nature and potential for widespread contamination.

All of the companies claim that none of their air emissions were depositional in nature and in any case have long since dissipated. I would think that it would be very difficult to chase after historical air emissions at this site. Short of modeling the dispersion patterns and sampling potential fallout areas, I think on site sampling in association with other unit characterizations

will probably address this issue. I think some more definitive documentation to back up the "non-depositional" claim is necessary. (Any investigation of depositional air emissions may better be addressed as a "Common Area" issue.

4) Hardesty Chemical Company Site:

Priority: High, Score 29.0

High priority due to "unknown" contaminant type. There is no surficial evidence of contamination. Use of potentially hazardous materials does not necessarily mean that a release has occurred. I would recommend limited sampling to put this issue to bed. This may be a Stauffer/Kerr McGee issue.

5) On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1:

Priority: High, Score 38.0

Because of the multi-use character of the Beta Ditch, segments down flow of the Stauffer/Montrose facilities should be studied on a complex wide basis. Segments originating on the various company properties which received discharges from that property only, should be identified and characterized by the property owner. An example would be the portions of the Beta Ditch (or tributaries) which lie wholly on the former Montrose property should be characterized by Montrose. Those portions of the Beta Ditch on KMCC property which received "common" discharges should be characterized by the BMI companies jointly.

6) Unnamed Drainage Ditch Segment:

Priority: Medium, Score 28.0

KMCC states that this is the Northwest Drainage Ditch. This is a BMI Common Areas issue.

7) Old P-2 Pond and Associated Conveyance Facilities:

Priority: High, Score 32.0

High Priority due to possible Cr+6 contamination due to liner failures. Liner, sludge, and adjacent and underlying soils have been removed to U.S. Ecology. Confirmatory sampling of subsurface soils is required to characterize past impacts to soil/GW. Work Plan to this end should be developed.

- 8) P-3 Pond and Associated Conveyance Facilities:
Priority: High, Score 32.0
Comments in Recommendations are appropriate.
- 9) New P-2 Pond and Associated Piping:
Priority: Medium, Score 26.0
Comments in Recommendations are appropriate. Score reflects possible presence of Cr+6.
- 10) On-Site Hazardous Waste Landfill, SWMU KMCC-013:
Priority: Medium, Score 27.0
Closure approved by NDEP in 1986. Post Closure monitoring ongoing. Post Closure permit pending. Documentation of status should be reviewed. **Does Jeff have these documents?**
- 11) SWMU KMCC-005:
Priority: Medium, Score 23.0
Old drying pad demolition material sent to U.S. Ecology. No analytical data presented in Phase I report. Since it went to Beatty, U.S. Ecology should have required characterization. No confirmatory sampling of soil after removal of old pad. What regulatory agency (if any) oversaw remediation of the old pad area?
- 12) Hazardous Waste Storage Area, SWMU KMCC-006:
Priority: None, Score 0.0
No Further Action required.
- 13) Pond S-1:
Priority: High, Score 29.0
NDEP acknowledged proper closure of this impoundment on 12/5/85. No further action should be required.
- 14) Pond P-1, and Associated Conveyance Piping:
Priority: Medium, Score 28.0
NDEP acknowledged proper closure of this impoundment on 12/5/85. No further action should be required.
- 15) Platinum Drying Unit, SWMU KMCC-007:

Priority: Medium, Score 27.0

This unit's score reflects the possible presence of Cr+6. Due to documented spillage of platinum and possibly chromium bearing filter cake material, a limited amount of sampling should be undertaken to establish the impact to the environment of such spillage.

- 16) Ponds AP-1 and AP-2, and Associated Transfer Lines:

Priority: High, Score 31.0

The score reflects the possible presence of Cr+6. The location of these ponds is not adequately indicated on facility diagrams. The Ponds area and transfer line areas should be sampled for TCLP chromium and possibly for perchlorates and chlorates (reactivity?).

- 17) Pond AP-3 and Associated Transfer Lines:

Priority: High, Score 29.0

Score reflects possible chromium contamination. See #16.

- 18) Pond AP-4:

Priority: High, Score 30.0

Score reflects possible hazardous nature due to reactivity. Barring this, probably only a TDS issue. Discussion of reactivity issue required. Better location identification required.

- 19) Pond AP-5:

Priority: High, Score 31.0

Score reflects possible hazardous nature due to reactivity. Barring this, probably only a TDS issue. Discussion of reactivity issue required. Better location identification required.

- 20) Pond C-1 and Associated Piping, SWMU KMCC-011:

Priority: Medium, Score 24.0

TDS issue.

- 21) Pond Mn-1 and Associated Piping:

Priority: Medium, Score 20

Based upon the list of materials disposed to this impoundment, this is a TDS issue and falls within the

realm of Water Pollution Control.

- 22) Pond WC-1 and Associated Piping, SWMU KMCC-015:

Priority: NFA, Score 0.0

- 23) Pond WC-2 and Associated Piping:

Priority: Low, Score 18.0

KMCC states that it will remediate the small stains caused by treatment chemicals used in the WC impoundments. Recommend No Further Action. Water Pollution Control should continue to regulate.

- 24) Leach Beds, Associated Conveyance Facilities, and Mn Tailings Area, SWMU KMCC-009:

Priority: Medium, Score 27.0

TCLP and EP TOX testing demonstrates this area does not contain leachable metals. Other issues concern TDS and possibly pH. KMCC agrees that this area should be sampled to determine whether pre-1975 disposal of slurried Mn waste to the leach beds has impacted soil or ground water. A soil sampling plan for TCLP metals and pH should be developed.

- 25) Process Hardware Storage Area, SWMU KMCC-001:

No Further Action.

- 26) Trash Storage Area:

No Further Action.

- 27) PCB Storage Area, SWMU KMCC-003:

No Further Action.

- 28) Hazardous Waste Storage Area, SWMU KMCC-004:

Priority: Low, Score 18.0

Recommendations appropriate. KMCC says "oil stained" cleanup has been carried out. Cleanup documentation? Otherwise, No Further Action.

- 29) Solid Waste Dumpsters, SWMU KMCC-008:

No Further Action.

- 30) Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017:

No Further Action.

- 31) Drum Crushing and Recycling Area, SWMU KMCC-018:
Priority: Medium, Score 28.0
KMCC states that it will remove minor soil staining in area and revise its practices to residual material in drums prior to crushing. This appears satisfactory. Provide documentation of both.
- 32) Ground Water Remediation Unit, SWMU KMCC-019:
Priority: Low, Score 16.0
KMCC states in their response that the small spills will be cleaned up. No Further Action appears warranted.
- 33) Sodium Perchlorate Platinum By-Product Filter, SWMU KMCC-021:
Priority: Medium, Score 27.0
Material is discharged directly to containers for shipment. No free liquids. Floor seams have been repaired according to KMCC. No Further Action appears warranted.
- 34) Former Manganese Tailings Area, SWMU KMCC-022:
Priority: Medium, Score 24.0
See comment #24 above.
- 35) Truck Emptying/Dump Site, SWMU KMCC-025:
Priority: High, Score 32.0
Disposal of "unknown" wastes during period 1969-1991. Area unlined. Further Characterization of materials disposed here is required. In the absence of this, sampling to determine character should be required. Sampling may be required in any event.
- 36, 37, 38) Former Satellite Accumulation Points:
No Further Action per recommendations.
- 39) Satellite Accumulation Point - AP Maintenance Shop, SWMU KMCC-029:
Priority: Medium, Score 22.0
KMCC states in their response that they will cleanup

small stained area referenced in Recommendations. They should also revise their practices regarding drum storage of 1,1,1 TCA (and other hazardous materials) on bare ground so as to avoid further/future spillage.

40) PCB Transformer Spill:

No Further Action based upon information presented in Final Phase I Report.

41) Unit 1 Tenant Stains:

Priority: Low, Score 16.0

TPH stains. KMCC states in their response that stained soil has been removed. Documentation?

42) Unit 2 Salt Redler:

No Further Action.

43) Unit 4 and 5 Basements:

Priority: Medium, Score 28.0

Residual contaminants in unsaturated soils beneath these units. What can reasonably be done? KMCC falls back on their ground water (chromium) intercept and remediation system. Perhaps we could make KMCC stipulate that upon closure of these units, they will be demolished and the soil beneath them assessed for residual contamination and if necessary, excavated and disposed of.

44) Unit 6 Basement:

Priority: Medium, Score 20.0

Is the GW remediation system capturing and addressing contamination from this unit? See note 43 above. KMCC states that a liner has been installed in the basement of Unit 6 and that during this operation "a significant quantity of soil was removed". Does this "indoor" impoundment or sump have a leak detection system?

45) Diesel Storage Tank:

Priority: Medium, Score 19.0

KMCC states that it plans to remove this tank in the near future and that they will remediate impacted soil. Tank closure/soil remediation documentation including a schedule should be provided to NDEP.

46) Former Old Main Cooling Tower and Recirculation Lines:

No Further Action.

47) Leach Plant Area Manganese Ore Piles:

Priority: Medium, Score 26.0

KMCC states this material is insoluble and therefore poses not environmental threat. Manganese has a secondary MCL of 50 ppb. A soil action level would therefore be 5 ppm. Is this material really an issue?. The material is ore and therefore is not a solid waste (and by inference not a hazardous waste). Is residue or leachate from "ore" storage a solid waste? I would guess that it is exempt.

48) Leach Plant Anolyte Tanks:

Priority: Medium, Score 23.0

General concurrence on further study. KMCC states that Leach plant process tanks have been replaced and that new tanks have secondary containment. Soil surrounding tank area should be characterized for pH and Mn. Sulfuric acid may have mobilized Mn.

49) Leach Plant Area Sulfuric Acid Storage Tank:

Priority: Medium, Score 23.0

KMCC references their response to item 48. Testing of adjacent soils for pH is indicated.

50) Leach Plant Area Leach Tanks:

Priority: Medium, Score 21.0

See 48 and 49 above. pH issue.

51) Leach Plant Area Transfer Lines:

Priority: Medium, Score 22.0

KMCC states that investigations related to item 48 will cover the transfer line area. This appears adequate. A work plan incorporating all the leach plant units/areas of concern is required.

52) AP Plant Area Screening Building, Dryer Building and Associated Sump:

Priority: Medium, Score 24.0

KMCC states in their response that the minor white staining resulting from ammonium perchlorate wash downs

will be cleaned up and they will evaluate their housekeeping practices and modify them as needed. I think they should go into a little more detail regarding this. Otherwise, No Further Action appears necessary.

- 53) AP Plant Area Tank Farm:
- Priority: High, Score 30.0
- Score reflects presence of strong oxidizing compounds. KMCC states in their response that they will remove small visual stains and repair or replace the concrete pad. Characterization of area contamination for "reactivity" may be appropriate? In any event, documentation of stained area clean up and pad repair is necessary.
- 54) AP Plant Area Change House/Laboratory Septic Tank:
- Priority: Medium, Score 22.0
- General Concurrence that the Lab septic system should be investigated to determine whether disposal of lab chemicals has impacted soil or GW.
- 55) Area Affected by July 1990 Fire:
- Priority: High, Score 30.0
- KMCC states in their response that the area impacted by the fire has been remediated and that soils were removed and disposed of at U.S. Ecology. Was a remediation report prepared? Was sampling of the soil (characterization and confirmatory) conducted or was visibly impacted soil just arbitrarily excavated and shipped to Beatty? A little more detailed documentation is required.
- 56) AP Plant Area Old Building D-1 -- Washdown:
- Priority: Medium, Score 23.0
- KMCC in their response claims that releases are minor and do not pose a threat to the environment. This claim requires substantiation (technically based argument or limited sampling). -
- 57 and 58) AP Plant Area New Building D-1 -- Washdown and AP Plant Transfer Lines to Sodium Chlorate Process:
- No Further Action per Recommendations.
- 59) Storm Sewer System:
- Priority: Medium, Score 22.0

KMCC states that no further study is recommended. historic leaks from this system may have impacted soil and/or GW. Segments of the system which are or have been used by other BMI companies should be addressed as a BMI Common Areas issue. Discrete (KMCC use only) segments should be evaluated for potential contaminant type and release potential. Some segments may require adjacent soil boring and sampling.

60) Acid Drain System:

Priority: Medium, Score 23.0

The issue is not current discharges but potential impacts from historic use. KMCC says NFA. See note #59 above. pH issue. Possibly other contaminants as well.

61) Old Sodium Chlorate Plant Decommissioning:

No Further Action per Recommendations.

62) State Industries, Inc. Site, Including Impoundments and Catch Basin:

Priority: High, Score 32.0

Characterization of impoundments and Catch Basin is required. Additional information on potential contaminants should be gathered if possible in order to limit analyses. Otherwise, a full screen may be necessary. KMCC agrees that the ponds need additional assessment.

63) J.B. Kelley, Inc. Trucking Site:

Priority: Low, Score 17.0

The underground vault water/sludge and soil potentially impacted by rinsate should be sampled and analyzed. A schedule and documentation of UST closure and associated soil and/or GW remediation should be provided to NDEP.

64) Koch Materials Company Site:

Priority: Low, Score 18.0

Characterization and remediation of hydrocarbon contamination is required. Storage tanks should be provided with concrete secondary containment structures.

65) Nevada Precast Concrete, etc....

Priority: Low, Score 11.0

Hydrocarbon staining north of Unit 1 should be remediated.

- 66) Above-Ground Diesel Storage Tank Leased by Flintkote Co.

Priority: Low, Score 17.0

Exact former location unknown, but no visible staining present. No Further Action appears warranted.

- 67) Delbert Madsen and Estate of Delbert Madsen Site:

Priority: Medium, Score 22.0

Assessment of tenant site is required. Possible asbestos, lead, hydrocarbons.

- 68) Southern Nevada Auto Parts Site:

Priority: Medium, Score 23.0

This is a wrecking yard. Operation of such a business is inherently dirty. Should characterization and remediation be pursued prior to change of parcel use. To let it go is inconsistent with our requirements for other sites.

- 69) Dillon Potter Site:

No Further Action per Recommendations.

STATE OF NEVADA

BOB MILLER
Governor

PETER G. MORROS
Director

L. H. DODGION
Administrator



Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4675
Water Quality Planning 687-5883
Water Pollution Control 687-5870
Fax 687-5856

Waste Management 687-5872
Chemical Hazards Management 687-5872
Federal Facilities 687-5872
Fax 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL PROTECTION

Capitol Complex

333 W. Nye Lane

Carson City, Nevada 89710

December 16, 1992

Mr. Alan Gaddy
Kerr-McGee Chemical Corp.
P.O. Box 55
Henderson, NV 89009

RE: Recommendations based on Phase 1 Report

Dear Mr. Gaddy:

The enclosed document presents draft recommendations developed from the revised Phase 1 Report prepared for your facility. These recommendations identify areas requiring "additional work" and the reasons and need for further evaluation in accordance with Section 3 of the Consent Agreement.

The Division will accept for consideration any comments you may have regarding these draft recommendations if submitted before February 1, 1993. Later in February, the Division will formally close Phase 1 and begin drafting a Phase 2 proposal based on the Phase 1 findings.

Please contact me with any questions you may have.

Sincerely,

A handwritten signature in cursive script that reads "Jeffery C. Denison".

Jeffery C. Denison, Supervisor
RCRA Facility Management Branch
Bureau of Waste Management

JCD:gf

Enclosure

cc (w/o enclosure):
Lew Dodgion
Verne Rosse
Steve Onysko

REVIEW OF JUNE 1992 DRAFT PHASE 1
ENVIRONMENTAL CONDITIONS ASSESSMENT REPORT
AND
IDENTIFICATION OF ENVIRONMENTAL INVESTIGATION ISSUES
KERR MCGEE CHEMICAL CORPORATION SITE

1. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

*On-Site Portions of "Trade Effluent" Settling Ponds and
Associated Vitriified Clay Piping, SWMU KMCC-014*

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Waste acid and caustic liquor generated in Basic Magnesium operations: NO CHARACTERIZATION INFORMATION PROVIDED;^{1/}
absorber tower drain waste: potentially including chlorine, hydrochloric acid, caustic liquor (presumed to be sodium hydroxide);^{2/} **"facility solid materials/wastes":** NO CHARACTERIZATION INFORMATION PROVIDED."^{3/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{4/}

^{1/} Kleinfelder, Inc., Environmental Conditions Assessment, Kerr-McGee Chemical Corporation, Henderson, Nevada Facility (June 1992) (draft) (hereinafter "KMCC Draft Report") at 3-5.

^{2/} KMCC Draft Report at 3-25, 5-39.

^{3/} KMCC Draft Report at 5-38.

^{4/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

- The KMCC Draft Report indicates that the SWMU "received facility solid materials/wastes at various times between 1945 and 1979."^{5/} The specific character of these materials/wastes is unknown.^{6/}
- The "chemical composition of the liquid waste discharged to the Trade Effluent settling ponds during U.S. Government operations is unknown."^{7/} The ponds were not lined.^{8/}
- The KMCC Draft Report notes that "material was borrowed from portions of this SWMU area between August 1979 and July 1987."^{9/} The disposition of this material should be evaluated in Phase 2.

2. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Open Area Due South of "Trade Effluent" Disposal Ponds

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to identify this area.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

**"Solid materials" generated in Basic Magnesium operations:
NO CHARACTERIZATION INFORMATION PROVIDED.^{10/}**

^{5/} KMCC Draft Report at 5-38.

^{6/} KMCC Draft Report at 5-39.

^{7/} KMCC Draft Report at 5-39.

^{8/} KMCC Draft Report at 5-41.

^{9/} KMCC Draft Report at 5-38.

^{10/} KMCC Draft Report at 3-6.

C. COMMENTS:

- It is unclear whether the KMCC Draft Report is referring to the BMI Landfill. This issue should be clarified.

3. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Air Pollutant Emissions Associated with Industrial Processes

A. RECOMMENDATION:

The issue of potential environmental contamination associated with historical air pollutant emissions should be evaluated in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
NOT IDENTIFIED.

C. COMMENTS:

- Section 2(c)(i) of the Consent Agreement requires Kerr-McGee to identify all past and present industrial processes conducted at the site and the "air pollutants generated by such industrial processes." NDEP clarified this obligation by letter to the Consent Agreement signatories dated June 21, 1991 wherein NDEP stated that the signatories were required to identify those emissions "that are characterized as depositional in nature in which particulate fallout or fugitive emissions may have contributed to surface contamination at the BMI site or surrounding area" The KMCC Draft Report does not address this required category of information. Thus, additional work is necessary in Phase 1 or Phase 2 to identify and evaluate the potential contribution of process-related air pollutant emissions to

environmental contamination at or associated with the BMI Complex.

4. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Hardesty Chemical Company Site

A. RECOMMENDATION:

Additional work is necessary in either Phase 1 or Phase 2 to develop the information required by Section 2 of the Consent Agreement with respect to the Hardesty Chemical Company site.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Synthetic detergents, "various chlorinated organics," chemicals for fireproofing paints, insecticides, chlorinated solvents, chlorobenzol, muriatic acid, synthetic hydrochloric acid, monochlorobenzene, paradichlorobenzene, orthodichlorobenzene, DDT.^{11/}

C. COMMENTS:

- Neither the Stauffer/Pioneer Draft Report nor the KMCC Draft Report provides any information regarding the specific facilities leased by Hardesty or the waste streams generated by the Hardesty process(es). Additional work is necessary in either Phase 1 or Phase 2 to develop the information required by Section 2 of the Consent Agreement.

5. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

On-Site Portion of Beta Ditch, Including "Small Diversion Ditch" Northwest of Pond C-1^{12/}

^{11/} KMCC Draft Report at 3-7.

^{12/} See KMCC Draft Report at 5-62.

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the Beta Ditch system and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Basic Magnesium

Acid effluent and waste caustic liquor: NO CHARACTERIZATION INFORMATION PROVIDED.^{13/}

Kerr-McGee Chemical Corporation and Predecessors at Site

Flows from storm sewer system (including process effluent): NO CHARACTERIZATION INFORMATION PROVIDED;^{14/} **flows from acid drain system:** NO CHARACTERIZATION INFORMATION PROVIDED;^{15/} **brine rinse and washwater from water softeners in sodium perchlorate process:** NO CHARACTERIZATION INFORMATION PROVIDED;^{16/} **cell bottoms and filter washings generated in sodium perchlorate process:** diatomaceous earth, platinum, chromium, sodium chloride, sodium perchlorate, sodium carbonate, calcium carbonate;^{17/} **washdown water from sodium chlorate production process;**^{18/} **stormwater from sodium chlorate production area;**^{19/} **excess sodium chlorate solutions from process vessels:** sodium chlorate, hexavalent chromium;^{20/} **filter cake wastes generated in sodium chlorate process:** diatomaceous earth, carbon, sodium carbonate, calcium sulfate, sodium chloride, sodium chlorate, calcium carbonate, hexavalent chromium,

^{13/} KMCC Draft Report at 5-63.

^{14/} KMCC Draft Report at 3-23 to 3-25.

^{15/} KMCC Draft Report at 3-23 to 3-25.

^{16/} KMCC Draft Report at 4-20, Table C-1 (App. C).

^{17/} KMCC Draft Report at 4-20, Table C-1 (App. C).

^{18/} KMCC Draft Report at 4-8.

^{19/} KMCC Draft Report at 4-8.

^{20/} KMCC Draft Report at 4-8.

trivalent chromium;^{21/} filter cakes and centrifuge "mother liquor" from potassium perchlorate process: diatomaceous earth, potassium chloride, sodium chloride, potassium perchlorate, sodium perchlorate, sodium carbonate, calcium carbonate, chromium;^{22/} filter cake and process area washdown waste from magnesium perchlorate process: NO CHARACTERIZATION INFORMATION PROVIDED;^{23/} filter slurry or cakes or wash liquor from purification stages in ammonium perchlorate process: diatomaceous earth, chromium, chromic hydroxide, calcium carbonate, calcium sulfate, magnesium sulfate;^{24/} lime scrubber tower waste stream from ammonium perchlorate process: chlorine, "chlorine derivatives," hydrochloric acid;^{25/} overflow from the ammonium perchlorate cooling towers: ammonium perchlorate, sodium chloride;^{26/} dissolving tank, dryer feed screw, cyclone dust generated in ammonium perchlorate process: ammonium perchlorate, sodium chloride, sodium perchlorate, chromic hydroxide, ferric hydroxide;^{27/} boron leach liquor filtrate: boron, magnesium sulfate, sodium sulfate, sodium borate, sulfuric acid, boric acid;^{28/} boron process neutralization tank waste solution: sodium carbonate, magnesium sulfate, sodium borate, sodium sulfate;^{29/} high boiling compound waste that collects in boron trichloride and tribromide distillation column: silicon tetrachloride, silicon tetrabromide, "high boiling compounds";^{30/} scrubber

^{21/} KMCC Draft Report at 4-8, Table C-1 (App. C).

^{22/} KMCC Draft Report at 4-24 to 4-25, Table C-1 (App. C).

^{23/} KMCC Draft Report at 4-28, Table C-1 (App. C).

^{24/} KMCC Draft Report at 4-33, Table C-1 (App. C).

^{25/} KMCC Draft Report at 4-33, Table C-1 (App. C).

^{26/} KMCC Draft Report at 4-36, Table C-1 (App. C).

^{27/} KMCC Draft Report at 4-35 to 4-36.

^{28/} KMCC Draft Report at 4-52 to 4-53, Table C-1 (App. C).

^{29/} KMCC Draft Report at 4-52, Table C-1 (App. C). Neither the text nor Table C-1 of the KMCC Draft Report states expressly that this waste stream was discharged to the BMI ponds via the Beta Ditch. Nonetheless, this can be inferred from the general statement that "[b]etween 1972 and January 1976, liquid wastes from the boron operations were discharged to the BMI ponds via the Beta Ditch." KMCC Draft Report at 4-52.

^{30/} KMCC Draft Report at 4-56 to 4-57, 4-61.

liquid and reboiler waste streams from boron trichloride and tribromide processes: sodium hexametaphosphate, neutralized sulfuric acid, manganese, sodium, sulfite and borate ions;^{31/} wastes from cooling tower blowdown, boiler blowdown, housekeeping washings, storm drains, acid drains and once-through cooling water: NO CHARACTERIZATION INFORMATION PROVIDED;^{32/} stormwater runoff from the manganese tailings area (SWMU KMCC-009);^{33/} "water from the old cooling tower upsets";^{34/} periodic discharges from the old main cooling tower: sodium chlorate process solution, sodium dichromate, chromium;^{35/} tanker truck rinsate from J.B. Kelley, Inc. Trucking operations: lime, soda ash, barite, magnesium chloride brine, ferric chloride, hydrochloric acid, sodium hydrosulfide, sodium hydroxide, titanium tetrachloride;^{36/} "contaminated water from chemical solution tanks" and asphalt cement from Koch Materials Company operations.^{37/}

Chemstar Lime Company and Predecessors

Stormwater: hydrated lime;^{38/} start-up hydrated lime slurry waste;^{39/} hydrochloric acid;^{40/} hydrator lime dust collector waste.^{41/}

^{31/} KMCC Draft Report at 4-57 to 4-58, 4-61, Table C-1 (App. C).

^{32/} KMCC Draft Report at 5-65.

^{33/} KMCC Draft Report at 5-62.

^{34/} KMCC Draft Report at 5-63.

^{35/} KMCC Draft Report at 6-10, 7-6.

^{36/} KMCC Draft Report at 7-22.

^{37/} KMCC Draft Report at 7-27.

^{38/} Chemstar Lime Company, Phase 1 Environmental Conditions Assessment Report, Chemstar Lime Company, Henderson, Nevada, Facility (June 8, 1992) (draft) (hereinafter "Chemstar Draft Report") at 20.

^{39/} Chemstar Draft Report at 36.

^{40/} Chemstar Draft Report at 36.

^{41/} Chemstar Draft Report at 41.

Stauffer Chemical Company, Pioneer Chlor Alkali Company^{42/}

Stormwater;^{43/} **asbestos slurry from the chlor alkali cell reconditioning process:** asbestos, caustic, teflon;^{44/} **sulfate slurry waste from chlor alkali process:** sulfate;^{45/} **cell renewal building fume wet scrubber waste stream:** "variety of organics," "heavy metals";^{46/} **cooling water from lindane process:** "undocumented concentration of organics";^{47/} **aqueous waste generated during batch distillation of thiophenol/parachlorothiophenol:** benzene, isooheptane, monochlorobenzene, parachlorothiophenol, thiophenol, bispara-chlorophenyl sulfone, bispara-chlorophenyl disulfide, phenyl sulfide, phenyl disulfide, monochlorobenzenesulfonic acid, benzenesulfonic acid, phosphoric acid, iodine;^{48/} toluene, dichlorobenzene, trithion, diphenyldisulfide, sodium thiophenate;^{49/} **"ag plant waste":** "While documents reviewed do not specify the character of this waste, it is believed" it is the same as the aqueous waste from the thiophenol/parachlorothiophenol process;^{50/} **caustic wastewater generated by scrubbing of iodine chloride used in the monochlorobenzenesulfonic acid unit of the thiophenol/parachlorothiophenol process:** NO CHARACTERIZATION INFORMATION PROVIDED;^{51/} **brine sludge from chlor alkali process:** clay and silts containing magnesium and calcium hydroxides and carbonates containing salts

^{42/} See generally Weston Managers, Designers/Consultants, Phase 1 Environmental Conditions Assessment Report, Pioneer Chlor Alkali Company, Inc., Stauffer Chemical Company Site (June 8, 1992) (draft) (hereinafter "Stauffer/Pioneer Draft Report") at 5-7 to 5-9, 5-35 to 5-37.

^{43/} Stauffer/Pioneer Draft Report at 5-7.

^{44/} Stauffer/Pioneer Draft Report at 4-26.

^{45/} Stauffer/Pioneer Draft Report at 4-28.

^{46/} Stauffer/Pioneer Draft Report at 4-28.

^{47/} Stauffer/Pioneer Draft Report at 4-19.

^{48/} Stauffer/Pioneer Draft Report at 4-8.

^{49/} Stauffer/Pioneer Draft Report at 4-8.

^{50/} Stauffer/Pioneer Draft Report at 5-4.

^{51/} Stauffer/Pioneer Draft Report at 4-9, Figure 4-2.

(calcium carbonate, sodium carbonate, and sodium chloride);^{52/} sodium hypochlorite waste stream from chlor alkali process;^{53/} aqueous phase phosphoric acid waste from thiophenol process: phosphoric acid, iodine, diphenylsulfone, benzenesulfonic acid;^{54/} organic phase phosphoric acid waste from thiophenol process: thiophenol, diphenyldisulfide, diphenylsulfone, "tris" (C₆H₅S)₃-P, iodine, (C₆H₅S)₂-P=O, (C₆H₅S)₂-P-I-I;^{55/} aqueous phase phosphoric acid waste from parachlorothiophenol process: phosphoric acid, iodine, dichlorodiphenylsulfone, dichlorodiphenylsulfide, monochlorobenzenesulfonic acid;^{56/} organic phase phosphoric acid waste from parachlorothiophenol process: thiophenol, p-thiophenol, dichlorodiphenyldisulfide, dichlorodiphenylsulfone, diphenyldisulfide, diphenylsulfone, "chloro-TRIS" (ClC₆H₄S)₃-P, (ClC₆H₄S)-P=O, (ClC₆H₄S)₂-P-I-I;^{57/} monochlorobenzene, benzene, bispara-chlorophenyl sulfone, bispara-chlorophenyl disulfide, phenyl sulfone, phenyl disulfide;^{58/} trithion/methyl trithion/imidan aqueous waste: parachlorothiophenol, trithion, muriatic acid, monochlorobenzene, isohexane, ethanol, methanol, imidan, sodium salt of O,O-dimethylphosphorodithioic acid, sodium salt of O,O-diethylphosphorodithioic acid,^{59/} hydroxymethyl phthalimide;^{60/} chlorine liquefaction sludge generated in chlor alkali process: chloroform, carbon tetrachloride, hexachloroethane.^{61/}

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- ^{52/} Stauffer/Pioneer Draft Report at 4-25.
- ^{53/} Stauffer/Pioneer Draft Report at 4-28, 5-4.
- ^{54/} Stauffer/Pioneer Draft Report at 4-6, 5-12.
- ^{55/} Stauffer/Pioneer Draft Report at 4-6, 5-12.
- ^{56/} Stauffer/Pioneer Draft Report at 4-7, 5-12.
- ^{57/} Stauffer/Pioneer Draft Report at 4-7, 5-12.
- ^{58/} Stauffer/Pioneer Draft Report at 4-7, 5-12.
- ^{59/} Stauffer/Pioneer Draft Report at 4-15.
- ^{60/} Stauffer/Pioneer Draft Report at 5-9.
- ^{61/} Stauffer/Pioneer Draft Report at 4-27.

Montrose Chemical Corporation of California^{62/}

Monochlorobenzene and Polychlorinated Benzene Processes

Hydrochloric acid used to wash monochlorobenzene: benzene, monochlorobenzene, dichlorobenzene, sodium hydroxide, sodium chloride, ferric hydroxide, "higher chlorinated organics";^{63/} **sulfuric acid used to wash polychlorinated benzenes:** NO CHARACTERIZATION INFORMATION PROVIDED;^{64/} **process area wastes generated as a result of equipment cleanout, benzene washer water (hydrochloric acid, benzene, iron), cooling water, process area cleaning and spills, loading dock cleaning water, ion exchange resin washing, monochlorobenzene columns evactor (monochlorobenzene) and/or acid storage tank scrubber waste water:** SPECIFIC CHARACTERIZATION INFORMATION NOT PROVIDED EXCEPT AS STATED ABOVE.^{65/}

Chloral Processes

Spent sulfuric acid waste stream from dessicated chloral process: acetaldehyde, chloroacetaldehyde, dichloroacetaldehyde, chloral, chloroform, carbon tetrachloride;^{66/} **waste stream(s) from ethyl alcohol-based chloral process:** "Montrose was unable to locate records";^{67/} **process area wastes, generated as a result of equipment cleanout, cooling water, process area cleaning and spills, loading dock cleaning water, ion exchange resin washing and/or acid storage tank scrubber waste water:** CHARACTERIZATION INFORMATION NOT PROVIDED;^{68/} **chloral drying vent scrubber waste:** hydrochloric acid, chloral.^{69/}

^{62/} See generally Converse Environmental Consultants, Southwest, Inc. & Montrose Chemical Corporation of California, Phase 1 Environmental Conditions Assessment for Former Montrose Chemical Corporation Facility, Henderson, Nevada (June 8, 1992) (draft) (hereinafter "Montrose Draft Report") at 81.

^{63/} Montrose Draft Report at 26, Table 5.3.2(b).

^{64/} Montrose Draft Report at 26.

^{65/} Montrose Draft Report at 26 (text and n.4).

^{66/} Montrose Draft Report at 33.

^{67/} Montrose Draft Report at 31.

^{68/} Montrose Draft Report at 33.

^{69/} Montrose Draft Report at 33 n.7.

Dichlorobenzil Process

Spent sulfuric acid: CHARACTERIZATION INFORMATION NOT PROVIDED;^{70/} **washwater:** sulfonated metabolites of DDT;^{71/} **excess water:** CHARACTERIZATION INFORMATION NOT PROVIDED;^{72/} **waste water from filter/centrifuge dewatering process:** Montrose found "no information regarding the chemical composition of the spent filter waste";^{73/} **dichlorobenzil washes:** sulfuric acid, "sulfonated organics," dichlorobenzil;^{74/} **"Oliver filtrate":** dichlorobenzene fines;^{75/} **cooling water:** CHARACTERIZATION INFORMATION NOT PROVIDED;^{76/} **"polycolumn and P10 evactor":** dichlorobenzene;^{77/} **dichlorobenzil waste acid receiver tank overflows:** CHARACTERIZATION INFORMATION NOT PROVIDED.^{78/}

Hydrochloric Acid Process

Low pH water from synthetic acid system: CHARACTERIZATION INFORMATION NOT PROVIDED;^{79/} **waste stream from final vent scrubber:** hydrochloric acid;^{80/} **HCL gas demister waste:** hydrochloric acid.^{81/}

Ethyl Chloride Process

Same waste streams as generated in chloral process using ethyl alcohol: Montrose Draft Report states, however, that no records were identified regarding the waste streams.

^{70/} Montrose Draft Report at 37.

^{71/} Montrose Draft Report at 37.

^{72/} Montrose Draft Report at 37.

^{73/} Montrose Draft Report at 38.

^{74/} Montrose Draft Report at 38 n.11, Table 5.2.2(a).

^{75/} Montrose Draft Report at 38.

^{76/} Montrose Draft Report at 38.

^{77/} Montrose Draft Report at 38.

^{78/} Montrose Draft Report at 38.

^{79/} Montrose Draft Report at 43.

^{80/} Montrose Draft Report at 43 n.13.

^{81/} Montrose Draft Report at 43 n.13.

generated in the chloral process using ethyl alcohol;^{82/} off-specification, unmarketable or excess ethyl chloride;^{83/} minor process releases "involving ethyl chloride."^{84/}

Miscellaneous

1971 release of mixture of 120 pounds of ammonia and process brine;^{85/} leaks from raw material or process intermediate storage tanks;^{86/} drainage from loading areas;^{87/} occasional disposal of product or spilled raw materials from the various processes (including one "batch" of dichlorobenzene);^{88/} spills and releases from the facility process area;^{89/} once-through cooling water; dichlorobenzil wash and acid drainage; chloral drying and monochlorobenzene drainage; water used to clean railroad tank cars; water pumped from chloral drying areas; chloral release from two 55 gallon drums, reported in an October 1980 document; "A" benzolator dike breach wastewater; "B" benzolator wastewater; final vent scrubber wastewater; surface water runoff; dichlorobenzene wash tank pumpings; truck loading dock washings "misc[ellaneous] spills," washdowns;^{90/} sulfuric acid, muriatic acid, caustic.^{91/}

State Industries

Spent sulfuric acid, borax, soda ash, "phosphate chemicals," "process waste," neutralized and unneutralized cyanide

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- ^{82/} Montrose Draft Report at 31.
^{83/} Montrose Draft Report at 45.
^{84/} Montrose Draft Report at 45.
^{85/} Montrose Draft Report at 46.
^{86/} Montrose Draft Report at 73.
^{87/} Montrose Draft Report at 73.
^{88/} Montrose Draft Report at 80.
^{89/} Montrose Draft Report at 49, 82.
^{90/} Montrose Draft Report at 82.
^{91/} Montrose Draft Report at 82.

solutions, calcium hypochlorite;^{92/} "pickling process wastes."^{93/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{94/}
 - An enormous variety of wastes has been conveyed historically via the Beta Ditch.
 - The Ditch is unlined.
 - Releases to the soil have occurred historically.^{95/}
 - Migration of contaminants to groundwater "could still occur as the Beta Ditch is used to transmit stormwater run-off and once through cooling water."^{96/}
 - The Ditch is a potential source of environmental contamination via all environmental pathways.^{97/}
6. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:
Unnamed Drainage Ditch Segment^{98/}

^{92/} KMCC Draft Report at 5-66.

^{93/} KMCC Draft Report at 7-3.

^{94/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{95/} KMCC Draft Report at 5-67.

^{96/} KMCC Draft Report at 5-67.

^{97/} KMCC Draft Report at 5-68.

^{98/} KMCC Draft Report at 3-23.

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate potential environmental contamination associated with this drainage ditch segment.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Stormwater;^{99/} "some" process wastes.^{100/}

C. COMMENTS:

- The specific location of this ditch segment is not identified in the Draft Report. It is unclear whether this segment is the same as the "small diversion ditch" referenced on page 5-62. If not, additional work is necessary in Phase 1 and Phase 2 to assess the nature and extent of environmental contamination associated with this ditch segment and to evaluate the need to implement appropriate remedial measures.

7. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Old P-2 Pond and Associated Conveyance Facilities

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this impoundment and to assess the need to implement appropriate remedial measures.

^{99/} KMCC Draft Report at 3-24.

^{100/} KMCC Draft Report at 3-24.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Washdown water from sodium chlorate production process: NO CHARACTERIZATION INFORMATION PROVIDED;^{101/} stormwater from sodium chlorate production area: NO CHARACTERIZATION INFORMATION PROVIDED;^{102/} excess sodium chlorate solutions from process vessels: sodium chlorate, hexavalent chromium;^{103/} solution from cooling tower leaks: NO CHARACTERIZATION INFORMATION PROVIDED;^{104/} caustic scrubber solution from the ammonium perchlorate process: ammonium chloride, neutralized carbonic acid, neutralized dilute hydrochloric acid.^{105/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{106/}
- The liner system for the impoundment failed on several occasions.^{107/} The soils adjacent to and underlying the impoundment "are potentially contaminated with hexavalent chromium as a result of historic liner leaks."^{108/}
- Groundwater downgradient of the impoundment exhibits elevated chromium and conductivity values.^{109/}

^{101/} KMCC Draft Report at 4-8.

^{102/} KMCC Draft Report at 4-8.

^{103/} KMCC Draft Report at 4-8.

^{104/} KMCC Draft Report at 5-23.

^{105/} KMCC Draft Report at 4-36.

^{106/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{107/} KMCC Draft Report at 5-23.

^{108/} KMCC Draft Report at 5-24.

^{109/} KMCC Draft Report at 5-25.

- The impoundment is undergoing "clean closure" pursuant to RCRA and the NHWDL.^{110/} The closure process should be integrated into Phase 2. The KMCC Draft Report does not explain why the unit, which assertedly "did not receive hazardous waste as classified by RCRA," is undergoing clean closure pursuant to RCRA.^{111/}

8. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

P-3 Pond and Associated Conveyance Facilities

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this impoundment and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Washdown water from sodium chlorate production process;^{112/} stormwater from sodium chlorate production area;^{113/} excess sodium chlorate solutions from process vessels: sodium chlorate, hexavalent chromium.^{114/}

C. COMMENTS:

- The KMCC Draft Report provides no information regarding the engineered features, operational status, regulatory status or release history of this impoundment.

^{110/} KMCC Draft Report at 5-23.

^{111/} KMCC Draft Report at 5-24.

^{112/} KMCC Draft Report at 4-8.

^{113/} KMCC Draft Report at 4-8.

^{114/} KMCC Draft Report at 4-8.

9. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

New P-2 Pond and Associated Piping

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this impoundment and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Washdown water from sodium chlorate production process;^{115/} stormwater from sodium chlorate production area;^{116/} excess sodium chlorate solutions from process vessels: sodium chlorate, hexavalent chromium;^{117/} caustic scrubber solution from the ammonium perchlorate process: ammonium chloride, neutralized carbonic acid, neutralized dilute hydrochloric acid.^{118/}

C. COMMENTS:

- The KMCC Draft Report provides no information regarding the engineered features, operational status, regulatory status or release history of this impoundment.

10. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

On-Site Hazardous Waste Landfill, SWMU KMCC-013

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to clarify the RCRA closure status of the landfill.

^{115/} KMCC Draft Report at 4-8.

^{116/} KMCC Draft Report at 4-8.

^{117/} KMCC Draft Report at 4-8.

^{118/} KMCC Draft Report at 4-36.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Filter cake wastes generated in sodium chlorate process: diatomaceous earth, carbon, sodium carbonate, calcium sulfate, sodium chloride, sodium chlorate, calcium carbonate, hexavalent chromium, trivalent chromium;^{119/} **materials from the closure of Pond 8-1 (including liners, sludge and chromium contaminated soil).**^{120/}

C. COMMENTS:

- The KMCC Draft Report states that the "hazardous waste landfill was closed in conformance with the intent of the approved closure/post closure plan."^{121/} The inclusion of the phrase "with the intent" in this sentence requires clarification.
- The KMCC Draft Report does not discuss the RCRA/NHWDL post-closure permitting status of the landfill. This issue requires clarification.

11. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

SWMU KMCC-005

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with this area and to assess the need to implement appropriate remedial measures.

^{119/} KMCC Draft Report at 4-8, Table C-1 (App. C).

^{120/} KMCC Draft Report at 5-33.

^{121/} KMCC Draft Report at 5-34 (emphasis added).

dioxide cathode wash solution: calcium, magnesium, manganese from cathode scale, "tank mud," "cell sludge";^{180/} boiler blowdown, backwash and regeneration water from the water softeners, sludge bed blowdown from the hot process softener, and miscellaneous pump seal flushes generated in the steam plant: elevated concentrations of sodium, calcium, magnesium.^{181/}

C. COMMENTS:

- The impoundment is double-lined, equipped with release detection features, and of recent construction (1989). The impoundment has not leaked historically.^{182/}

23. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond WC-2 and Associated Piping

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to remediate the apparent release noted in the KMCC Draft Report.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese dioxide product wash water: manganese dioxide, "heavy metal sulfides," manganese sulfate;^{183/} manganese dioxide cathode wash solution: calcium, magnesium, manganese from cathode scale, "tank mud," "cell sludge";^{184/} boiler blowdown, backwash and regeneration water from the water softeners, sludge bed blowdown from the hot process softener, and miscellaneous pump seal flushes

^{180/} KMCC Draft Report at 4-40, Table C-1 (App. C).

^{181/} KMCC Draft Report at 4-64 to 4-66.

^{182/} KMCC Draft Report at 5-43 to 5-44.

^{183/} KMCC Draft Report at 4-41, Table C-1 (App. C).

^{184/} KMCC Draft Report at 4-40, Table C-1 (App. C).

generated in the steam plant: elevated concentrations of sodium, calcium, magnesium.^{185/}

C. COMMENTS:

- An area of apparently contaminated soil adjacent to the impoundment was observed during the Site Reconnaissance.^{186/} This area should be remediated in Phase 1 or Phase 2.
- Otherwise, the impoundment is triple-lined, equipped with release detection features, and of recent construction. The impoundment has not leaked historically.^{187/}

24. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Beds, Associated Conveyance Facilities, and Manganese Tailings Area, SWMU KMCC-009

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Unwashed filter sludge and associated liquids generated in manganese dioxide leaching process: manganese dioxide ore, silica, alumina;^{188/} **filtered heavy metal sulfides and associated liquids generated in manganese dioxide purification process:** sulfides of zinc, copper, lead,

^{185/} KMCC Draft Report at 4-64 to 4-66.

^{186/} KMCC Draft Report at 5-48.

^{187/} KMCC Draft Report at 5-45 to 5-48.

^{188/} KMCC Draft Report at 4-46, Table C-1 (App. C).

cobalt, nickel, barium;^{189/} filter cake generated in leaching step in manganese dioxide leaching process: manganese dioxide ore, silica, alumina;^{190/} filtered heavy metal sulfides generated in manganese dioxide purification process: sulfides of zinc, copper, lead, cobalt, nickel;^{191/} liner, sludge contents and contaminated soil generated during closure of Pond P-1;^{192/} concrete and underlying soils from remediation of basement area of Unit 6;^{193/} soil contaminated by spills from leach plant area anolyte tanks: manganese sulfate, sulfuric acid.^{194/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{195/}
- Prior to 1975, the area was used as a leach bed area.^{196/}
The area is unlined.
- The KMCC Draft Report indicates that waste in the area could migrate via the air, surface water and groundwater pathways.^{197/}

^{189/} KMCC Draft Report at 4-46.

^{190/} KMCC Draft Report at 4-46.

^{191/} KMCC Draft Report at 4-46.

^{192/} KMCC Draft Report at 5-78.

^{193/} KMCC Responses to NDEP Comments on the KMCC Henderson Nevada Facility Draft ECA Report, Response to Comment No. 133 (June 5, 1992).

^{194/} KMCC Draft Report at Table C-1 (App. C).

^{195/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{196/} KMCC Draft Report at 5-19.

^{197/} KMCC Draft Report at 5-21.

- No specific groundwater monitoring system is in place for the area.^{198/}
- The barium sulfide waste stream identified in Table C-1 is not discussed in the relevant portions of Section 4, i.e., pp. 4-38 to 4-47. This issue should be resolved in Phase 1 or Phase 2.

25. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Process Hardware Storage Area, SWMU KMCC-001

A. RECOMMENDATION:

No further evaluation of this area is necessary in either Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Cleaned scrap metal.^{199/}

C. COMMENTS:

- The area is paved and is used only for the temporary storage of cleaned process equipment scrap.

26. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Trash Storage Area North of Units 1 and 2, SWMU KMCC-002

A. RECOMMENDATION:

No further evaluation of this area is necessary in either Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

^{198/} KMCC Draft Report at 5-22.

^{199/} KMCC Draft Report at 5-2.

Domestic trash contaminated with chlorates or
perchlorates. ^{200/}

^{200/} KNCC Draft Report at 54.

C. COMMENTS:

- The wastes in this area are stored temporarily in sealed 55-gallon drums. The area is paved.^{201/}

27. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

PCB Storage Area, SWMU KMCC-003

A. RECOMMENDATION:

No further evaluation of this area is necessary in either Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Polychlorinated biphenyls (PCBs).^{202/}

C. COMMENTS:

- The area is located within a building and is equipped with various engineered features to prevent the migration of spilled PCBs. There is no evidence of a release from the area. The area is regulated under the Toxic Substances Control Act (TSCA) PCB storage regulations and is inspected regularly.^{203/}

28. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Hazardous Waste Storage Area, SWMU KMCC-004

^{201/} KMCC Draft Report at 5-4.

^{202/} KMCC Draft Report at 5-6.

^{203/} KMCC Draft Report at 5-6 to 5-7.

A. RECOMMENDATION:

Minor work is necessary in Phase 1 or Phase 2 to remediate the apparent release observed during the site reconnaissance.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Waste oil, flammable wastes, base wastes, acid wastes.^{204/}

C. COMMENTS:

- The area is regulated pursuant to the Resource Conservation and Recovery Act (RCRA) and the Nevada Hazardous Waste Disposal Law (NHWDL).^{205/}
- The area is equipped with various release containment features, which appear to be in good condition.^{206/}
- KMCC concurs that the apparent release observed near the edge of the SWMU must be remediated.^{207/}

29. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Solid Waste Dumpsters, SWMU KMCC-008

A. RECOMMENDATION:

No further evaluation of this area appears to be necessary in Phase 1 or Phase 2.

^{204/} KMCC Draft Report at 5-7 to 5-8.

^{205/} KMCC Draft Report at 5-8.

^{206/} KMCC Draft Report at 5-8.

^{207/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Common paper trash; scrap metal.^{208/}

C. COMMENTS:

- The area is used for the temporary storage of nonhazardous solid waste. Metal scrap is washed prior to delivery to the SWMU. The SWMU is operated "in conformance with good operating practices for nonhazardous solid waste."^{209/}

30. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Ammonium Perchlorate Area - Pad 35, SWMU KMCC-017

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Drummed, nonhazardous, solid industrial waste, including "common trash" potentially contaminated with ammonium perchlorate, iron oxide saddles, calcined packing insulation.^{210/}

C. COMMENTS:

- Wastes stored at the SWMU are drummed. Drums are placed on a concrete pad. The wastes stored in the area are not hazardous and are managed in small quantities. "The overall appearance of this SWMU suggests relatively good housekeeping practices are employed."^{211/}

^{208/} KMCC Draft Report at 5-17.

^{209/} KMCC Draft Report at 5-18.

^{210/} KMCC Draft Report at 5-49.

^{211/} KMCC Draft Report at 5-50.

31. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Drum Crushing and Recycling Area, SWMU KMCC-018

A. RECOMMENDATION:

Minor additional work should be performed in Phase 1 or Phase 2 to verify that soil in the vicinity of the area is not contaminated at levels of concern.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Chlorates; perchlorates.^{212/}

C. COMMENTS:

- The KMCC Draft Report indicates that not all of the drums were rinsed prior to delivery to the area or that rinsing was not complete.^{213/} The Draft Report states that drums are stored on the "soil surface adjacent to the crusher" before and after crushing.^{214/} The Draft Report notes that "operating practices could be modified to further reduce the possibility of release to the environment."^{215/}

32. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Groundwater Remediation Unit, SWMU KMCC-019

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to remediate small spills associated with the SWMU.

^{212/} KMCC Draft Report at 5-51.

^{213/} KMCC Draft Report at 5-51.

^{214/} KMCC Draft Report at 5-51.

^{215/} KMCC Draft Report at 5-52.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Iron oxide sludge; iron oxide filter cake: chromium.^{216/}

C. COMMENTS:

- The KMCC Draft Report indicates that iron oxide sludge and filter cake was observed spilled onto the soil in the area adjacent to the groundwater remediation unit.^{217/} These spills should be remediated and housekeeping practices implemented to prevent such releases in the future.

33. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Sodium Perchlorate Platinum By-Product Filter, SWMU KMCC-021

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to repair the containment features of this area.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sodium chloride, sodium carbonate, calcium carbonate, sodium perchlorate, chromium, platinum.^{218/}

C. COMMENTS:

- The KMCC Draft Report indicates that seam seals in the floor and berms of this unit are "in need of repair."^{219/}

34. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Former Manganese Tailings Areas, SWMU KMCC-022

^{216/} KMCC Draft Report at 5-60.

^{217/} KMCC Draft Report at 5-60.

^{218/} KMCC Draft Report at 5-70.

^{219/} KMCC Draft Report at 5-71.

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with these areas and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese tailings: manganese dioxide ore, heavy metal sulfides, silica, paraffin cake, calcium sulfate.^{220/}

C. COMMENTS:

- The KMCC Draft Report indicates that the history of these areas is "obscure."^{221/}
- The areas were not lined.
- The KMCC Draft Report indicates that no analyses were discovered during Phase 1 indicating the "composition of the tailings material during the time of placement in this area."^{222/}
- The KMCC Draft Report notes that migration of the waste materials in these areas could occur via the air, surface water and groundwater pathways.^{223/}

35. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Truck Emptying/Dump Site, SWMU KMCC-025

^{220/} KMCC Draft Report at 5-72.

^{221/} KMCC Draft Report at 5-71.

^{222/} KMCC Draft Report at 5-72.

^{223/} KMCC Draft Report at 5-73.

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this site and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
"Solid waste/materials" of "unknown" composition.^{224/}

C. COMMENTS:

- The Site was used as a disposal area from 1969 to 1991. The area apparently was unlined. The composition of the wastes deposited in the SWMU is "unknown." According to the KMCC Draft Report, potential migration pathways include the "air, surface soil, subsurface soil, and possibly groundwater."^{225/}

36. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Former Satellite Accumulation Point - Unit 3, SWMU KMCC-026

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Lead acid batteries; 1,1,1-trichloroethane (TCA).^{226/}

^{224/} KMCC Draft Report at 5-81 to 5-82.

^{225/} KMCC Draft Report at 5-82.

^{226/} KMCC Draft Report at 5-83.

C. COMMENTS:

- The area was used for only two years. The area was equipped with a concrete pad. Hazardous substances were used in small quantities. The KMCC Draft Report indicates that no evidence of a release from this area was identified.^{227/}

37. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Former Satellite Accumulation Point - Unit 6, SWMU KMCC-027

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

1,1,1-trichloroethane (TCA).^{228/}

C. COMMENTS:

- The area is equipped with a concrete pad. Hazardous substances were used in small quantities. TCA is no longer used in this area. The KMCC Draft Report indicates that no evidence of a release from this area was identified.^{229/}

38. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Satellite Accumulation Point, AP Laboratory, SWMU KMCC-028

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

^{227/} KMCC Draft Report at 5-84 to 5-85.

^{228/} KMCC Draft Report at 5-86.

^{229/} KMCC Draft Report at 5-86 to 5-87.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Chemicals from the AP Laboratory.^{230/}

C. COMMENTS:

- Wastes are stored in minor quantities. The area is equipped with a concrete floor. There is no evidence of a release from the area. Good housekeeping practices are employed.^{231/}

39. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

*Satellite Accumulation Point - AP Maintenance Shop, SWMU
KMCC-029*

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to remediate the minor spill noted in the Draft Report and to improve housekeeping practices with respect to the storage area associated with the SWMU.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
1,1,1-trichloroethane (TCA).^{232/}

C. COMMENTS:

- Wastes are stored in minor quantities. The area is equipped with a concrete floor. There is no evidence of a release from the area proper. Good housekeeping practices are employed.^{233/}

^{230/} KMCC Draft Report at 5-87.

^{231/} KMCC Draft Report at 5-88 to 5-89.

^{232/} KMCC Draft Report at 5-90.

^{233/} KMCC Draft Report at 5-90.

- The KMCC Draft Report notes that "minor soil staining" was evident during the Site Reconnaissance at the "product storage area" west of the SWMU proper. This area is not equipped with any containment features. The soil staining should be remediated and housekeeping practices improved so that containers of hazardous substances are not stored in the "soil surfaced area."^{234/}

40. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

PCB Transformer Spill

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to evaluate the adequacy of the remediation of this spill area.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Polychlorinated biphenyls (PCBs).^{235/}

C. COMMENTS:

- The KMCC Draft Report does not identify the disposal location for the PCB fluid, absorbent, contaminated concrete and soil. This issue should be clarified.^{236/}
- The KMCC Draft Report notes that soil "immediately underlying" the contaminated concrete was removed.^{237/}
Additional fact gathering is necessary to verify that all

^{234/} KMCC Draft Report at 5-90.

^{235/} KMCC Draft Report at 6-2.

^{236/} KMCC Draft Report at 6-2.

^{237/} KMCC Draft Report at 6-2.

soil contaminated at levels requiring remediation was removed.

41. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Unit 1 Tenant Stains

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to remediate the apparent stained soil areas.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Petroleum hydrocarbons.^{238/}

C. COMMENTS:

- Kerr-McGee acknowledges that these stained soil areas should be remediated.^{239/}

42. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Unit 2 Salt Redler

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sodium chloride.^{240/}

^{238/} KMCC Draft Report at 6-3.

^{239/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{240/} KMCC Draft Report at 6-4.

C. COMMENTS:

- Sodium chloride is the only substance involved. The KMCC Draft Report notes that "spilled salt is swept up and returned to storage"^{241/}

43. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Unit 4 and Unit 5 Basements

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with these areas and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sodium chlorate and sodium perchlorate process liquor, spillage, and washwater: NO SPECIFIC CHARACTERIZATION INFORMATION PROVIDED.^{242/}

C. COMMENTS:

- The basements were used for "many years" as wastewater sumps.^{243/}
- Releases occurred "to underlying soils and groundwater."^{244/}

^{241/} KMCC Draft Report at 6-4.

^{242/} KMCC Draft Report at 6-5.

^{243/} KMCC Draft Report at 6-5.

^{244/} KMCC Draft Report at 6-5.

- The referenced September 9, 1986 consent agreement addresses only the remediation of hexavalent chromium groundwater contamination.
- Significant residual soil contamination potentially is associated with these areas.
- It is unclear from the identification of the wastes managed in the basements whether hexavalent chromium is the only contaminant of concern.

44. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Unit 6 Basement

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with this area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Process spillage and washwater from the manganese dioxide operations: NO SPECIFIC CHARACTERIZATION INFORMATION PROVIDED.^{245/}

C. COMMENTS:

- The basement was used during the period 1951 to 1986 for the collection of spilled manganese sulfate solution.^{246/}

^{245/} KMCC Draft Report at 6-6.

^{246/} KMCC Draft Report at 6-6 to 6-7.

- The KMCC Draft Report indicates that "spilled solutions percolated into the underlying soils and groundwater."^{247/}
- Significant residual soil contamination is potentially associated with the area as the referenced September 16, 1986 Consent Order did not address the removal or remediation of contaminated soil. Additional work is necessary in Phase 2 to evaluate whether such remediation is necessary.
- The KMCC Draft Report states that the documented groundwater contamination plume associated with Unit 6 "is migrating in a north-northwesterly direction in the shallow groundwater and co-mingles with the chromium plume associated with Units 4 and 5."^{248/} Additional work is necessary to determine whether the operation of the groundwater intercept system appropriately addresses the remediation of the plume associated with Unit 6.

45. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Diesel Storage Tank Area

A. RECOMMENDATION:

Minor work is necessary in Phase 1 or Phase 2 to remediate the soil staining noted in the Draft Report.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

^{247/} KMCC Draft Report at 6-7.

^{248/} KMCC Draft Report at 6-8.

Diesel fuel.^{249/}

C. COMMENTS:

- Kerr-McGee acknowledges that the soil staining observed during the Site Reconnaissance requires remediation.^{250/} The KMCC Draft Report observes that the "presence of soil staining and diesel odor indicates that there has been some localized environmental impact."^{251/}

46. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Former Old Main Cooling Tower and Recirculation Lines

A. RECOMMENDATION:

No further evaluation of this unit appears necessary in either Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Potentially contaminated cooling water.^{252/}

C. COMMENTS:

- Discharges from this unit were to the Beta Ditch. Thus, any environmental contamination associated with this unit is an issue of concern with respect to the Beta Ditch.

47. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Plant Area Manganese Ore Piles

^{249/} KMCC Draft Report at 6-7 to 6-8.

^{250/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{251/} KMCC Draft Report at 6-9.

^{252/} KMCC Draft Report at 6-10.

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to evaluate the potential environmental or health risk posed by the maintenance of these piles.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Manganese ore.^{253/}

C. COMMENTS:

- The area is unlined and uncovered. The KMCC Draft Report indicates that migration from these areas may occur via the surface soil, surface water runoff and air pathways.^{254/}
Minor additional work is necessary to assess whether current and historical manganese ore storage practices pose an environmental or public health risk.

48. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Plant Area Anolyte Tanks

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the anolyte tank area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Concentrated manganese sulfate/sulfuric acid solution.^{255/}

^{253/} KMCC Draft Report at 6-12.

^{254/} KMCC Draft Report at 6-13.

^{255/} KMCC Draft Report at 6-13.

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{256/}
- The tanks "have been the source of several releases."^{257/}
- The soil surrounding the tanks is "visibly stained."^{258/}

49. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Plant Area Sulfuric Acid Storage Tank

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the sulfuric acid tank area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sulfuric acid.^{259/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{260/}

^{256/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{257/} KMCC Draft Report at 6-14.

^{258/} KMCC Draft Report at 6-16.

^{259/} KMCC Draft Report at 6-16.

^{260/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

- The tank has been the source of releases onto the concrete containment area and the surrounding soil.^{261/}
- The concrete containment area is in a deteriorated condition.^{262/}

50. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Plant Area Leach Tanks

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sulfuric acid, manganese sulfate, calcine.^{263/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{264/}
- The tanks "experienced spills as a result of overflow of liquid."^{265/}

^{261/} KMCC Draft Report at 6-16.

^{262/} KMCC Draft Report at 6-16.

^{263/} KMCC Draft Report at 6-18.

^{264/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{265/} KMCC Draft Report at 6-18.

- The concrete containment area associated with the tanks is "obviously unable to function as originally designed for retaining liquids."^{266/}
- The soil surrounding the tanks is "visibly impacted from historic spills."^{267/}

51. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Leach Plant Area Transfer Lines

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the transfer lines and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese sulfate, sulfuric acid.^{268/}

C. COMMENTS:

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{269/}
- The transfer lines have leaked historically.^{270/}

^{266/} KMCC Draft Report at 6-18.

^{267/} KMCC Draft Report at 6-18.

^{268/} KMCC Draft Report at 6-19.

^{269/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{270/} KMCC Draft Report at 6-20.

- The soil is visibly stained along portions of the transfer lines.^{271/}

52. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Area Screening Building, Dryer Building and Associated Sump

A. RECOMMENDATION:

Minor additional work is necessary to remediate the apparent ammonium perchlorate releases and to improve housekeeping practices in this area.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Ammonium perchlorate.^{272/}

C. COMMENTS:

- The concrete floor and asphalt outside of each building have white stains caused by the deposition of ammonium perchlorate during washdown operations. The area should be remediated and drainage patterns altered so that washdown water flows into the floor drain.^{273/}

53. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Area Tank Farm

A. RECOMMENDATION:

^{271/} KMCC Draft Report at 6-21.

^{272/} KMCC Draft Report at 6-22.

^{273/} KMCC Draft Report at 6-22.

Minor additional work is necessary in Phase 1 or Phase 2 to remediate environmental contamination associated with historical leaks and spills from the tanks in the area.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Ammonium perchlorate, sodium perchlorate, sodium hydroxide, hydrogen peroxide.^{274/}

C. COMMENTS:

- The concrete pad in the area is in poor condition.^{275/}
- Soil in the area is "visibly stained from historic, small, non-reportable quantity releases"^{276/}

54. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Area Change House/Laboratory Septic Tank

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the septic system and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sanitary wastewater and laboratory effluent.^{277/}

C. COMMENTS:

^{274/} KMCC Draft Report at 6-23.

^{275/} KMCC Draft Report at 6-24.

^{276/} KMCC Draft Report at 6-24.

^{277/} KMCC Draft Report at 6-25.

- Kerr-McGee acknowledges that this area should be studied in Phase 2.^{278/}
- The area is equipped with a leach field.^{279/} The area has been in use since the "early 1950s."^{280/}

55. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Area Affected by July 1990 Fire

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to verify the remediation of all potentially contaminated soils.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Ammonium perchlorate and decomposition products.^{281/}

C. COMMENTS:

- The KMCC Draft Report indicates that soil contaminated as a result of the fire was "removed, placed into drums, and hauled off-site for disposal"^{282/} The Draft Report does not identify whether sampling activities were performed to verify the removal of all soil contaminated at levels of concern.

^{278/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{279/} KMCC Draft Report at 6-25.

^{280/} KMCC Draft Report at 6-25.

^{281/} KMCC Draft Report at 6-26.

^{282/} KMCC Draft Report at 6-27.

56. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Area Old Building D-1 -- Washdown

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to evaluate potential soil contamination in the area outside the building.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Ammonium perchlorate.^{283/}

C. COMMENTS:

- Contaminated washwater "drains onto the soil adjacent to the asphalt" outside the building.^{284/}

57. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Area New Building D-1 -- Washdown

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Ammonium perchlorate.^{285/}

C. COMMENTS:

^{283/} KMCC Draft Report at 6-27.

^{284/} KMCC Draft Report at 6-27.

^{285/} KMCC Draft Report at 6-28.

- The building was used for only six months for ammonium perchlorate operations.^{286/}
- No evidence of a release from the building and surrounding asphalt pavement was identified.^{287/}

58. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

AP Plant Transfer Lines to Sodium Chlorate Process

A. RECOMMENDATION:

No further evaluation of these lines appears necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Solutions of sodium chloride and sodium hypochlorite.^{288/}

^{286/} KMCC Draft Report at 6-28.

^{287/} KMCC Draft Report at 6-29.

^{288/} KMCC Draft Report at 6-32.

C. COMMENTS:

- The transfer lines are above-ground and inspected regularly.^{289/} Leaks are promptly repaired when they are "pinhole-size."^{290/} The KMCC Draft Report indicates that the lines historically have not been the source of any large releases.^{291/}

59. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Storm Sewer System

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the storm sewer system and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

"[S]torm water and process effluent from throughout the southern portions of the site"^{292/}

C. COMMENTS:

- The system was installed in 1941 and 1942.^{293/} In general, the Draft Reports present very little information regarding the configuration, engineered features, outfalls, and release history of the storm sewer system. It is evident

^{289/} KMCC Draft Report at 6-33.

^{290/} KMCC Draft Report at 6-33.

^{291/} KMCC Draft Report at 6-33.

^{292/} KMCC Draft Report at 7-10.

^{293/} KMCC Draft Report at 7-10.

from the Draft Reports, however, that substantial volumes of potentially contaminated stormwater and industrial wastewaters have been conveyed historically by the storm sewer system over nearly a four decade period. In sum, considerable additional work is necessary in either Phase 1 or Phase 2 on a BMI Complex-wide basis to delineate the storm sewer system, to identify the specific waste streams conveyed by discrete segments or sub-networks of the sewer system, to assess potential environmental contamination associated with the system, and to evaluate the need to implement appropriate remedial measures.

60. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Acid Drain System

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the acid drain system and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

"[A]cid effluent from throughout the BMI Complex"^{294/}

C. COMMENTS:

- The system was installed in 1941 and 1942.^{295/} In general, the Draft Reports present very little information regarding

^{294/} KMCC Draft Report at 7-12.

^{295/} KMCC Draft Report at 7-13.

the configuration, engineered features, outfalls, and release history of the acid drain system. It is evident from the Draft Reports, however, that substantial volumes of industrial wastewaters were conveyed historically by the acid sewer system over the period 1941 to 1976. In sum, considerable additional work is necessary in either Phase 1 or Phase 2 on a BMI Complex-wide basis to delineate the acid sewer system, to identify the specific waste streams conveyed by discrete segments or sub-networks of the sewer system, to assess potential environmental contamination associated with the system, and to evaluate the need to implement appropriate remedial measures.

61. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Old Sodium Chlorate Plant Decommissioning

A. RECOMMENDATION:

No further evaluation of this process appears necessary in either Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Sodium chlorate process production equipment.^{296/}

C. COMMENTS:

- Waste generated during the decommissioning process was cleaned and transported off-Site for disposal or recycling.^{297/}

^{296/} KMCC Draft Report at 7-15.

^{297/} KMCC Draft Report at 7-15.

62. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

State Industries, Inc. Site, Including Impoundments and Catch Basin

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the site and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Paint, paint thinner, sulfuric acid, soda ash, borax, "fabrication lubricant," "gear lubricant," phosphate chemicals, cyanide.^{298/}

C. COMMENTS:

- Kerr-McGee acknowledges that that this area should be studied in Phase 2.^{299/}
- State Industries operated two single-lined impoundments at the site, which leaked historically.^{300/} The KMCC Draft Report indicates that limited characterization information is available regarding the specific wastes managed in the impoundments and the regulatory status of the units.^{301/}
- No information apparently was identified regarding the "closure" of the "western" impoundment.^{302/} Closure of the

^{298/} KMCC Draft Report at 7-16 to 7-17.

^{299/} Kerr-McGee Chemical Corporation, Henderson Nevada Facility, "Recommendations" (August 26, 1992).

^{300/} KMCC Draft Report at 7-17 to 7-19.

^{301/} KMCC Draft Report at 7-18.

^{302/} KMCC Draft Report at 7-20.

"eastern" impoundment entailed simply mixing soil with pond contents to raise the area to existing grade.^{303/} The KMCC Draft Report states that "an engineered protective cover appropriate for the waste may not have been placed" on the eastern impoundment at the time of closure.^{304/}

- The KMCC Draft Report does not describe the specific industrial processes engaged in by State Industries. Thus, the above list of hazardous substances potentially associated with the site cannot be considered exhaustive. Additional information in this regard should be developed in Phase 1 or Phase 2.

63. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

J.B. Kelley, Inc. Trucking Site

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the site and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Waste oil, lime, soda ash, barite, magnesium chloride brine, ferric chloride, hydrochloric acid, sodium hydrosulfide, sodium hydroxide, titanium tetrachloride.^{305/}

^{303/} KMCC Draft Report at 7-20.

^{304/} KMCC Draft Report at 7-20.

^{305/} KMCC Draft Report at 7-22.

C. COMMENTS:

- Truck washing operations were conducted either on unbermed concrete pads or "in a soil and concrete covered area."^{306/} The soil in the vicinity of these areas is potentially contaminated.
- The underground concrete vaults used for the disposal of truck rinsate were not designed for this function.^{307/} Liquids and sludges are present in the vaults.^{308/} The subsurface in the vicinity of the vaults potentially is contaminated.
- The two underground storage tanks located at the site are known "to have leaked."^{309/} The ongoing soil remediation activities should be completed promptly and the contaminated excavated soil disposed appropriately.^{310/}

64. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Koch Materials Company Site

A. RECOMMENDATION:

Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination

^{306/} KMCC Draft Report at 7-22.

^{307/} KMCC Draft Report at 7-22.

^{308/} KMCC Draft Report at 7-24.

^{309/} KMCC Draft Report at 7-23.

^{310/} KMCC Draft Report at 7-23.

associated with the site and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

"[P]etroleum hydrocarbon related materials including heavy oils/tars."^{311/}

C. COMMENTS:

- The KMCC Draft Report indicates that "housekeeping practices could be improved," that tanks at the site are not equipped with secondary containment, that the soil is "visibly stained" at several locations (including one "large area"), that "several of the storage tanks currently sit directly on the ground," that such tanks apparently have released "constituents" to "surrounding surface soils," and that a "standing pool of liquid resembling oil and water" is located on the site.^{312/}

65. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Nevada Precast Concrete Products, Green Ventures International, Buckles Construction Company, and Ebony Construction Company Sites

A. RECOMMENDATION:

With the minor exception noted below, no further evaluation of these sites appears to be necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
NOT APPLICABLE.

^{311/} KMCC Draft Report at 7-26.

^{312/} KMCC Draft Report at 7-26 to 7-27.

C. COMMENTS:

- The KMCC Draft Report indicates that the activities of the tenants listed above did not involve the management of hazardous substances.^{313/}
- The observed surface soil oils stains observed north of Unit 1 should be remediated.^{314/}

66. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Above-Ground Diesel Storage Tank Leased By Flintkote Co.

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to verify that the soil in the area of the former tank location is not significantly contaminated.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Diesel fuel.^{315/}

C. COMMENTS:

- The KMCC Draft Report indicates that no information was identified "to suggest the presence or absence of environmental impacts."^{316/}

67. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Delbert Madsen and Estate of Delbert Madsen Site

^{313/} KMCC Draft Report at 7-27 to 7-30.

^{314/} KMCC Draft Report at 7-29.

^{315/} KMCC Draft Report at 7-30.

^{316/} KMCC Draft Report at 7-30.

A. RECOMMENDATION:

Minor Phase 1 or Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the site and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Petroleum hydrocarbons, asbestos, batteries.^{317/}

C. COMMENTS:

- The KMCC Draft Report indicates that the site is littered with "numerous old buildings on blocks, numerous vehicles, automobile gas tanks, batteries, and 55-gallon drums."^{318/} Asbestos-containing building materials may be present at the site.^{319/}

68. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Southern Nevada Auto Parts Site

A. RECOMMENDATION:

Minor Phase 1 or Phase 2 data gathering and analysis is necessary to evaluate the nature and extent of environmental contamination associated with the site and to assess the need to implement appropriate remedial measures.

^{317/} KMCC Draft Report at 7-31.

^{318/} KMCC Draft Report at 7-31.

^{319/} KMCC Draft Report at 7-31.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
Motor oil, gasoline, anti-freeze, battery acids.^{320/}

C. COMMENTS:

- Soil staining is visible in various areas of the site.^{321/}

69. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Dillon Potter Site

A. RECOMMENDATION:

No further evaluation of this area appears necessary in
Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):
NOT APPLICABLE.

C. COMMENTS:

- The site is used to maintain a limited number of
livestock.^{322/}

^{320/} KMCC Draft Report at 7-32.

^{321/} KMCC Draft Report at 7-32.

^{322/} KMCC Draft Report at 7-32.

- The impoundment is a potential source of groundwater contamination.^{164/}

20. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond C-1 and Associated Piping, SWMU KMCC-011

A. RECOMMENDATION:

Additional work is necessary in either Phase 1 or Phase 2 to evaluate the release history of this unit and to develop and implement a closure plan.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese dioxide cathode wash solution: calcium, magnesium, manganese from cathode scale, "tank mud," "cell sludge";^{165/} **manganese dioxide product wash water:** manganese dioxide, "heavy metal sulfides," manganese sulfate;^{166/} **sodium hexametaphosphate solution from electrode cleaning in manganese dioxide process;**^{167/} **boron process neutralization tank waste solution:** sodium carbonate, magnesium sulfate, sodium borate, sodium sulfate;^{168/} **high boiling compound waste that collects in boron trichloride and tribromide distillation column:** silicon tetrachloride, silicon tetrabromide, "high boiling compounds";^{169/} **scrubber liquid and reboiler waste streams from boron trichloride and tribromide processes:** sodium hexametaphosphate, neutralized sulfuric acid, manganese, sodium, sulfite and borate ions;^{170/} **boiler blowdown, backwash and regeneration water from the water softeners, sludge bed blowdown from the hot process softener, and**

^{164/} KMCC Draft Report at 6-32.

^{165/} KMCC Draft Report at 4-40, Table C-1 (App. C).

^{166/} KMCC Draft Report at 4-41, Table C-1 (App. C).

^{167/} KMCC Draft Report at 4-41.

^{168/} KMCC Draft Report at 4-52, Table C-1 (App. C).

^{169/} KMCC Draft Report at 4-56 to 4-57, 4-61.

^{170/} KMCC Draft Report at 4-57 to 4-58, 4-61, Table C-1 (App. C).

miscellaneous pump seal flushes generated in the steam plant: elevated concentrations of sodium, calcium, magnesium.^{171/}

C. COMMENTS:

- The KMCC Draft Report indicates that "closure of this SI is now planned for 1993."^{172/} The closure of this unit should be integrated into Phase 2.
- The Draft Report states that the impoundment is a potential source of downgradient groundwater contamination.^{173/}
- The KMCC Draft Report does not identify the location, engineered features or release history of the conveyance facilities associated with the impoundment.
- The KMCC Draft Report does not identify the disposal location for the manganese dioxide cathode wash solution prior to 1975. This issue should be clarified.

21. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond Mn-1 and Associated Piping

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to clarify the release history of the impoundment.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese dioxide cathode wash solution: calcium, magnesium, manganese from cathode scale, "tank mud," "cell

^{171/} KMCC Draft Report at 4-64 to 4-66.

^{172/} KMCC Draft Report at 5-28.

^{173/} KMCC Draft Report at 5-29.

sludge";^{174/} sodium hexametaphosphate solution from electrode cleaning in manganese dioxide process;^{175/} calcine belt filter washwater generated in manganese dioxide process: potassium, potassium phosphate, sodium hexametaphosphate, manganese, "other constituents."^{176/}

C. COMMENTS:

- Pond Mn-1 has been in operation since May 1983.^{177/} Apparently, the KMCC Draft Report bases its conclusions regarding the release history of this impoundment exclusively on a review of discharge monitoring reports for the period June 1990 to November 1991.^{178/} Minor additional work is necessary in Phase 1 or Phase 2 to identify the release history of this unit for the period 1983 to 1990.

22. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond WC-1 and Associated Piping, SWMU KMCC-015

A. RECOMMENDATION:

No further evaluation of this impoundment appears to be necessary in Phase 1 or Phase 2.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Manganese dioxide product wash water: manganese dioxide, "heavy metal sulfides," manganese sulfate;^{179/} **manganese**

^{174/} KMCC Draft Report at 4-40, Table C-1 (App. C).

^{175/} KMCC Draft Report at 4-41.

^{176/} KMCC Draft Report at 4-46, Table C-1 (App. C).

^{177/} KMCC Draft Report at 5-30.

^{178/} KMCC Draft Report at 5-32.

^{179/} KMCC Draft Report at 4-41, Table C-1 (App. C).

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Cakes/muds generated in process filtration steps in sodium chlorate process: diatomaceous earth, sodium chlorate, sodium carbonate, calcium sulfate, sodium chloride, hexavalent chromium, trivalent chromium, calcium carbonate.^{122/}

C. COMMENTS:

- The KMCC Draft Report notes that the existing hazardous waste drying and storage area "was built over the same location as the former drying pad."^{123/} No information is provided in the KMCC Draft Report regarding the specific containment features, condition and release history of the original area. The Draft Report does not indicate whether any sampling activities were performed following the removal of the original pad to determine whether contamination was present at levels of concern.
- The KMCC Draft Report does not identify the disposal location for the demolition debris associated with removal of the original pad. This issue should be clarified in either Phase 1 or Phase 2.

12. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Hazardous Waste Storage Area, SWMU KMCC-006

A. RECOMMENDATION:

No further evaluation of this area appears necessary in Phase 1 or Phase 2.

^{122/} KMCC Draft Report at 4-9, Table C-1 (App. C).

^{123/} KMCC Draft Report at 5-9.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Cakes/muds generated in process filtration steps in sodium chlorate process: diatomaceous earth, sodium chlorate, sodium carbonate, calcium sulfate, sodium chloride, hexavalent chromium, trivalent chromium, calcium carbonate.^{124/}

C. COMMENTS:

- Waste stored in this area is containerized. The area is equipped with secondary containment. There is no evidence of a release from the area. Spilled material is promptly swept up or washed down and recycled into the process stream. The area is regulated under RCRA and the NHWDL.^{125/}

13. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

{ Pond S-1

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to clarify whether the 1985 "clean closure" of the impoundment addressed all appropriate contaminants.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

"Mother liquor" and filter cake waste slurry generated in potassium chlorate process: WASTE STREAMS NOT SEPARATELY CHARACTERIZED (the Draft Report does indicate that, in general, potassium chlorate production waste streams contained sodium chloride, potassium chloride, sodium chlorate, potassium chlorate);^{126/} **brine rinse and washwater from water softeners in sodium perchlorate**

^{124/} KMCC Draft Report at 4-9, Table C-1 (App. C).

^{125/} KMCC Draft Report at 5-14.

^{126/} KMCC Draft Report at 4-14, Table C-1 (App. C).

process: NO CHARACTERIZATION INFORMATION PROVIDED;^{127/}
filter cakes and centrifuge "mother liquor" from potassium perchlorate process: diatomaceous earth, potassium perchlorate, potassium chloride, sodium chloride, sodium perchlorate, sodium carbonate, calcium carbonate, chromium;^{128/} **filter cake and process area washdown waste from magnesium perchlorate process:** NO CHARACTERIZATION INFORMATION PROVIDED;^{129/} **boron leach liquor filtrate:** boron, magnesium sulfate, sodium sulfate, sodium borate, neutralized sulfuric acid, neutralized boric acid;^{130/} **scrubber liquid and reboiler waste streams from boron trichloride and tribromide processes:** sodium hexametaphosphate, neutralized sulfuric acid, manganese, sodium, sulfite and borate ions.^{131/}

C. COMMENTS:

- The KMCC Draft Report states that the impoundment "was closed in conformance with the intent of the approved closure plan."^{132/} The inclusion of the phrase "with the intent" in this sentence requires clarification.
- Minor additional work is necessary in Phase 1 or Phase 2 to evaluate whether the 1985 interim status closure of the unit is "equivalent" to the amended RCRA closure standard pursuant to 40 C.F.R. § 270.1(c).

14. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond P-1, and Associated Conveyance Piping

^{127/} KMCC Draft Report at 4-20, Table C-1 (App. C).

^{128/} KMCC Draft Report at 4-24 to 4-25, Table C-1 (App. C).

^{129/} KMCC Draft Report at 4-28, Table C-1 (App. C).

^{130/} KMCC Draft Report at 4-52 to 4-53, Table C-1 (App. C).

^{131/} KMCC Draft Report at 4-57 to 4-58, 4-61, Table C-1 (App. C).

^{132/} KMCC Draft Report at 5-76 (emphasis added).

A. RECOMMENDATION:

Minor additional work is necessary in Phase 1 or Phase 2 to clarify whether the 1985 "clean closure" of the impoundment addressed all appropriate contaminants.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

"Mother liquor" and filter cake waste slurry generated in potassium chlorate process: WASTE STREAMS NOT SEPARATELY CHARACTERIZED (the Draft Report does indicate that, in general, potassium chlorate waste streams contained sodium chloride, potassium chloride, sodium chlorate, potassium chlorate);^{133/} **brine rinse and washwater from water softeners in sodium perchlorate process:** NO CHARACTERIZATION INFORMATION PROVIDED;^{134/} **filter cakes and centrifuge "mother liquor" from potassium perchlorate process:** diatomaceous earth, potassium perchlorate, potassium chloride, sodium chloride, sodium perchlorate, sodium carbonate, calcium carbonate, chromium;^{135/} **filter cake and process area washdown waste from magnesium perchlorate process:** NO CHARACTERIZATION INFORMATION PROVIDED;^{136/} **boron leach liquor filtrate:** boron, magnesium sulfate, sodium sulfate, sodium borate, neutralized sulfuric acid, neutralized boric acid;^{137/} **scrubber liquid and reboiler waste streams from boron trichloride and tribromide processes:** sodium hexametaphosphate, neutralized sulfuric acid, manganese, sodium, sulfite and borate ions;^{138/} **residual salt solutions and rinsates generated during the decommissioning and closure of Pond S-1.**^{139/}

^{133/} KMCC Draft Report at 4-14, Table C-1 (App. C).

^{134/} KMCC Draft Report at 4-20, Table C-1 (App. C).

^{135/} KMCC Draft Report at 4-24 to 4-25, Table C-1 (App. C).

^{136/} KMCC Draft Report at 4-28, Table C-1 (App. C).

^{137/} KMCC Draft Report at 4-52 to 4-53, Table C-1 (App. C).

^{138/} KMCC Draft Report at 4-57 to 4-58, 4-61, Table C-1 (App. C).

^{139/} KMCC Draft Report at 5-78.

C. COMMENTS:

- The KMCC Draft Report states that the impoundment "was closed in conformance with the intent of the approved closure plan."^{140/} The inclusion of the phrase "with the intent" in this sentence requires clarification.
- Minor additional work is necessary in Phase 1 or Phase 2 to evaluate whether the 1985 interim status closure of the unit is "equivalent" to the amended RCRA closure standard pursuant to 40 C.F.R. § 270.1(c).

15. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Platinum Drying Unit, SWMU KMCC-007

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with this area and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Cell bottoms and filter washings generated in sodium perchlorate process: diatomaceous earth, platinum, chromium, sodium chloride, sodium perchlorate, sodium carbonate, calcium carbonate.^{141/}

C. COMMENTS:

- The area is not equipped with a secondary containment system.^{142/}

^{140/} KMCC Draft Report at 5-80 (emphasis added).

^{141/} KMCC Draft Report at 4-20, Table C-1 (App. C).

^{142/} KMCC Draft Report at 5-15.

- The KMCC Draft Report indicates that the "soil surrounding this drying unit showed some staining with a white crystalline substance similar to the white crystalline material within the drying unit."^{143/}
- The KMCC Draft Report does not indicate the condition of the entire floor of the unit.^{144/}
- The Draft Report states that the "area may not be of adequate size or design for the current use."^{145/}

16. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Ponds AP-1 and AP-2, and Associated Transfer Lines

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with the impoundments and associated transfer lines and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Filter slurry or cakes or wash liquor from purification stages in ammonium perchlorate process: diatomaceous earth, chromium, chromic hydroxide, calcium carbonate, calcium sulfate, magnesium sulfate;^{146/} dissolving tank, dryer feed screw, cyclone dust generated in ammonium perchlorate

^{143/} KMCC Draft Report at 5-15.

^{144/} KMCC Draft Report at 5-15.

^{145/} KMCC Draft Report at 5-17.

^{146/} KMCC Draft Report at 4-33, Table C-1 (App. C).

process: ammonium perchlorate, sodium chloride, sodium perchlorate, chromic hydroxide, ferric hydroxide.^{147/}

C. COMMENTS:

- The impoundments have leaked historically.^{148/}
- Soils are "visibly stained along portions of the transfer lines"^{149/}
- The impoundments are potential sources of groundwater contamination.^{150/}

17. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond AP-3 and Associated Transfer Lines

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with the impoundment and associated transfer lines and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Supernatant liquid from Ponds AP-1 and AP-2;^{151/} **sodium perchlorate and ammonium process purification filter wash liquor:** NO CHARACTERIZATION INFORMATION PROVIDED;^{152/} **dissolving tank, dryer feed screw, cyclone dust generated in ammonium perchlorate process:** ammonium perchlorate, sodium

^{147/} KMCC Draft Report at 4-35 to 4-36.

^{148/} KMCC Draft Report at 6-30.

^{149/} KMCC Draft Report at 6-31.

^{150/} KMCC Draft Report at 6-32.

^{151/} KMCC Draft Report at 4-35.

^{152/} KMCC Draft Report at 4-35.

chloride, sodium perchlorate, chromic hydroxide, ferric hydroxide.^{153/}

C. COMMENTS:

- The impoundment has leaked historically.^{154/}
- Soils are "visibly stained along portions of the transfer lines"^{155/}
- The impoundment is a potential source of groundwater contamination.^{156/}

18. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond AP-4

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with the impoundment and associated transfer lines and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

**Sodium chloride crystal washwater from ammonium perchlorate process: NO CHARACTERIZATION INFORMATION PROVIDED;^{157/}
"unusual flows" from the ammonium perchlorate cooling towers: ammonium perchlorate, sodium chloride;^{158/} salt crystallizer washout and "minor flows" from the ammonium**

^{153/} KMCC Draft Report at 4-35 to 4-36.

^{154/} KMCC Draft Report at 6-30.

^{155/} KMCC Draft Report at 6-31.

^{156/} KMCC Draft Report at 6-32.

^{157/} KMCC Draft Report at 4-33.

^{158/} KMCC Draft Report at 4-35 to 4-36.

perchlorate process: NO CHARACTERIZATION INFORMATION PROVIDED.^{159/}

C. COMMENTS:

- Soils are "visibly stained along portions of the transfer lines"^{160/}
- The impoundment is a potential source of groundwater contamination.^{161/}

19. AREA, UNIT, CONVEYANCE, RELEASE OR ISSUE OF CONCERN:

Pond AP-5

A. RECOMMENDATION:

Additional work is necessary in Phase 1 or Phase 2 to evaluate the potential nature and extent of environmental contamination associated with the impoundment and associated transfer lines and to assess the need to implement appropriate remedial measures.

B. RELEVANT WASTE STREAM(S) AND/OR HAZARDOUS SUBSTANCE(S):

Flows from the ammonium perchlorate cooling tower: ammonium perchlorate, sodium chloride.^{162/}

C. COMMENTS:

- Soils are "visibly stained along portions of the transfer lines"^{163/}

^{159/} KMCC Draft Report at 4-35.

^{160/} KMCC Draft Report at 6-31.

^{161/} KMCC Draft Report at 6-32.

^{162/} KMCC Draft Report at 4-35 to 4-36.

^{163/} KMCC Draft Report at 6-31.

Department of Conservation and Natural Resources
Division of Environmental Protection

R E C E I P T

KERR-MCGEE CHEMICAL CORPORATION

Receipt Number 000747
Receipt Date 06/01/1992

KERR-MCGEE CENTER
OKLAHOMA CITY, OK 73125 3125

This letter acknowledges receipt of check number 549321 dated
05/27/1992 in the amount of \$13800.00.

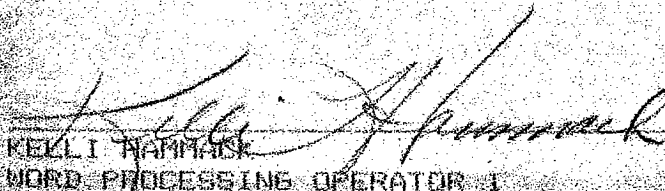
Program: WASTE MANAGEMENT

Fee Description:

Amount: 13,800.00

CIVIL PENALTIES

Alene,
Is This Enforcement
penalty? Jeff


KELLI NAMIAS
WORD PROCESSING OPERATOR I

*Doug said
OK.*

KM file



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

JUN -4 92

May 29, 1992

Mr. Douglas Martin
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Martin:

Subject: Notice of Alleged Violation and Order
Dated December 17, 1991
Certification Status Update

Kleinfelder, Inc. has completed their review of information developed through sampling and investigation of the subject Hazardous Waste Storage Tank.


During a brief meeting on 5-20-92, Kleinfelder informed KMCC of those items to be added in order to satisfy the requirements in the outline in the March 13, 1992 correspondence to NDEP.

KMCC will require approximately 30 days to:

- 1) Install a roll-over berm with a water stop.
- 2) Coat the surface of the tank.
- 3) Amend the as-built drawings to reflect the modifications.

Should you have any questions, please contact Alan J. Gaddy at 702-565-8901.

Sincerely,


Patrick S. Corbett
Plant Manager

PSC:j

Certified mail No. P 775 819 819

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

K-M file

L. H. DO
Administ

Administration	(702) 687-4670
Air Quality	687-5065
Mining Regulation and Reclamation	687-4670
Waste Management	687-5872
Federal Facilities	687-3880



Chemical Hazards Management	687
Water Pollution Control	687
Water Quality Planning	687
FAX	885

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane
Carson City, Nevada 89710

May 21, 1992

MEMORANDUM

TO: Brian Chally
Deputy Attorney General

FROM: Lew Dodgion
Administrator

THROUGH: Verne Rosse, Deputy Administrator *WR*
Steven J. Onysko, Chief *sgo*
Waste Management Bureau

Subject: Kerr-McGee Chemical Corporation

On May 12, 1992, Mr. John Stauter, Kerr-McGee Chemical Corporation, called to confirm that Kerr-McGee has agreed to accept a negotiated settlement of \$13,800, to resolve the violations noted on the Finding of Alleged Violation dated December 17, 1991.

Please complete the appropriate court documents to enter into a Consent Decree with Kerr-McGee Chemical Corporation and file the documents with the court.

Please address a draft Consent Decree to Mr. Pat Corbett, Facility Manager, Kerr-McGee Chemical Corporation, P.O. Box 55, Henderson, Nevada, 89015. A copy of the signed Consent Decree should be provided to Alene Coulson, Waste Management Bureau, Enforcement Branch.

cc: Alene Coulson



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

May 7, 1992

Mr. Jeffery Denison
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Denison:

Subject: Late Submittal of Phase I Draft Report

Attached is KMCC check #541621 in the amount of \$2400.00 as payment in full of stipulated penalties incurred as a result of delayed submission of the KMCC ECA Report. This penalty is paid under protest.

In support of KMCC's protest, I enclose a copy of correspondence received from Airborne, confirming that KMCC delivered the ECA package to Airborne for next day delivery to NDEP on March 16, 1992. This correspondence confirms that the package was delayed at an in-transit pickup point and did arrive at NDEP on March 18.

The results of this investigation show clearly that KMCC submitted the package to Airborne in a timely manner for delivery. Delayed delivery by a third party carrier is clearly an event arising from causes not reasonably foreseeable and beyond the reasonable control of KMCC, which could not be overcome by due diligence. As such, we submit that payment of stipulated penalties should be excused in accordance with the Consent Agreement at paragraph 7 regarding Force Majeure and Excusable Delay.

We request that you reconsider your determination that penalties are due on this delay.

Sincerely,

A handwritten signature in cursive script, appearing to read "Patrick S. Corbett".

Patrick S. Corbett
Plant Manager

PSC:j

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management 687-5872
Federal Facilities 687-3880



Chemical Hazards Management 687-5872
Water Pollution Control 687-4670
Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane
Carson City, Nevada 89710

May 6, 1992

Mr. Alan Gaddy
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89009

RE: Division comments on Phase I Draft Report.

Dear Mr. Gaddy:

Attached are the Division's comments based on the review of the Phase I Draft Report.

In general, the Division is pleased with the effort that has gone into preparing the report thus far. However, it is felt that the quality and usefulness of the report will be improved by addressing the issues included as comments with this letter. These comments should be addressed in the revised draft of the Phase I report as stipulated by Task 14 of the Consent Agreement schedule.

If you have questions regarding these comments, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Jeffrey C. Denison".

Jeffrey C. Denison
Supervisor
RCRA Facilities Branch

JCD:klh

Enclosure

MAY 6, 1992

COMMENTS ON THE MARCH 16, 1992 DRAFT PHASE 1
ENVIRONMENTAL CONDITIONS ASSESSMENT REPORT
KERR-McGEE CHEMICAL CORPORATION

NO.	REPORT REFERENCE § (Page)	COMMENT
1	§§ 1.0.(1-2); 2.3.1.(2-6).	Identify the reason access to files was not granted at the Desert Research Institute and the U.S. EPA Environmental Monitoring Systems Laboratory. Explain activities undertaken to secure approval from EPA for access to relevant files of these entities.
2	§ 2.3.1.(2-6).	Provide as an appendix to the Report a log of interviews conducted.
3	App. A.	Identify each reference by title or by a brief description of the general subject matter of the reference.
4	§ 3.1.1.(3-3).	Provide data showing the location and nature of the referenced "main electrical substations."
5	§ 3.1.3.(3-6).	Provide the information required by Sections 2(b)(i) and 2(c) of the Consent Agreement for the activities of Valite Industries at the Site.
6	§ 3.1.3.(3-6).	Provide the information required by Sections 2(b)(i) and 2(c) of the Consent Agreement for the activities of Hardesty Chemical Company at the Site.
7	§ 3.1.4.(3-7).	Provide additional data which identifies on a parcel-by-parcel basis the lease and purchase transactions resulting in the current configuration of the Site under KMCC's ownership.
8	§§ 3.1.4; 3.1.5.	Integrate the discussion regarding the waste generation and management practices of Western Electrochemical Company ("WECCO"), American Potash and Chemical Corporation ("APCC") and KMCC into the appropriate subsections of Sections 4 and 5.

9	§ 3.1.4.(3-9, 3-10).	The draft Report states that "reliable numbers" for the amount of perchlorate solid waste disposed in the BMI ponds is not available because "perchlorate solids were not measurable in the liquid waste streams (because they were soluble)" Provide data regarding the characterization and volumes generated of the solubilized perchlorate solids waste stream.
10	§ 3.1.4.(3-9 to 3-10); Table 3.1.5.	The text indicates that APCC commenced production activities at the Site in 1955. Table 3.1.5., however, summarizes waste information starting in 1956. Clarify this apparent inconsistency.
11	Table 3.1.6.(3-11).	Identify the "other inorganic chemicals" referenced in the Table which were produced at the Site. Provide the information required by Sections 2(b)(i) and 2(c) of the Consent Agreement for any such chemical produced at the Site in an aggregate amount equal to or in excess of one ton.
12	§ 4 generally; Table C-1.	For each waste stream discussed, provide information regarding the annual volume of waste generated. If available records do not specify the quantities of waste that were generated, provide estimates based upon all relevant available data.

13	§ 4 generally.	For each waste stream discussed, identify whether the waste stream meets the listing description of any "characteristic" or "listed" hazardous waste under the Resource Conservation and Recovery Act ("RCRA") or the Nevada Hazardous Waste Disposal Law ("NHWDL") and their respective implementing regulations. It is the position of both EPA and NDEP that hazardous waste listings under RCRA and the NHWDL apply to wastes whose management ceased prior to the effective date of the rule listing or identifying them as hazardous. <u>See, e.g.,</u> 56 Fed. Reg. 30,192, 30,193 (1991). Address separately any waste stream generated following the installation of any treatment facility or the implementation of a significant industrial process modification.
14	§ 4 generally.	Explain in detail the basis for the characterization of each identified waste stream. Identify and discuss any available characterization analyses or data.
15	§§ 4, 5 generally.	The draft Report regularly refers to the same waste stream by several different names. Revise the Report to use consistent terminology when discussing a particular waste stream.
16	§ 4 generally.	For each industrial process discussed, explain the incidence of production of off-specification product. Identify all incidents involving the production of off-specification product and the disposition of such product. Identify the post-production management or disposal practices associated with off-specification product.

17	§ 4 generally.	The draft Report regularly identifies waste streams in the description of an industrial process but fails to address the waste streams in the characterization subsection. For example a wash water waste stream is identified in the description of the manganese dioxide process in Section 4.8.3.(4-41). This waste stream is not mentioned in the characterization discussion in Section 4.8.4.(4-41). Revise the Report to provide characterization information for each identified waste stream in the appropriate waste stream characterization subsection included for each identified industrial process.
18	§ 4, 5 generally.	With respect to each waste management impoundment, identify any periodic or episodic sludge removal activities, and the disposition of such material.
19	§ 4 generally.	As required by Section 2(c)(i) of the Consent Agreement, provide characterization information regarding the air pollutant waste streams associated with each identified industrial process. As discussed by NDEP in our correspondence dated June 21, 1991, "[e]mphasis should be placed on those [air] releases that are characterized as depositional in nature in which particulate fallout or fugitive emissions may have contributed to surface contamination at the BMI site or surrounding area"
20	§ 4 generally.	For each industrial process identified, provide data indicating the present or former locations and nature of all major external: (1) raw material storage facilities or units; (2) intermediate product storage, processing or staging facilities or units; and (3) final product storage, processing, staging or transportation facilities (together with associated conveyance facilities, e.g., underground piping).

21	§ 4 generally.	Identify any disposal on-Site, in any BMI Common Area, or in any off-Site Waste Management Area, as these terms are defined in Section 1 of the Consent Agreement, of any process-related manufacturing equipment, PCB-containing equipment, or structural demolition debris.
22	§ 4.0.(4-1); Table 3.1.6.(3-11).	Resolve the inconsistency between Section 4.0. and Table 3.1.6. regarding the year in which KMCC ceased producing potassium chlorate.
23	§ 4.1.3.(4-7 to 4-8); Table C-1.	The text indicates on page 4-7 that wastes from the sodium chlorate production process have been managed from "early" 1975 to date in "on-site ponds." On page 4-8, the text indicates that these wastes were first impounded on-Site in 1978. In addition, Table C-1 identifies 1972 as the year in which KMCC commenced management of the wastes in on-Site impoundments. Further, Table C-1 identifies Ponds S-1 and P-1 as the impoundments used. The text, by contrast, identifies Old P-2 Pond, P-3 Pond and New P-2 Pond as the impoundments used. Finally, Table C-1 indicates that KMCC ceased impounding sodium chlorate liquid wastes in 1983. The text, however, indicates that New P-2 Pond continues to be used for this purpose. Resolve these inconsistencies.
24	§ 4.1.4.(4-9).	Identify how the filter cake waste stream was managed on-Site prior to off-Site disposal for the period February 1983 to 1990.
25	§§ 4.2.1.(4-12); 4.2.3.(4-13); Table 3.1.6.(3-11).	Resolve the inconsistency between the text and Table 3.1.6. regarding the year in which KMCC ceased producing potassium chlorate.
26	§§ 4.2.3.(4-13); 4.2.4.(4-14); Table C-1.	Resolve the inconsistency between the Sections and Table C-1 regarding the year in which KMCC began using Ponds S-1 and P-1, i.e., 1972, "the early to mid-1970's," or 1974.

27	§§ 4.2.3.(4-13); 4.2.4.(4-14).	Clarify whether "process vessel overflow solutions" and "process solution in the form of mother liquor" refer to the same waste stream.
28	§ 4.4.3.(4-19); Table C-1.	The text indicates that "liquid wastes" were disposed in the BMI ponds from 1945 to January 1976. Table C-1 indicates that this waste stream was disposed in the BMI ponds from 1951 to 1976. Further, the text indicates that this waste stream was disposed in Ponds S-1 and P-1 from 1976 to 1983. Table C-1, however, identifies the relevant time period as 1972 to 1983. Resolve these inconsistencies.
29	§ 4.4.4.(4-20); Table C-1.	The text indicates that the cell bottom/filter cake waste stream has been generated since 1945. Table C-1, however, indicates that this waste stream was not generated prior to 1974. Resolve these inconsistencies.
30	§ 4.4.4.(4-20).	Explain whether "filter cakes" and "cell bottoms" refer to the same waste stream.
31	§ 4.5.3.(4-24 to 4-25); Table C-1.	The text indicates that "liquid wastes" from the potassium perchlorate process were discharged to Ponds S-1 and P-1 from January 1976 to 1983. Table C-1, however, identifies the relevant time period as 1972 to 1983. Resolve this inconsistency.
32	§ 4.5.4.(4-25).	The Section identifies "filter cakes" as the only waste stream generated in the process. Section 4.5.3.(4-24), however, identifies an additional "liquid" waste stream. Revise the Section accordingly. If "filter cakes" and "liquid wastes" refer to the same waste stream, revise the text accordingly.
33	§ 4.5.3.(4-25); Table C-1; Table 3.1.6.(3-11).	Resolve the inconsistent references to the year in which KMCC ceased producing potassium perchlorate, i.e., 1982 or 1983.
34	Table 4.6.1.(4-27).	Explain the apparent reference to a negative production value for magnesium perchlorate in 1976.

35	Table 4.3.1.(4-16).	Explain the apparent reference to a negative production value for Tumbleleaf Defoliant in 1983.
36	Table 4.5.1.(4-23).	Explain the apparent reference to a negative production value for potassium perchlorate in 1983.
37	§ 4.6.3.(4-28); Table 3.1.6.(3-11).	The text indicates that magnesium perchlorate was produced at the Site from 1945 to 1976. Table 3.1.6., however, identifies 1969 to 1976 as the relevant period. Resolve this inconsistency.
38	§§ 4.7.3.(4-36); 4.7.4.(4-36); Table C-1.	The "dissolving tank, dryer feed screw and cyclone dust generating" waste stream identified in Section 4.7.3. is not discussed in Section 4.7.4. Revise Section 4.7.4. accordingly. Explain whether this waste stream is the same as the "caustic scrubber solution (NaOH)" waste stream identified in Table C-1. If so, resolve the inconsistency between Section 4.7.3. and the Table regarding the year in which disposal of this waste stream in the BMI ponds ceased, i.e., January 1976 or 1974.
39	§ 4.7.4.(4-36); Table C-1; Fig. 4.7.1.(4-37).	Section 4.7.4. and Figure 4.7.1. indicate that the filter cake waste stream has been routed to Ponds AP-1, AP-2 and AP-3 since 1974. Table C-1 indicates that the waste stream also is routed to Ponds AP-4 and AP-5. Resolve this inconsistency.
40	§ 4.7.3.(4-34 to 4-35).	Identify the dates of construction and operation for Ponds AP-1 through AP-5.
41	§ 4.7.4.(4-36); Table C-1.	Table C-1 identifies the disposal of pond residues from Pond AP-2 in the BMI Landfill prior to 1980. Section 4.7.4., however, discusses the disposal of this pond residue waste stream only for the years 1983, 1989 and 1990. Revise the text accordingly. Explain why only residue from Pond AP-2, and not Ponds AP-1 and AP-3, was removed prior to 1983, as indicated in Table C-1.

42	§ 4.8.3.(4-40).	Table 3.1.6.(3-11) indicates that manganese dioxide has been produced at the Site since 1951. Section 4.8.3. and Table C-1, however, identify the management of the manganese dioxide cathode wash solution only for the period 1975 to present. Discuss the management of this waste stream for the period 1951 to 1975.
43	§ 4.8.3.(4-40); Table C-1.	The text indicates that Ponds C-1 and Mn-1 are the only impoundments used for the management of the wash solution. Table C-1, however, indicates that Ponds WC-1 and WC-2 also have been used for this purpose since 1989. Revise the text accordingly.
44	§ 4.8.3.(4-41).	Identify the on-Site impoundments used for the management of the manganese dioxide product wash water waste stream.
45	§ 4.8.4.(4-41).	Identify the referenced "other process aqueous wastes."
46	§ 4.8.4.(4-40); Table C-1.	Revise the text to address the use of on-Site Ponds WC-1 and WC-2 for the disposal of manganese dioxide wash water, as indicated in Table C-1.
47	§ 4.8.3.(4-41); Fig. 4.8.1.(4-42).	The Figure does not identify the manganese dioxide product wash water waste stream discussed in the text.
48	§ 4.9.3.(4-46).	Identify the "other constituents" present in the calcine belt filter wash water waste stream.
49	§ 4.9.3.(4-46).	Identify the period of use of barium sulfide as the precipitator. Explain how the characterization of the precipitate waste stream was affected by the conversion to the use of hydrogen sulfide.

50	§ 4.9.4.(4-46 to 4-47); Table C-1.	Section 4.9.4. indicates that the manganese dioxide leach plant currently generates a "leach acid thickener underflow sludge" waste stream, as well as a product filter cake waste stream. Table C-1, however, suggests that only the filter cake waste stream is generated currently. In addition, it is unclear from a review of Section 4.9.4. and Table C-1 whether the "manganese tailings solids" and "manganese tailings liquids" waste streams, which are identified separately in Table C-1, are the same as the leach acid thickener underflow sludge waste stream referenced in the text. Clarify these inconsistencies.
51	§ 4.9.4.(4-46); Table C-1.	The barium sulfide waste stream identified in Table C-1 is not discussed in the text. Revise the text accordingly.
52	§ 4.9.4.(4-47); Table C-1.	Figures 4.9.1.(4-48) through 4.9.3.(4-50) do not identify the use of a cathode in the manganese dioxide leach plant process, as indicated in the text. In addition, Table C-1 does not identify this waste stream. Revise the text, Figures and Table C-1 accordingly.
53	§ 4.9.4.(4-47); Table C-1.	The text does not identify the "soils impacted by anolyte ..." waste stream identified in Table C-1. Revise the text accordingly.
54	§ 4.9.4.(4-46); Fig. 4.9.1.(4-48); Table C-1.	Neither the text nor Table C-1 discusses the potassium wash water waste stream identified in Figure 4.9.1. Revise the text and Table C-1 accordingly.
55	Fig.'s 4.9.2.(4-49); 4.9.3.(4-50); § 4 generally.	The Figures identify the generation of a filter cake waste stream at two separate points in the manganese dioxide process. Throughout Section 4, revise the Report to identify any significant constituent characterization differences associated with the generation of the "same" waste stream at different points in the production process.

56	§ 4.10.4.(4-52 to 4-53); Table C-1.	Table C-1 indicates that boron leach liquor was disposed of in Pond P-1, in addition to Pond S-1 as indicated in the text. In addition, Table C-1 indicates that the boron leach liquor waste stream was generated at the Site through at least July 1990. The text implies that this waste stream was no longer generated after January 1983. Resolve these inconsistencies.
57	§ 4.10.4.(4-52 to 4-53); Table C-1.	Revise the text to discuss the "wet scrubber liquid" waste stream identified in Table C-1.
58	§ 4.11.3.(4-57).	Identify the specific periods cooling tower and reboiler wastes were discharged "first to P-1, then to S-1, and currently to C-1."
59	§ 4.11.4.(4-57 to 4-58); Table C-1.	Table C-1 does not identify the reboiler wash water or cooling tower waste streams associated with the boron trichloride process, as indicated in the text. Revise Table C-1 accordingly.
60	Fig. 4.12.1.(4-60).	Explain the apparent reference to a negative production value for boron tribromide for the years 1976, 1977, and 1990.
61	Fig.'s 4.11.1.(4-59); 4.12.1.(4-62); §§ 4.11.4.(4-57); 4.12.4.(4-61); Table C-1.	The Figures identify a filtrate waste stream and a "halide wall solid" waste stream, neither of which appears to be addressed in the corresponding text or in Table C-1. Revise the Report accordingly.

62	§ 5 generally.	<p>For each active and inactive waste management unit or area (including associated conveyance facilities), identify all releases or potential releases to any environmental media of any substance identified in Section 2(c)(iii) of the Consent Agreement, with specific reference to: (1) unit or area characteristics (e.g., the type of unit or area, design features, operating practices, the period of operation, the age, location and condition of the unit or area, and methods used to close the unit or area); (2) characteristics of the particular waste(s) managed in the unit or area (e.g., the type of waste, migration and dispersal characteristics of the waste, toxicological characteristics, and physical and chemical characteristics); (3) migration pathways; and (4) available evidence of such releases (e.g., groundwater monitoring data and sampling data). For each unit or area, the Report should identify and explain: (1) whether it is likely that the unit or area has released; (2) whether it is unlikely that the unit or area has released; or (3) any additional information or Sampling Visit data gathering that is necessary to assess the likelihood of a release.</p>
63	§ 5 generally.	<p>The draft Report regularly identifies the routine compliance activities that are conducted with respect to particular SWMUs, e.g., routine visual inspections, maintenance of records, but fails to discuss the results of such compliance activities, e.g., whether a leak was detected during a visual inspection. Provide a compliance history for each unit that is discussed in Section 5.</p>

64	§§ 4, 5 generally.	Through the inclusion of appropriate discussion and cross-references within each Section, correlate each identified waste stream generated by each industrial process, for each relevant generation period, with the appropriate conveyance facility (if applicable) and the corresponding ultimate disposal unit or area. Include data indicating the location, nature, and period of use of all such conveyance facilities (e.g., underground pipes, ditches, etc.) with specific reference to the particular wastes conveyed.
65	§ 5 generally.	Provide data regarding the location and engineered features of conveyance facilities associated with each identified SWMU, e.g., underground piping, etc.
66	§ 5.1.1.(5-1).	Identify whether SWMU KMCC-001 was used prior to November 1989.
67	§ 5.3.5.(5-7).	For each SWMU discussed, explain whether any documentary evidence of a release from the SWMU was identified during the document review. The draft Report regularly addresses only the results of the Site Reconnaissance.
68	§ 5.4.1.(5-7).	Provide an operational history for SWMU KMCC-004. For example, identify the age of the unit.
69	§ 5.5.1.(5-9).	Revise the Report to address as a separate SWMU the bermed concrete pad which was used as a hazardous waste drying and storage area for the period 1982 to 1991.
70	§ 5.6.1.(5-12).	Identify practices employed to prevent the discharge of sodium chlorate filter cake during transport by front-end loader from SWMU KMCC-005 to KMCC-006.

71	§§ 5.5.2.(5-11); 5.6.2.(5-13).	Explain the basis for the statement that the filter cake waste contains chromium "at concentrations that potentially could be greater than 5.0 ppm if this material were evaluated by EP Toxicity (EP TOX) testing criteria" in light of the later statement that EP TOX analysis of this waste stream "was not found." Address the characterization of this material pursuant to the TCLP.
72	§ 5.7.1.(5-14).	Identify how the sodium perchlorate by-product material is conveyed to SWMU KMCC-007.
73	§ 5.7.1.(5-14).	Identify the location and engineered features of the referenced "covered storage area."
74	§ 5.7.1.(5-15).	Explain how the condition of the floor of the SWMU was observed during the August 19, 1991 in light of the statement that the "unit was full of material."
75	§ 5.7.2.(5-15).	Address as a separate SWMU the process used for the incineration of the sodium perchlorate by-product prior to 1983.
76	§ 5.7.4.(5-16).	Discuss the potential migration of hazardous constituents through the floor of the unit. Identify whether the unit is equipped with secondary containment.
77	§ 5.7.4.(5-16).	Provide additional data to support the assertion that the "operating management practices for this recycling unit are such that measurable amounts of airborne migration are not likely."
78	§ 5.9.1.(5-19).	Provide data regarding the design characteristics of the referenced "unlined surface impoundments/leach beds" (including associated piping or other conveyances), e.g., capacity and dimensions, construction materials, and engineered features.
79	§ 5.9.3.(5-20).	Explain the "May 15, 1985 authorization from the NDEP." Identify the compliance history of the unit under this authorization.

80	§ 5.9.3.(5-20).	Identify the compliance history of the unit under KMCC's NPDES permit.
81	§ 5.9.4.(5-20).	Identify the "soluble constituents" which could migrate via percolation.
82	§§ 5.9.4.(5-20); 5.9.5.(5-20 to 5-21); 5.9.6.(5-21).	Revise the Sections to address the disposal of manganese tailings slurry in the unit prior to 1975.
83	§§ 5.9.1.(5-19); 5.9.6.(5-21).	The eastern diversion ditch identified in Section 5.9.6. is not discussed in Section 5.9.1. Revise the Sections accordingly.
84	§§ 5.10.1.(5-22); 4.7.4.(4-36); Table C-1.	Section 5.10.1. indicates that Pond Old P-2 received "caustic scrubber solution from the ammonium perchlorate plant." This use of Pond Old P-2 is not discussed in Section 4.7.4. or identified in Table C-1. Revise the Report accordingly.
85	§ 5.10.1.(5-22).	The text indicates that the area of Pond Old P-2 was used historically for the disposal of manganese tailings. Include an appropriate cross-reference to the discussion set forth in Section 5.22.
86	§ 5.10.3.(5-23).	Discuss the RCRA compliance history of Pond Old P-2. Identify the dates of submission of the Part A application and the Part B application. Identify and discuss the results of any groundwater monitoring. Identify and discuss the elements of the ongoing RCRA "clean closure," i.e., closure schedule, sampling parameters and results, closure standards, extent of soil removal, etc. Explain the post-closure permitting status of the unit.
87	§ 5.10.1.(5-23).	Explain the statement that "[a] limited amount of surface water run-on may flow into the excavation because there is a run-on control ditch approximately 15 feet north of a road which parallels the southern portion of this SWMU."

88	§ 5.10.6.(5-24).	Identify in additional detail the closure-related sampling and analyses which will be performed to identify any releases associated with the operation of Pond Old P-2 (including scheduling information).
89	§ 5.11.1.(5-25); Table C-1.	Table C-1 indicates that Pond C-1 also receives manganese dioxide wash water. Revise the text accordingly.
90	§ 5 generally.	Provide data showing the locations of referenced monitoring wells in relation to the location of the associated SWMU.
91	§ 5.12.2.(5-30).	Identify the referenced "other constituents."
92	§ 5.13.3.(5-33).	Identify the post-closure permitting status of the hazardous waste landfill.
93	§ 5.13.3.(5-34).	Identify the groundwater monitoring parameters and associated detection limits.
94	§ 5.13.6.(5-35).	Explain the statement that groundwater monitoring has not detected "increases" in chromium in shallow groundwater.
95	§§ 5.15.1.(5-41); 5.16.1.(5-44).	The Section identifies waste streams which are not discussed in Section 4 or identified in Table C-1, e.g., process seal water/filter flush, and concentrated brine from the vapor recompression. Revise the appropriate subsections of Section 4, as well as Table C-1.
96	§ 5.15.1.(5-41).	Table C-1 indicates that manganese dioxide cathode wash solution also is managed in Pond WC-1. Revise the text accordingly.
97	§ 5.18.2.(5-50).	Identify the source(s) of the drums. Identify the management of the empty drum waste stream prior to the installation of the drum crusher in 1984.
98	§ 5.18.6.(5-51).	Explain the statement that "operating practices could be modified to further reduce the possibility of release to the environment."

99	§ 5.19.1.(5-52).	The text identifies the basements of Units 4 and 5 as disposal units for waste streams associated with the sodium chlorate and sodium perchlorate processes. The use of the basements for this purpose is not identified in either Section 4 or Table C-1. Revise the appropriate subsections in Section 4 and Table C-1 accordingly.
100	§ 5.19.1.(5-53).	Identify the referenced "RCRA 'regulated units.'"
101	§ 5.19.1.(5-56).	The text explains that uncontained sludge "was present on the concrete floor of the SWMU" on the day of the Site Reconnaissance. Provide additional detail regarding the generation, collection and management of the sludge.
102	§ 5.19.2.(5-56).	Identify the results of any additional analyses of the saddles waste stream prior to March 1990. Explain the use of the term "significantly less"
103	§ 5.19.3.(5-57 to 5-58).	The statement that "[c]oncentrations downgradient of the remediation system appear to be decreasing" appears to be inconsistent with the provided excerpts from the July 26, 1991 performance report. Revise the text accordingly.
104	§ 5.19.3.(5-58).	Provide data which shows the measured concentrations of total and hexavalent chromium present in the treatment system discharge for the period since the system became operational.
105	§ 5.19.5.(5-59).	Provide data which supports the statement that "[l]eakage through the interceptor system, however, would be diluted at the recharge trenches and the NDEP requirements for chromium concentration downgradient of the remediation system would be met."
106	§ 5.20.1.(5-61).	Identify the source of the referenced "broken concrete and metal parts of cells (rip rap)"

107	§ 5.20.2.(5-62).	Identify the documentation found by Kleinfelder describing the chemical composition of waste conveyed by the Beta Ditch under U.S. ownership.
108	Table 5.20.1.(5-63).	Provide additional information regarding the waste stream data set forth in Table 5.20.1., e.g., identifying whether it is based on sampling or mass balance data and the relevant time period.
109	§ 5.20.2.(5-63).	The text identifies waste streams which are not discussed in Section 4, e.g., wastes from "housekeeping washings" and "acid drains." Revise Section 4 accordingly.
110	§ 5.20.2.(5-64).	Identify the referenced "phosphate chemicals."
111	§ 5.21.1.(5-67).	Identify the engineered features of the referenced sump, e.g., capacity, construction materials, etc.
112	§ 5.22.2.(5-70).	Identify the analytical results from the referenced EP toxicity and TCLP analyses.
113	§ 5.22.4.(5-71).	Table C-1 and Section 4 indicate that the manganese tailings would have been conveyed to the SWMU in slurried form prior to 1975. Accordingly, revise the Section to discuss the migration of constituents via the groundwater pathway during the operational life of the unit.
114	§ 5.23.1.(5-72); Table C-1.	Resolve the inconsistency between the text and Table C-1 regarding the year in which KMCC ceased operation of Pond S-1, i.e., 1982 or 1983.
115	§ 5.23.1.(5-72).	Correct the reference to SWUM KMCC-026 as the "former manganese tailings areas." Appendix D identifies SWMU KMCC-026 as the former satellite accumulation point, Unit 3.
116	§§ 5.23.1.(5-72); 5.24.1.(5-76).	Table C-1 indicates that Ponds S-1 and P-1 also were used for the disposal of plant effluent from boilers and cooling towers. Revise the text accordingly.

117	§ 5.23.1.(5-72); Table C-1; Table 3.1.6.(3-11).	Resolve the inconsistent references to the year in which KMCC ceased producing potassium perchlorate, i.e., 1982 or 1983.
118	§ 5.23.1.(5-73).	Identify the purpose of the referenced groundwater monitoring wells.
119	§ 5.23.3.(5-74).	Discuss the RCRA compliance history of Pond S-1. Identify the dates of submission of the Part A application and the Part B application. Identify and discuss the results of any groundwater monitoring. Identify and discuss the elements of the referenced RCRA closure of the unit, i.e., sampling parameters and results, closure standards, extent of soil removal, etc. Identify the post-closure permitting status of the unit.
120	§§ 5.23.1.(5-73); 5.23.5(5-74).	Provide additional data regarding the referenced soil sampling activities, e.g., location and number of samples, analytical parameters and detection limits, analytical results, etc.
121	§ 5.23.5.(5-74 to 5-75).	Provide additional data regarding the referenced groundwater sampling, e.g., purpose of the sampling, location of monitoring wells, analytical parameters and detection limits, analytical results, etc.
122	§ 5.24.1.(5-76).	Identify the location of the referenced "on-site nonhazardous waste landfill." Address this landfill as an additional SWMU in Section 5.
123	§ 5.24.1.(5-76 to 5-77).	Identify the purpose of the referenced groundwater monitoring wells.

124	§ 5.24.3.(5-77 to 5-78).	Discuss the RCRA compliance history of Pond P-1. Identify the dates of submission of the Part A application and the Part B application. Identify and discuss the results of any groundwater monitoring. Identify and discuss the elements of the referenced RCRA closure of the unit, i.e., sampling parameters and results, closure standards, extent of soil removal, etc. Identify the post-closure permitting status of the unit.
125	§ 5.24.5.(5-78).	Provide additional data regarding the referenced groundwater sampling, e.g., purpose of the sampling, location of monitoring wells, analytical parameters and detection limits, analytical results, etc.
126	§ 5.25.1.(5-79).	Identify the referenced "Koch, and other entities."
127	§ 6 generally.	Provide additional data showing the specific locations of the referenced releases and spills. Map 6-1 is not adequate for this purpose.
128	§ 6 generally.	For each release or spill identified, provide analysis regarding data gaps or data-gathering activities necessary to assess existing environmental effects associated with the release or spill.
129	§ 6.1.2.(6-2).	Identify the disposal location for the drums, contaminated concrete and soil. Provide additional data regarding the reasons for and extent of soil removal.
130	§ 6.4.(6-5 to 6-6).	The basements of Units 4 and 5 should be addressed as SWMUs in Section 5 of the Report.
131	§ 6.4.2.(6-5).	Identify whether any sludge or other waste material was removed from the basements during the referenced remedial activities. Provide volume and characterization data for any such material. Identify the disposal location for any such material.

132	§ 6.5.1.(6-6).	The text identifies the basement of Unit 6 as a disposal unit for waste streams associated with the manganese dioxide process. The use of the basement for this purpose is not identified in either Section 4 or Table C-1. Revise the appropriate subsections in Section 4 and Table C-1 accordingly.
133	§ 6.5.2.(6-7).	Identify whether any sludge or other waste material was removed from the basement during the referenced remedial activities. Provide volume and characterization data for any such material. Identify the disposal location for any such material.
134	§ 6.5.(6-6 to 6-8).	The basement of Unit 6 should be addressed as a SWMU in Section 5 of the Report.
135	§ 6.8.4.(6-13).	Identify the referenced "other trace compounds."
136	§§ 6.9.2.(6-15); 6.12.2.(6-21).	Explain the statement that the identified response measure(s) "appears to be appropriate for the initial mitigation." Identify any necessary additional mitigation measures. Explain whether such measures were undertaken.
137	§ 6.12.1.(6-20).	Provide data showing the location of the referenced "buried anolyte transfer line." Provide additional information regarding the referenced "numerous small leaks."
138	§ 6.13.2.(6-22).	Provide data regarding the engineered features of the sump.
139	§ 6.14.1.(6-24).	Provide data regarding the engineered features of the "central sump."
140	§ 6.15.1.(6-25).	Provide additional data regarding the specific contaminants associated with the laboratory's rinse water discharges to the septic tank and leach field.
141	§§ 4.7.4.(4-36); 6.20.1.(6-32).	The chlorine gas scrubbing operation waste stream identified in Section 6.20.1. is not discussed in Section 4.7.4. Revise Section 4.7.4. accordingly.

142	§ 6.7.(6-9 to 6-12).	Section 7.1.2.(7-6) states that chromium was added to water in the old main cooling tower. Revise Section 6.7. to address the presence of chromium in the referenced releases or spills.
143	§ 7.2.1.(7-8).	Identify the source, nature and volume of the referenced "asbestos containing material."
144	§ 7.3.(7-10 to 7-12).	The storm sewer system should be addressed as a SWMU in Section 5 of the Report.
145	§ 7.4.(7-12 to 7-14).	The acid drain system should be addressed as a SWMU in Section 5 of the Report.
146	§ 7.5.1.(7-15).	Explain whether the "appropriate landfill disposal sites" are on- or off-Site.
147	§§ 7.6.; 7.7.; 7.8.; 7.9.; 7.10.; 7.11.; 7.12.; 7.13.; 7.14.; 7.15.; 7.16.	Information regarding the activities of the KMCC tenants should be presented in Sections 3, 4 and 5 of the Report. Provide the information required by Sections 2(b)(i) and 2(c) of the Consent Agreement and the Work Plan with respect to each tenant and their respective industrial processes and waste management practices and units. Each of the general comments set forth herein apply equally to the discussion of the activities of each KMCC tenant.
148	§ 7.7.2.(7-23).	Provide data regarding the location and engineered features of the metal tanks and concrete vaults used for the disposal of tank wash water.

file

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration	(702) 687-4670
Air Quality	687-5065
Mining Regulation and Reclamation	687-4670
Waste Management	687-5872
Federal Facilities	687-3880



Wastewater Treatment Services	687-5870
Water Permits and Compliance	687-4670
Water Quality Planning	687-4670
FAX	885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

April 22, 1992

Allen Gaddy
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Mr. Gaddy:

The Division of Environmental Protection (DEP) has made a penalty settlement determination for the alleged violations noted on the Finding of Alleged Violation dated December 17, 1992.

The penalty settlement determination is based on information gathered by DEP staff during the facility inspection conducted on June 8, 1991 and the telephone Enforcement Conference conducted on March 27, 1992.

DEP is prepared to accept a penalty settlement in the amount of \$13,800. By May 8, 1992, please contact Doug Martin at (702) 687-5872 with your decision to accept a proposed settlement or to schedule a meeting should you wish to discuss this settlement.

Failure to notify DEP by May 8, 1992, may result in a referral of this case to the Attorney General for assessment and collection of maximum penalties.

Sincerely,

Verne Rosse, P.E.
Deputy Administrator
Division of Environmental Protection

AC:klh

cc: Steve Onysko

Certified Mail # 680 480 856

P 680 480 856

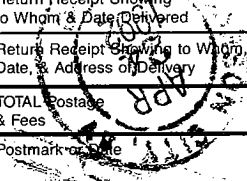


Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse) Waste - AC

Sent to	
Allen Gaddy	
Ker-McGee Chemical	
P.O. Box 55	
Henderson, NV 89015	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark	

EPA

PS Form 3800 June 1990



Allen Gaddy
Ker-McGee Chemical
Henderson, NV 89015

5. Signature (Addressee)
6. Signature (Agent)
PS Form 3811, November 1990 * U.S. GPO: 1991-287-088 DOMESTIC RETURN RECEIPT

- SENDER:**
- Complete items 1 and/or 2 for additional services.
 - Complete items 3, and 4a & b.
 - Print your name and address on the reverse of this form so that we can return this card to you.
 - Attach this form to the front of the mailpiece, or on the back if space does not permit.
 - Write "Return Receipt Requested" on the mailpiece below the article number.
 - The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.
 - 3. Article Addressed to:

I also wish to receive the following services (for an extra fee):

1. Addressee's Address

2. Restricted Delivery

Consult postmaster for fee.

4a. Article Number
P680 480 856

- 4b. Service Type
- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery
4-28-90

8. Addressee's Address (Only if requested and fee is paid)

redi-letter

carbonless

88811

TRIP

TO

Vernie / Steve

FROM

Jeff

SUBJECT

MESSAGE

DATE

5/14/92

Do we want to reconsider?

SIGNED

Jeff

REPLY

n-o with a capital N!

Lew (to Steve)

3

SIGNED

DATE

1/1

REDIFORM 45 471

SEND PARTS 1 AND 3 INTACT - PART 3 WILL BE RETURNED WITH REPLY.

POLY PAK (50 SETS) 4P 471

Sent 4/19 12:25 P M

Km fill

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration	(702) 687-4670
Air Quality	687-5065
Mining Regulation and Reclamation	687-4670
Waste Management	687-5872
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Wastewater Treatment Services	687-5870
Water Permits and Compliance	687-4670
Water Quality Planning	687-4670
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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

I N T E R N A L M E M O R A N D U M

DATE: April 10, 1992

TO: Kerr-McGee Facility File

From: Alene Coulson *AC*
Compliance & Enforcement Branch

Subject: Kerr-McGee Telephone Enforcement Conference

On March 27, 1992, a telephone Enforcement Penalty Settlement Conference was held by Division of Environmental Protection (DEP) staff and representatives of Kerr-McGee Chemical Corporation representatives. DEP representatives were Doug Martin and Alene Coulson and the Kerr-McGee representatives were Allen Gaddy, John Stauter and Russell Jones.

The purpose of the conference was to discuss the status of the violations cited in the Division Finding of Alleged Violation dated December 17, 1991 as discussed in the January 24, 1992 Enforcement Conference and to determine whether Kerr-McGee Chemical Corporation would consider a penalty settlement offer for the violations cited.

The status of the violations is as follows:

1. NRS 459.515 Treatment of facility without permit was changed to §262.34(a) 1 distinct violation of accumulation of uncontainerized HW sludge from the circular tank;
2. NAC 444.8632 COMPLIANCE WITH FEDERAL STANDARDS is not a distinct violation;
3. § 262.30 PACKING was not a violation;
4. § 262.31 LABELING was not a violation;

5. § 262.34 ACCUMULATION TIME

- a. 1 Distinct violation of accumulation of HW in an uncertified tank; and
- b. 1 Distinct violation of accumulation of HW in an unlabeled tank.

DEP will propose the following penalty in the interest of pre-litigation settlement:

# 1. Violation of § 262.34(a)(1)	\$ 3,200.00
# 5a. Violation of § 262.34(a)(1)	\$10,000.00
# 5b. Violation of § 262.34(a)(1)	\$ 600.00

Company Name KEZR-MCGEE CHEMICAL CORP

Address HENDERSON, NV

Requirement Violated 242.34(a)
VIOLATION #1

SETTLEMENT PENALTY AMOUNT

1.	Gravity based penalty from matrix... <u>1. Violation</u>	<u>3,200</u>
	(a) Potential for harm.....	<u>moderate</u>
	(b) Extent of deviation.....	<u>moderate</u>
2.	Select an amount from the appropriate multiday matrix cell.....	<u>0</u>
3.	Multiply line 2 by number of days of violation minus 1 [or other number as appropriate (provide narrative explanation)].....	<u>0</u>
4.	Add line 1 and line 3.....	<u>3,200</u>
5.	Percent increase/decrease for good faith.....	<u>0</u>
6.	Percent increase for willfulness/negligence.....	<u>0</u>
7.	Percent increase for history of noncompliance	<u>0</u>
8.	Percent increase/decrease for other unique factors (except litigation risk)	<u>0</u>
9.	Add lines 5, 6, 7, and 8	<u>0</u>
10.	Multiply line 4 by line 9	<u>0</u>
11.	Add lines 4 and 10	<u>3,200</u>
12.	Adjustment amount for environmental project	<u>0</u>
13.	Subtract line 12 from line 11	<u>3,200</u>
14.	Calculate economic benefit.....	<u>0</u>
15.	Add lines 13 and 14	<u>3200</u>
16.	Adjustment amount for ability-to-pay	<u>0</u>
17.	Adjustment amount for litigation risk.....	<u>0</u>
18.	Add lines 16 and 17.....	<u>0</u>
19.	Subtract line 18 from line 15 for..... final settlement amount	<u>3,200</u>

This procedure should be repeated for each violation.

#

Company Name KERR-MCGEE CHEMICAL CORP
 Address HENDERSON, NV
 Requirement Violated 262.34(a)(1)(265.192)

VIOLATION #2

SETTLEMENT PENALTY AMOUNT

- 1. Gravity based penalty from matrix..... 19,000
 - (a) Potential for harm..... MAJOR
 - (b) Extent of deviation..... MAJOR
- 2. Select an amount from the appropriate multiday matrix cell..... 0
- 3. Multiply line 2 by number of days of violation minus 1 [or other number as appropriate (provide narrative explanation)]..... 0
- 4. Add line 1 and line 3..... 19,000
- 5. Percent increase/decrease for good faith..... 0
- 6. Percent increase for willfulness/negligence..... 0
- 7. Percent increase for history of noncompliance 0
- 8. Percent increase/decrease for other unique factors (except litigation risk) 0
- 9. Add lines 5, 6, 7, and 8 0
- 10. Multiply line 4 by line 9 0
- 11. Add lines 4 and 10 19,000
- 12. Adjustment amount for environmental project 0
- 13. Subtract line 12 from line 11 19,000
- 14. Calculate economic benefit..... 0
- 15. Add lines 13 and 14 19,000
- 16. Adjustment amount for ability-to-pay 0

- 17. Adjustment amount for litigation risk..... 0
- 18. Add lines 16 and 17..... 0
- 19. Subtract line 18 from line 15 for..... 19,000
 final settlement amount

This procedure should be repeated for each violation.

Company Name KEER-MCGEE CHEMICAL CORP
 Address HENDERSON, NV
 Requirement Violated 262.34 (AY3)

VIOLATION #3

SETTLEMENT PENALTY AMOUNT

- 1. Gravity based penalty from matrix..... 600
 - (a) Potential for harm..... minimum
 - (b) Extent of deviation..... MODERATE
- 2. Select an amount from the appropriate multiday matrix cell..... 0
- 3. Multiply line 2 by number of days of violation minus 1 [or other number as appropriate (provide narrative explanation)]..... 0
- 4. Add line 1 and line 3..... 600
- 5. Percent increase/decrease for good faith..... 0
- 6. Percent increase for willfulness/negligence..... 0
- 7. Percent increase for history of noncompliance 0
- 8. Percent increase/decrease for other unique factors (except litigation risk) 0
- 9. Add lines 5, 6, 7, and 8 0
- 10. Multiply line 4 by line 9 0
- 11. Add lines 4 and 10 600
- 12. Adjustment amount for environmental project 0
- 13. Subtract line 12 from line 11 600
- 14. Calculate economic benefit..... 0
- 15. Add lines 13 and 14 600
- 16. Adjustment amount for ability-to-pay 0

- 17. Adjustment amount for litigation risk..... 0
- 18. Add lines 16 and 17..... 0
- 19. Subtract line 18 from line 15 for..... 600
 final settlement amount

This procedure should be repeated for each violation.



5

TO: Alan Gaddy

FROM: Chris Steindorf

DATE: 3/26/92

SUBJECT: AWB 869063506

REFERENCE:

cc

My investigation on this shipment from Kerr Mc Gee Chemical to the Nevada Division of Environmental Protection Agency in Carson City has been completed. The shipment moved through our Fresno and Sacramento truck hubs and was determined to be left behind at one of these two stations by mistake. Again, I apologize for any inconvenience this may have caused.

Sincerely,

A handwritten signature in cursive script that reads "Chris Steindorf".

Chris Steindorf
Station Manager

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management 687-5872
Federal Facilities 687-3880



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
FAX 886-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

March 19, 1992

Mr. Alan J. Gaddy
Kerr-McGee Chemical Corp.
P.O. Box 55
Henderson, NV 89015

RE: Late Submittal of Phase I Draft Report.


Dear Mr. Gaddy:

This letter serves as notification that the Phase I Draft Report (Environmental Conditions Assessment) submitted for Kerr-McGee was received by the Division March 18, 1992. Pursuant to the agreed upon conditions of the Division's letter dated February 26, 1992, this report was due March 2, 1992, and was to be delivered no later than March 17, 1992, to avoid penalty. Receipt of the report on March 18, 1992, constitutes a 16-day late submittal and is therefore subject to a \$2,400 penalty (14 days x \$100 plus 2 days x \$500 = \$2,400) as provided by Section 8 of the Consent Agreement.

In accordance with the stipulated penalties and provisions of the Consent Agreement, the Division hereby orders Kerr-McGee Chemical Company to submit payment of penalty in the amount of \$2,400. This amount is to be made payable to the Nevada Division of Environmental Protection and is due within 30 days of this notification.

Please contact Jeff Denison, BMI Project Coordinator, with any questions regarding this notice.

Sincerely,


for L.H. Dodgion, P.E.
Administrator

LHD/JCD:klh

cc: V. Rosse
J. Denison
M. Calhoun



TO: Allan Gaddy
 FROM: Chris Steindorf DATE: 3/18/92
 SUBJECT: AWB 869063506 REFERENCE:

cc

On Monday the 16th, Airborne Express picked up a shipment from Kerr Mc Gee Chemical going to Carson City. The shipment was delayed for one day and was not delivered in Carson City until the 18th. I appologize for any inconvenience this may have caused and the matter is currently under investigation. Please feel free to contact myself if you have any further questions concerning this shipment.

Sincerely,

Chris Steindorf
 Station Manager

PLEASE TYPE OR PRINT
U.S. AIRBILL

FROM (COMPANY NAME) KERR MC GEE CHEMICAL		ORIGIN LAS	AIRBILL NUMBER 869043506
ADDRESS BOX 55		CUSTOMER AIRBORNE EXPRESS ACCOUNT NUMBERS 6319467	
CITY HENDERSON	STATE NV	ZIP CODE (REQUIRED) 89015	
SENT BY (NAME/DEPT.) A. J. GADY		PHONE 702-565-8901	
TO NEVADA DIV. OF ENVIRONMENTAL PROTECTION		METHOD OF PAYMENT <input checked="" type="checkbox"/> BILL SENDER <input type="checkbox"/> BILL RECEIVER AIRBORNE ACCOUNT NO.	
ADDRESS 123 W. NYE LANE		<input type="checkbox"/> BILL PARTY <input type="checkbox"/> PAID IN ADVANCE CHECK NO. / AMOUNT	
CITY CARSON CITY	STATE NV	ZIP CODE (REQUIRED) 89710	
JEFFREY DENISON 702-687-4670		BILLING REFERENCE AND APPEARANCE NOTICE WCN 48535	
BUSINESS DOCUMENTS		NO. OF PACKAGES (WEIGHT (LBS.)) 1 28	
SHIPMENT VALUATION <input type="checkbox"/> DECLARED VALUE OR FULL ASSURANCE \$		SPECIAL INSTRUCTIONS <input type="checkbox"/> SATURDAY DELIVERY <input type="checkbox"/> HOLD AT AIRBORNE EXPRESS	
PREPRINT FORMAT NO. 2069200		CHECK IF <input type="checkbox"/> LETTER EXPRESS	
SENDER SIGNATURE <i>Joan Loppage</i>		AIRBORNE SIGNATURE <i>[Signature]</i>	
DATE 3/16/82		DATE 3/16/82	
TIME 1530		ROUTE 24	
DROPPED OFF LOCATION AIRBORNE TERMINAL		DROPPED OFF LOCATION DROPPED OFF BOX No.	



EXECUTIVE OFFICES
P.O. BOX 662, SEATTLE, WA 98111

THANK YOU FOR SHIPPING WITH AIRBORNE EXPRESS!



USE THIS AIRBILL FOR SHIPMENTS WITHIN THE U.S. & TO AND FROM PUERTO RICO. ABSENT A HIGHER SHIPMENT VALUATION, CARRIER'S LIABILITY IS LIMITED TO \$9.07 PER POUND PER PIECE. SPECIAL OR CONSEQUENTIAL DAMAGES ARE NOT RECOVERABLE. SEE TERMS AND CONDITIONS ON REVERSE SIDE OF THIS NON-NEGOTIABLE AIRBILL

SCAC AIRB FED ID NO. 91-0837469

*Martin 1138 → 1141 3/18
will have manager call me back*

434-2130

*Chris 1242 → 1244 3/18
letter coming*

*3/24 Katrina 845 → 846
left message for Chris to call back*

*4/2 - Chris 12 noon referred to claims dept
1800/233-1379 → Ira - Service failure claim
freight charges only
Claim # 04021064 - 10 days
\$ 32.44*



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

RECEIVED
ENVIRONMENTAL
PROTECTION
MAR 17 92

March 13, 1992

Mr. Douglas J. Martin, Supervisor
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Martin:

Subject: Notice of Alleged Violation & Order
Dated December 17, 1991

Attached please find Kleinfelder's summary of analysis for the subject Hazardous Waste Storage Area.

Should you have any questions, please contact Alan J. Gaddy at 702-565-8901.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Patrick S. Corbett'.

Patrick S. Corbett
Plant Manager

PSC:j

BY FACSIMILIE 3-13-92

March 13, 1992

Mr. Douglas J. Martin, Supervisor
Compliance/Enforcement Branch
Bureau of Waste Management
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Martin:

Subject: Kerr-McGee Chemical Corporation
Henderson, Nevada
Notice of Alleged Violation & Order
Dated December 17, 1991

Please be advised that Kleinfelder, Inc. has completed an engineering analysis of the Kerr-McGee Chemical Corporation (KMCC) Hazardous Waste Storage Area, SWMU KMCC-005 for certification as a tank for hazardous waste storage per 40 CFR 265, Subpart J. This review included the technical evaluation outlined in our February 4, 1992 correspondence to your office (with KMCC cover letter dated February 7, 1992).

Conclusions

In our professional opinion, we conclude the following:

1. This unit is certifiable as a tank system for hazardous waste storage or treatment (in accordance with 40 CFR Part 265, Subpart J and applicable Nevada Revised Statutes) with only minor modifications needed. Proposed changes are necessary to meet specific regulatory requirements.
2. The inside of the container must have a corrosion resistant liner placed or applied to protect the bare concrete. This liner, to be compatible, would consist of an epoxy resin type coating that could stand up to the traffic and activities associated with loading, turning, and unloading the material from the vessel and is easily repairable.
3. Provisions for Section 265.193 for capacity to contain precipitation from a 25 year, 24 hour rainfall event can be achieved through the construction of a berm.

Page 2
Mr. Douglas J. Martin
March 13, 1992

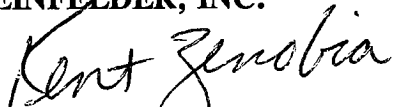
Schedule

We believe that unit design modifications, purchasing and construction will require sixty (60) days to complete. After completion of the modifications, the engineering certification may be submitted within fifteen (15) days of complete construction.

Please feel free to contact either Kerr-McGee or Kleinfelder if you should have any questions. Thank you.

Sincerely,

KLEINFELDER, INC.



Kent E. Zenobia, C.E.M., P.E.
Senior Engineering Consultant

KEZ/cfh

cc: Mr. Alan Gaddy - KMCC, Henderson
Mr. Russell Jones - KMCC, Oklahoma City
Dr. John Stauter - KMCC, Oklahoma City
Mr. Todd Croft - Kleinfelder, Inc



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

file
RECEIVED
ENVIRONMENTAL
PROTECTION

MAR -9 92

March 5, 1992

Mr. Douglas Martin
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Martin:

Subject: Notice of Alleged Violation and Order
Dated December 17, 1991

As discussed with you on 3-4-92, information to be supplied to KMCC and NDEP by Kleinfelder, Inc. regarding analysis, recommendations, and schedule for certification of the hazardous waste storage area will be delayed until March 13, 1992.

The data gathering and analysis portion done by Kleinfelder, Inc. had been delayed by a late start for that portion.

Should you have any questions, please contact Alan J. Gaddy at 702-565-8901.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Patrick S. Corbett'.

Patrick S. Corbett
Plant Manager

PSC:j

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
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Waste Management 687-5872
Federal Facilities 687-3880



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
FAX 886-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

February 26, 1992

Mr. Alan J. Gaddy, Chairman
Henderson Industrial Site Steering Committee
P.O. Box 55
Henderson, NV 89009

Dear Mr. Gaddy:

In response to our discussion during the meeting held February 18, 1992 and the follow-up correspondence dated February 19, 1992, regarding the due date for the Phase I draft reports, the Division will waive the assessment of any penalties for reports that are received on or before March 17, 1992.

The reports are still formally due March 2, 1992, but will not incur penalty unless submitted after March 17, 1992. Reports received after this date will be subject to the applicable penalties as stipulated by the Consent Agreement. For example, a report received on March 18, 1992 will be considered 16 days late and subject to a \$2400 penalty (14 days x \$100 plus 2 days x \$500 = \$2400).

In order to recuperate the delay imposed by offering a 15-day grace period, the Time Schedule is now modified as follows:

<u>Task</u>	<u>Due Date</u>
#10 (HISSC)	Day 130 (+ 15-day grace period)
#11 (NDEP)	Day 165 (was Day 150)
#12 (NDEP)	Day 195 (was Day 180)
#13 (HISSC)	Day 220 (was Day 210)
#14 (HISSC)	Day 220 (was Day 210)
#15 (NDEP)	Day 230 (was Day 220)
#16 (HISSC)	Day 250 (same)
#17 through #26	same

Mr. Alan J. Gaddy, Chairman
Henderson Industrial Site Steering Committee
February 26, 1992
Page 2

Please inform all Companies of these changes and prepare a new
Time Schedule to reflect these revisions.

Sincerely,



Jeffrey C. Denison
Environmental Engineer
Bureau of Waste Management

JCD:klh

cc: L. Dodgion
V. Rosse
M. Calhoun
B. Conaty



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

file

February 7, 1992

Mr. Douglas Martin
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Mr. Martin:

Subject: Notice of Alleged Violation and Order
Dated December 17, 1991

Kerr-McGee Chemical Corporation (KMCC) has retained Kleinfelder, Inc. to address certification of the hazardous waste storage area referred to in the subject Notice.

Attached is Kleinfelder's letter regarding analysis, recommendations, and schedule for the certification.

Should you have any questions, please contact Alan J. Gaddy at 702-565-8901.

Sincerely,

A handwritten signature in cursive script that reads "Patrick S. Corbett".

Patrick S. Corbett
Plant Manager

PSC:j

February 4, 1992
File: 31-135909-010

Via Facs

Mr. Douglas J. Martin, Supervisor
Compliance/Enforcement Branch
Bureau of Waste Management
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

**SUBJECT: Kerr-McGee Chemical Corporation
Henderson, Nevada
Notice of Alleged Violation and Order
Dated December 17, 1991
NRS 459.515 - Hazardous Waste Storage Area**

Dear Mr. Martin:

Please be advised that Kleinfelder, Inc. has been retained by Kerr-McGee Chemical Corporation to provide engineering consulting services in response to your Division's Order noted above. Specifically, we are providing assistance to address your notice C.1. NRS 459.515 for the hazardous waste storage area. Kleinfelder's preliminary technical analysis, and proposed schedule for completing our evaluation is noted below.

Technical Analysis

The subject hazardous waste treatment and storage area is used to evaporate water from damp sodium chlorate filter cake. This hazardous waste management area (SWMU KMCC-005) is located approximately 30 feet north of Unit 3 and 20 feet west of Eighth Street (Reference Plate 1). This is a newly constructed concrete unit with a floor which slopes toward the rear wall. This unit is approximately 36 feet long (north-south) and 18 feet wide (east-west). The floor of the unit is approximately 18 inches above the surrounding asphalt area. Access to the elevated unit is provided by a concrete ramp which is the same width as the unit. The concrete ramp is approximately 20 feet long. Liquids which drain from the chlorate process filter cake held in this SWMU flow to the lower southwest corner and exit the unit through a pipe and a valve into a 12 inch deep portable plastic containment bin. This containment bin is positioned within a ramped and bermed concrete secondary containment area. A separate ramp allows access by forklift to remove the bin when it is full and recycle the solution to the process. The drying area and secondary containment area are underlain by an HDPE liner with a leak detection system. The leak detection system consists of a four inch diameter PVC monitoring pipe which extends to the low point of the liner. The monitoring pipe has a perforated cap at the low end which allows detection and measurement of liquid that is trapped by the liner.

The operating practices in this area consist of transporting damp to wet filter cake from the sodium chlorate filter press to this SWMU by front-end loader. This filter cake contains hexavalent chromium as sodium dichromate in the solution. The filter cake is placed in

this area where it is allowed to dry. The time of placement is noted and starts the accumulation time period. When the material is dry, it is taken by front-end loader to the hazardous waste storage unit between Units 3 and 4 (SWMU KMCC-006) awaiting off-site disposal.

On the day of this writer's site reconnaissance, January 27, 1992, there was no filter cake in the subject area. The storage area is new and the overall integrity appears good. Signs of minor deterioration, and hairline cracks, were observed. Run-off from within the unit is controlled by the floor sloping to the back southwest corner where precipitation run-off, as well as liquid which has drained from the solids, flows through a pipe and valve system into a plastic containment bin. Water would have to overtop the plastic containment bin to cause a release of the solution from the containment area. Area surface water run-on is virtually eliminated by the unit's elevated design. Ponding may occur against the outside concrete walls of the storage area and this uncontaminated run-on may enter the secondary containment area because the ramp to this area slopes down toward the plastic containment bin.

This hazardous waste unit appears adequate in size and design for the anticipated amount of process solids to be treated and stored in it. This SWMU is not fenced, but it is located within the fenced and guarded KMCC facility. The leak detection system is monitored by KMCC personnel on a regular basis.

Recommendations

Kleinfelder will be assessing this unit for certification as a tank system for hazardous waste storage or treatment in accordance with 40 CFR Part 265, Subpart J; 40 CFR Part 270.11 and applicable Nevada Revised Statutes (NRS). Our final certification will rely upon additional field testing, and engineering evaluations.

Schedule

Kleinfelder expects that the necessary evaluations can be completed within thirty days. These findings will be transmitted to you by March 6, 1992. If modifications are deemed necessary by these evaluations, a proposed description and schedule of implementation will accompany this transmittal.

Please feel free to contact either Kerr-McGee or Kleinfelder if you should have any questions or comments. Thank you.

Sincerely,

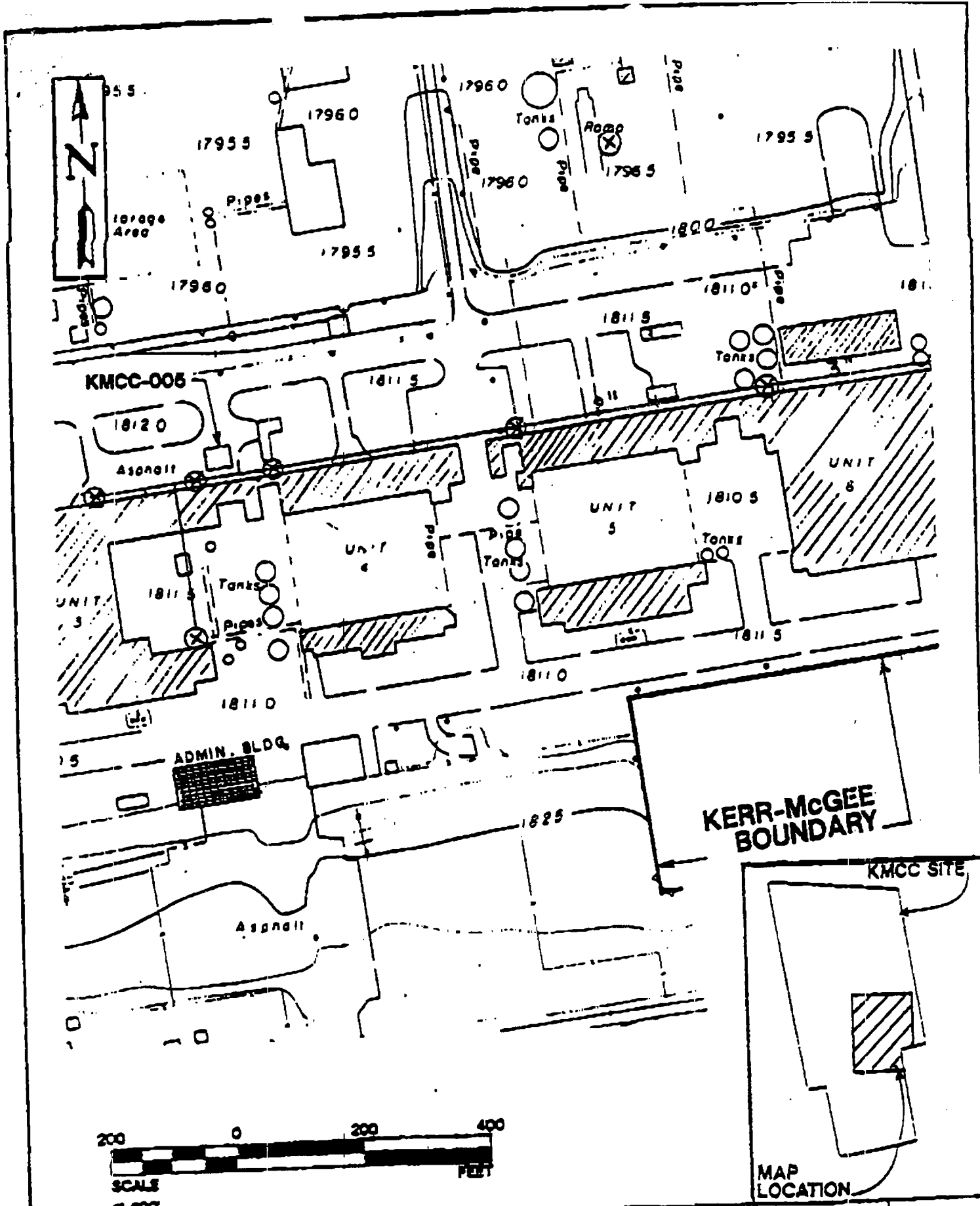
KLEINFELDER, INC.



Kent E. Zenobia, C.E.M., P.E.
Senior Engineering Consultant

Attachment

cc: Mr. Alan Gaddy - KMCC, Las Vegas
Mr. Russell Jones - KMCC, Oklahoma
Mr. John Stauter - KMCC, Oklahoma
Mr. Todd Croft - Kleinfelder, Inc.



KLEINFELDER

**SWMU KMCC-005
SODIUM CHLORATE FILTER CAKE
HOLDING AREA NORTH OF UNIT 3**

PLATE

1

PROJECT NO. 31-135909 -010



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

January 31, 1992

Ms. Jolaine A. Johnson, P.E.
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Ms. Johnson:

Re: Notice of Alleged Violation - 12-17-91
Kerr-McGee Chemical Corporation

Attached are supporting documents resulting from the conference held January 21, 1992 on the referenced subject.

Alleged Violation C.1 -

Attachment 1 is a laboratory analysis for TOX for the material placed in the hazardous waste drying unit. KMCC uses the drying unit to evaporate water only from the salt material. No organics are expected to be present in the material.

Alleged Violation C.3. and C.4. - Packing and Labeling.

Attachment 2 references U.S. D.O.T. regulations for packaging ORM-E materials as shipped from KMCC and referenced in the "Notice" as photos 6, 7, 8, and 9. The manifest enclosed as Attachment 2 documents the material shipped as RQ Hazardous Waste Solid, n.o.s, ORM-E, NA9189 (D007). Packing requirements for ORM materials are referenced in 49 CFR 173.510(a)(5) as having all discharge openings secure and vehicles free from leaks during transportation. KMCC feels the materials were packaged beyond the requirements by encapsulating the entire load with 6 mil visqueen tarp materials then covering the load with an industrial transport tarp and chain securing the load to the vehicle. 49CFR 173.24 further indicates general requirements for packages designed in such a manner that there are no significant releases of the hazardous material to the environment. These requirements were also attained in the preparation of the material for transport. Additional enclosures with Attachment 2 provide applicable references to labeling ORM materials for transport on public highways. Labeling requirements do not apply to ORM materials if greater than 110 gallons.

FEB - 5 1992
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DIVISION OF ENVIRONMENTAL PROTECTION
CARSON CITY, NEVADA

Page 2

Ms. Jolaine A. Johnson, P.E.
January 31, 1992

Alleged Violation C.5. - Accumulation Time:

KMCC provided information and photos during the January 21 conference, indicating the hazardous waste storage area (photo #3) was labeled on the same day as the inspection. An explanation of the labeling oversight was also provided in the letter dated January 21 to Ms. Coulson. Photo 3 of the "notice" does picture the area unlabeled at the time of the inspection. Attachment 3 is copies of manifests for the disposal of the material placed on the storage area generated during the determination phase of the process tank clean-out.

Sincerely,



Patrick S. Corbett
Plant Manager

PSC:j
johnson1.30/psc

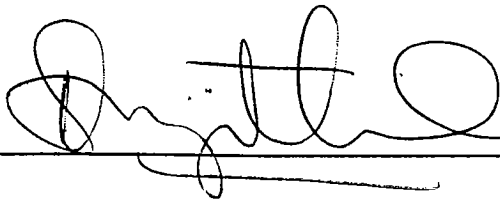
ATTACHMENT 1

CLIENT NAME: Kerr McGee PROJECT #: 91-688/48535
JOB ORDER #: 91STS-11021 SAMPLE ID #: WS#902992
STS ID #: S-91-635 MATRIX: SOLID

PARAMETER	RESULT	UNITS	REPORTING LIMIT mg/Kg
Total Organic Halogens	<10.	mg/Kg	10.0

ND= Not Detected
NA= Not Applicable

Approved by: _____



Date: _____

12-20-91

ATTACHMENT 2

§173.510 General packaging requirements.

(a) Except as provided in §173.505, ORM materials must be prepared for shipment in compliance with the following:

(1) Each material must be offered for transportation and transported in compliance with Subparts B, C, and D of Part 172 of this subchapter and Subparts A and B of Part 173. [note: Packaging for certain PCB's for disposal, and for storage for disposal is prescribed by EPA in 40 CFR 761.60 and 761.65.]

(2) For packagings of 110 gallon capacity or less, sufficient outage (ullage) must be provided so the packaging will not be liquid full at 130°F. (55°C.).

(3) When a liquid or solid has an absolute vapor pressure exceeding 16 p.s.i. at 100°F. (38°C.), the primary packaging must be capable of withstanding the inside vapor pressure at 130°F. without leakage.

(4) Any material classed as an ORM material, which may cause a hazard in transportation due to its reaction with water, must be packaged with either an inner or outer water proof packaging.

(5) Portable tanks, tank cars, cargo tanks, hopper and dump type transport vehicles must be free from leaks and all discharge openings must be securely closed during transportation.

§173.24 Standard requirements for all packages.

(a) Each package used for shipping hazardous materials under this subchapter shall be so designed and constructed, and its contents so limited, that under conditions normally incident to transportation:

(1) There will be no significant release of the hazardous materials to the environment;

(2) The effectiveness of the packaging will not be substantially reduced; and

(3) There will be no mixture of gases or vapors in the package which could, through any credible spontaneous increase of heat or pressure, or through an explosion, sig-

Vertical text on the right margin, likely a scanning artifact or reference code.

§177.834 General requirements.

(a) *Packages secured in a vehicle.* Any tank, barrel, drum, cylinder, or other packaging, not permanently attached to a motor vehicle, which contains any flammable liquid, compressed gas, corrosive material, poisonous material, or radioactive material must be secured against movement within the vehicle on which it is being trans-

ported, under conditions normally incident to transportation.

(b) *No hazardous materials on pole trailers.* No hazardous materials may be loaded into or on or transported in or on any pole trailer.

(c) *No smoking while loading or unloading.* Smoking on or about any motor vehicle while loading or unloading any explosive, flammable liquid, flammable solid, oxidizing material, or flammable compressed gas is forbidden.

(d) *Keep fire away, loading and unloading.* Extreme care shall be taken in the loading or unloading of any explosive, flammable liquid, flammable solid oxidizing material, or flammable compressed gas into or from any motor vehicle to keep fire away and to prevent persons in the vicinity from smoking lighting matches, or carrying any flame or lighted cigar, pipe, or cigarette.

(e) *Handbrake set while loading and unloading.* No hazardous material shall be loaded into or on, or unloaded from, any motor vehicle unless the handbrake be securely set and all other reasonable precautions be taken to prevent motion of the motor vehicle during such loading or unloading process.

(f) *Use of tools, loading and unloading.* No tools which are likely to damage the effectiveness of the closure of any package or other container, or likely adversely to affect such package or container, shall be used for the loading or unloading of any explosive or other dangerous article.

(g) *Prevent relative motion between containers.* Containers of explosives, flammable liquids, flammable solids, oxidizing materials, corrosive materials, compressed gases, and poisonous liquids or gases, must be so braced as to prevent motion thereof relative to the vehicle while in transit. Containers having valves or other fittings must be so loaded that there will be the minimum likelihood of damage thereto during transportation.

(h) *Precautions concerning containers in transit; fueling road units.* Reasonable care should be taken to prevent undue rise in temperature of containers and their contents during transit. There must be no tampering with such container or the contents thereof nor any discharge of the contents of any container between point of origin and point of billed destination. Discharge of contents of any container, other than a cargo tank, must not be made prior to removal from the motor vehicle. Nothing contained in this paragraph shall be so construed as to prohibit the fueling of machinery or vehicles used in road construction or maintenance.

(i) *Attendance requirements.* (1) *Loading.* A cargo tank must be attended by a qualified person at all times when it is being loaded. The person who is responsible for loading the cargo tank is also responsible for ensuring that it is so attended.

(2) *Unloading.* A motor carrier who transports hazardous materials by a cargo tank must ensure that the cargo tank is attended by a qualified person at all times during unloading. However, the carrier's obligation to ensure attendance during unloading ceases when:

(i) The carrier's obligation for transporting the materials is fulfilled;

(ii) The cargo tank has been placed upon the consignee's premises; and

(iii) The motive power has been removed from the cargo tank and removed from the premises.

(3) A person "attends" the loading or unloading of a cargo tank if, throughout the process, he is awake, has an unobstructed view of the cargo tank, and is within 7.62 meters (25 feet) of the cargo tank.

(4) A person is "qualified" if he has been made aware of the nature of the hazardous material which is to be loaded or unloaded, he has been instructed on the procedures to be followed in emergencies, he is authorized to move the cargo tank, and he has the means to do so.

Subpart E—Labeling

§172.400 General labeling requirements.

(a) Except as otherwise provided in this subchapter, each person who offers a package, overpack, or freight container containing a hazardous material for transportation shall label it, when required, with labels prescribed for the material as specified in §172.101 or §172.102 (when authorized) and in accordance with this subpart.

(b) A label is not required on a:

(1) Package for which labeling is not required under the conditions set forth in this subchapter and in this section;

(2) Cylinder containing a compressed gas classed as flammable or nonflammable that is:

(i) Carried by a private or contract motor carrier;

(ii) Not overpacked; and

(iii) Durably and legibly marked in accordance with CGA Pamphlet C-7, Appendix A.

(3) Package or unit of military explosives (including ammunition) shipped by or on behalf of the DOD when in (i) freight containerload, carload or truckload shipments, if loaded and unloaded by the shipper or DOD or (ii) unitized or palletized break bulk shipments by cargo vessel under charter to DOD if at least one required label is displayed on each unitized or palletized load.

(4) Package containing a hazardous material other than ammunition that is:

(i) Loaded and unloaded under the supervision of DOD personnel, and

(ii) Escorted by DOD personnel in a separate vehicle.

(5) Compressed gas cylinder permanently mounted in or on a transport vehicle;

(6) Portable tank which is placarded in accordance with §172.514;

(7) Freight container having a volume of 640 cubic feet or more which is subject to §172.512;

(8) Package containing a material classed as ORM-A, B, C, D, or E if that package does not contain any other material classed as a hazardous material that requires labeling.

(9) Package containing a combustible liquid; or

(10) Package of low specific activity radioactive material, when being transported in a conveyance assigned for exclusive use of the consignor under §173.425(b) of this subchapter.

(11) Cargo tank or tank car other than a multi-unit tank car tank.

§172.502 Prohibited placarding.

(a) Except as provided in paragraph (c) of this section, no person may affix or display on a transport vehicle, portable tank or freight container any placard described in this subpart unless:

(1) The material being offered or transported is a hazardous material, and

(2) The placard represents a hazard of the hazardous material being offered or transported.

(b) No person may affix or display any sign or other device on a transport vehicle, portable tank, or freight container, that by its color, design, shape, or content could be confused with any placard prescribed in this subpart.

(c) The restrictions in paragraphs (a) and (b) of this section do not apply to transport vehicles, portable tanks, or freight containers which:

(1) In addition to any placards required by this part, may be placarded in conformance with the IMDG Code; or

(2) Are placarded in conformance with the TDG Regulations.

ATTACHMENT 3

2654

Please print or type. (Form designed for use on elicit

ritch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **N|V|D|0|0|8|2|9|0|3|3|0** Manifest Document No. **00454**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KERR-McGEE CHEMICAL CORPORATION
P. O. BOX 55, HENDERSON, NV 89009-0055

A. State Manifest Document Number
B. State Generator's ID **(12)**

4. Generator's Phone **(702) 565-8902**

5. Transporter 1 Company Name **FREHNER TRUCKING SERVICE, INC.** 56 6. US EPA ID Number **N|V|D|0|0|9|6|9|9|3|8|0**

C. State Transporter's ID
D. Transporter's Phone **(702) 649-2397**

7. Transporter 2 Company Name 8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
U. S. ECOLOGY, BEATTY, NV SITE
HIGHWAY 95
BEATTY, NV 89003

10. US EPA ID Number **N|V|T|3|3|0|0|1|0|0|0|0**
G. State Facility's ID
H. Facility's Phone **(702) 553-2203**

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol 15. Waste No.

HM	Description	No.	Type	Total Quantity	Unit Wt/Vol	Waste No.
a. X	"RQ" HAZARDOUS WASTE SOLID, n.o.s., ORM-E, NA 9189 (D007)	18	CM	1231	T	D007
b.						
c.						
d.						

Electrolytic cells

J. Additional Descriptions for Materials Listed Above
EMERGENCY CONTACT 702-565-8901
WS# 07-001-0996

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
RETURN TO GENERATOR IF UNDELIVERABLE.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **ALAN J. GADDY** Signature *Alan Gaddy* Month Day Year **06/10/91**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name **ROSS E MILLER** Signature *Ross E Miller* Month Day Year **06/10/91**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space
13a) Total qty received 25.5T. DT.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name **David Robert** Signature *David Robert* Month Day Year **06/10/91**

GENERATOR
TRANSPORTER
FACILITY

2889

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N V D 0 0 8 2 9 0 3 3 0		Manifest Document No. 0 0 4 6 2		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address KERR-McGEE CHEMICAL CORPORATION P. O. BOX 55, HENDERSON, NV 89009-0055						A. State Manifest Document Number				
4. Generator's Phone (702) 565-8901						B. State Generator's ID				
5. Transporter 1 Company Name FREHNER TRUCKING SERVICE, INC.			6. US EPA ID Number N V D 0 0 9 6 9 9 3 8 0			C. State Transporter's ID				
7. Transporter 2 Company Name						D. Transporter's Phone (702) 649-2397				
8. US EPA ID Number			E. State Transporter's ID			F. Transporter's Phone				
9. Designated Facility Name and Site Address U. S. ECOLOGY, BEATTY, NV SITE HIGHWAY 95 BEATTY, NV 89003						10. US EPA ID Number N V T 3 3 0 0 1 0 0 0				
G. State Facility's ID						H. Facility's Phone (702) 553-2203				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a.	HM	X	waste "RQ" HAZARDOUS SOLID, n.o.s., ORM-E, NA 9189 (D007)			001 DT		20	T	D007
b.										
c.										
d.										
J. Additional Descriptions for Materials Listed Above WS # 07-001-0996 EMERGENCY CONTACT 702/565-8901						K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information RETURN TO GENERATOR IF UNDELIVERABLE.										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name ALAN J. GADDY				Signature <i>Alan J. Gaddy</i>		Month Day Year 10 12 1991				
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name <i>Ken Stalworth</i>				Signature <i>Ken Stalworth</i>		Month Day Year 10 12 1991				
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature		Month Day Year				
19. Discrepancy Indication Space Total Transported quantity 23.79 T. 6-26-91										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Michael E. Stucker				Signature <i>Michael E. Stucker</i>		Month Day Year 10 12 1991				

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UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV D 0 0 8 2 9 0 3 3 0		Manifest Document No. 0 0 4 6 1 1		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address KERR-McGEE CHEMICAL CORPORATION P. O. BOX 55, HENDERSON, NV 89009-0055						A. State Manifest Document Number					
4. Generator's Phone (702) 565-8901						B. State Generator's ID					
5. Transporter 1 Company Name FREHNER TRUCKING SERVICE, INC.			6. US EPA ID Number NV D 0 0 9 6 9 9 3 8 0			C. State Transporter's ID					
7. Transporter 2 Company Name						D. Transporter's Phone (702) 649-2397					
9. Designated Facility Name and Site Address U. S. ECOLOGY, BEATTY, NV SITE HIGHWAY 95 BEATTY, NV 89003			10. US EPA ID Number NV T 3 3 0 0 1 0 0 0 0			E. State Transporter's ID					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol	1. Waste No.
a.	X	"RQ" HAZARDOUS SOLID, n.o.s., ORM-E, NA 9189 (D007)				6	1	DT	120	T	D007
b.											
c.											
d.											
J. Additional Descriptions for Materials Listed Above WS # 07-001-0996 EMERGENCY CONTACT 702/565-8901						K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information RETURN TO GENERATOR IF UNDELIVERABLE.											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name ALAN J. GADDY						Signature <i>Alan Gaddy</i>			Month Day Year 06 21 91		
17. Transporter 1 Acknowledgement of Receipt of Materials											
Printed/Typed Name BRIAN K LOWERY						Signature <i>Brian Lowery</i>			Month Day Year 06 21 91		
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed/Typed Name						Signature			Month Day Year		
19. Discrepancy Indication Space 13a) Actual wt. received 12.99 T. 06-21-91 KQ.											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.											
Printed/Typed Name Kelly Quinn						Signature <i>Kelly Quinn</i>			Month Day Year 06 21 91		

GENERATOR

TRANSPORTER

FACILITY

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NVD000829033000456** Manifest Document No.

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
**KERR-McGEE CHEMICAL CORPORATION
P. O. BOX 55, HENDERSON, NV 89009-0055**

A. State Manifest Document Number
B. State Generator's ID

4. Generator's Phone (702) 565-8901
5. Transporter 1 Company Name **58 FRESHNER TRUCKING SERVICE, INC.**

C. State Transporter's ID
D. Transporter's Phone (702) 649-2397

6. US EPA ID Number **NVD0009699380**

E. State Transporter's ID
F. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
**U. S. ECOLOGY, BEATTY, NV SITE
HIGHWAY 95
BEATTY, NV 89003**

G. State Facility's ID
H. Facility's Phone (702) 553-2203

10. US EPA ID Number **NVT330010000**

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)

HM	No.	Type	Total Quantity	Unit Wt/Vol	Waste No.
a. X	1	DDT	110	T	D007
b.					
c.					
d.					

Tank Material

J. Additional Descriptions for Materials Listed Above
**WS# 07-001-0996
EMERGENCY CONTACT 702/565-8901**

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
RETURN TO GENERATOR IF UNDELIVERABLE.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **ALAN J. GADDY** Signature *Alan J Gaddy* Month Day Year **06/12/91**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name **Kenny Sheesley** Signature *Kenny Sheesley* Month Day Year **06/12/91**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name _____ Signature _____ Month Day Year _____

19. Discrepancy Indication Space
(3A) Actual wt. Received 6.8 T. ^{KR} 06-12-91

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name **Kelly Quinn** Signature *Kelly Quinn* Month Day Year **06/12/91**

GENERATOR
TRANSPORTER
FACILITY

Kerr-McGee
Enforcement Conference
Memorandum
January 24, 1992

They believe that the process of releasing tank sludge from the circular tank into the process containment area was done to recover process solution and for de-watering and does not constitute "treatment of HW". The sludge material was not HW at the time because the sludge contained a usable, recoverable solution (containing chlorate crystals) and it was in a safe and bermed process containment area.

DEP:

K-M staff stated that they intended to ship the sludge off-site as a HW after the dewatering in the process area. DEP believes that the sludge was a HW at the time it was released from the cut circular tank and was treated (evaporation) on the process pad secondary containment area, which is not an authorized treatment area for a generator.

K-M agreed to submit a certifiability statement from a P.E. (and to make any required modifications) if this is a certifiable "tank", by February 7, 1992

Alleged Violation #3 & #4: § 262.30 Packing & § 262.31 Labeling

Kerr-McGee:

Information presented at the conference indicates that the anode cells are an ORME waste which does not require additional packing and labels.

DEP:

DEP agreed that #3 and #4 are not violations providing that K-M submits a copy of an anode manifest and a copy of the appropriate sections of the DOT regulations to demonstrate their claim, by January 31, 1991.

Alleged Violation #5: § 262.34 Accumulation Time

Kerr-McGee:

Kerr-McGee staff agreed that the facility failed to label and mark the accumulation time on the sludge drying "tank" area. The "tank" construction finished on a 6/6/91 (Thursday), the mud was placed on the "tank" pad on 6/7/91 (Friday) and was inspected on 6/8/91 (Saturday).

ALAN J. GADDY
SENIOR PROCESS ENGINEER/ENVIRONMENTAL



KERR-McGEE CHEMICAL CORPORATION
POST OFFICE BOX 55
HENDERSON, NEVADA 89015
702/565-8901

RUSSELL JONES
STAFF ENVIRONMENTAL ENGINEER

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER
POST OFFICE BOX 25861
OKLAHOMA CITY, OKLAHOMA 73125
405/270-2665

JOHN C. STAUTER, PH.D.
VICE PRESIDENT, ENVIRONMENTAL SERVICES

KERR-McGEE CORPORATION
KERR-McGEE CENTER
POST OFFICE BOX 25861
OKLAHOMA CITY, OKLAHOMA 73125
405/270-2623





KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

January 21, 1992

Ms. Alene Coulson
Nevada Department of Conservation
and Natural Resources
Division of Environmental Protection
Compliance/Enforcement Branch
123 W. Nye Lane
Carson City, Nevada 89710

Re: Finding of Alleged Violation and Order
KMCC Henderson Facility
December 17, 1991

Dear Ms. Coulson:

The following addresses the alleged deficiencies noted in the above referenced NOV. For your convenience, each of the Findings of Alleged Violation is set forth verbatim, followed by KMCC's response. We look forward to discussing these points with you at our meeting scheduled in your Carson City offices at 10:00 a.m. on Tuesday, January 21, 1992.

FINDING OF ALLEGED VIOLATIONS

Alleged Violation C.1: NRS 459.515

C. Information gathered at the time of the inspection indicates that Kerr-McGee Chemical Corporation is allegedly in violation of the following provision of the Nevada Administrative Code (NAC) and the 40 Code of Federal Regulations (CFR):

1. NRS 459.515 Construction, alteration or operation of facility without permit unlawful:

Kerr-McGee Chemical Corporation treated hazardous waste chlorate muds by evaporation, on a concrete pad which is not a process tank or container, without a permit (photos #3 - #5).

RESPONSE:

The alleged violation refers to chlorate solids recycle and waste management practices at the facility. The industrial process is electrolysis to convert chlorides to chlorates. A small amount of chromium, added as chromate (Cr+6), is an essential process additive to maintain electrolytic cell efficiency. Solids produced in the process, when filtered, contain entrained solution. When these solids are dried to remove water, dissolved constituents such as chromium remain with the solids. These dried solids, if subjected to testing using EP Tox or TCLP protocols may test as hazardous because of chromium. As a result, these chlorate solids, when wasted, are managed as hazardous due to the presence of chromium VI (D007) which is present in the process solution.

Chlorate Process Solids Drying

At the time of the inspection on June 18, 1991, KMCC had designed and just completed construction of a new concrete drying unit (NDEP Inspection report, photo #3) to evaporate residual water that potentially could manifest itself as free liquids during packaging and transport of the solids for disposal. The evaporation process removes only water since the dissolved inorganic salts are not volatile. KMCC believes that the material is properly managed at this unit under the general provisions for generators in 40 CFR 262.

The new concrete drying unit is designed to contain the solids while facilitating material handling and maximizing drying rate. Drying is aided by providing a sloped bottom (2%) to direct, collect and recover any liquids. Drawings are attached showing the drying system design.

The unit incorporated several of the provisions of Subpart J of 40 CFR Part 265 - Tank Systems in that it is designed to structurally stand alone and is of materials compatible with chlorate muds and solutions that may be placed in it (40 CFR 265.192(a)). The vessel bottom is a continuously poured, seamless reinforced concrete unit. Beneath the unit is a leak detection/collection system capable of containing 110% of the vessel volume (40 CFR 265.193(a), (b), (c), and (d)). Therefore, the design assures there will be no impact to groundwater or underlying soils. The unit is elevated to assure stormwater runoff away from the area.

KMCC believes that this drying unit is the best design for management and permissible treatment of the waste - atmospheric evaporation of water - while assuring that releases of constituents will not occur and adverse environmental impacts will not result.

When chlorate solids are placed in the drying unit they are identified as hazardous wastes, monitored, and the date of placement noted. When dry, the solids are transferred to the vehicle which transports the material to a Class 1 hazardous waste disposal facility. The wastes, in accordance with generator requirements, are not stored on site for more than 90 days.

Chlorate Process Tank Decommissioning

Photos 4 and 5 of the Investigation report show chlorate mud removed from a process tank. The tank in question is one of four chlorate process tanks used for managing chlorate solutions and directing them to various parts of the chlorate production process. Each of the tanks has a volume capacity of 250,000 gallons. At the time of the inspection, one tank had earlier been cleaned and removed. The tank in the photos has since been cleaned and

dismantled. Two tanks remain in service and serve as backup to the new chlorate process. These two remaining tanks are scheduled to be removed from service during 1992.

All of the tanks reside in an area that is contained, and has a paved floor and sump to collect and recover any liquids resulting from spills, area washdowns or storm events. This contained area is referred to as a recovery area.

The tank which was out of service on the day of inspection had been emptied of as much process liquor as possible and opened to facilitate removal of solids and remaining entrained process solutions for recycle or disposal.

The wet solids were removed from the tank and spread in the immediate area to facilitate drainage of entrained process solution to the recovery sump. Should some of the solids had been found to be reusable in the process, they, along with the entrained process solution, would have been washed to the sump. If the solids were determined to be non-usable in the process, they were either transferred directly to the hazardous waste management trailer (accumulation point) if sufficiently drained or placed in the new drying unit to evaporate remaining water.

Clean-out of these process tanks is not a routine operation. In fact, there were no records indicating that the tank had been cleaned during its lifetime. However, sludge accumulation was not a significant factor in the use of these tanks. Large quantities of process solids had not accumulated in the tanks. As the tanks cycled various strength solution, solids apparently precipitated out or dissolved.

2. NAC 444.8632 COMPLIANCE WITH FEDERAL STANDARDS:

Failure to comply with all applicable requirements of the 40 Code of Federal Regulations (CFR) Parts 2, 124 and 260 through 270, inclusive, including:

A. 40 CFR § 262.30 PACKING:

Failure to package hazardous waste in accordance with applicable Department of Transportation (DOT) regulations on packaging under 49 CFR Parts 173, 178 and 179, prior to transportation off-site.

Kerr-McGee stored improperly packaged hazardous waste anode cells on-site, prior to transportation off-site (photos #6 - #9).

RESPONSE:

KMCC was in the process of loading the old chlorate cells on the truck trailer in preparation for shipment to a waste disposal site. The load was shipped under the U.S. DOT description best describing this material as RQ Hazardous Waste Solid, n.o.s., ORM-E, NA9189 (D007). Following loading, the units were covered with a tarp and all transport requirements, including appropriate labeling, and manifesting were completed. The shipment, as with all previous shipments, left the facility gate fully in compliance with applicable DOT requirements. KMCC has not experienced an instance where one of these loads was stopped on the highway and cited for non-compliance.

B. 40 CFR § 262.31 LABELING:

Failure to label hazardous waste in accordance with applicable DOT regulations on labeling hazardous materials, under 49 CFR Part 172, prior to transportation off-site:

Kerr-McGee stored unlabeled hazardous waste anode cells on-site, prior to transportation off-site (photos #6 - #9).

RESPONSE:

Please refer to 2.A. above. The contents were properly labeled in accordance with applicable regulations.

C. 40 CFR § 262.34 ACCUMULATION TIME:

Failure to store accumulated hazardous waste in containers, in compliance with the applicable requirements of Part 265 Subpart I, or in tanks, in compliance with the applicable requirements of Part 265 Subpart J (photo #3 - #5).

RESPONSE:

Per phone discussion with Alene Coulson, KMCC understands that the alleged violation of 40 CFR 262.34, Accumulation Time, relates to the proper placement of hazardous waste labels which identify the first date of accumulation. KMCC's response to the alleged violation of 40 CFR Subparts I or J is discussed above in Item 1.

The chlorate mud drying unit (photo 3) was constructed and first put into use on Thursday, June 16. The inspection took place on Saturday, June 18. The required labels and signs had not yet been affixed. The required hazardous waste labels and identification were properly affixed before the inspector departed from the facility. This was an oversight on our part.

The inspector also indicated that hazardous waste labels and identification were required at the process tank area. Concerning the materials at that process tank area, KMCC has not identified these materials as waste, as the activity at the tank area is a recovery process for solutions from the tank, and evaluation of the solids for recycle. The muds removed from the tank were not wastes. KMCC stresses that the activity in the area is controlled. The process is contained and solutions and solids recycled via a sump. Any solids that are determined to be not reusable are moved to the appropriate waste storage/management area and properly labeled

as hazardous wastes.

If you have any questions or comments, prior to our meeting on January 21, 1992, please call Alan Gaddy at (702) 565-8901.

Very truly yours,

KERR-McGEE CHEMICAL CORPORATION



Patrick S. Corbett,

Plant Manager

PSC:j

NRS459.515



Telephone Conf

1/21/92

ENF Conf

Allen Gaddy
John Stauter
Russell Jones

1. Sludge - circular tank -

2. Not violation

3. Not violation

4. Not Violation

262.34

5. - 1. No label 264. Violation

265, - 2. No CERCLA Violation

R4.B 3. Overtopping - they ~~do~~ feel that demonstration issue ~~is~~ is a certification issue that may be resolved by certification process.

Final Certification within 60 days

Sludge from circular tank - DEP feels it's a violation

KM file

RECORD OF COMMUNICATION	DISCUSSION	
	FIELD TRIP	
	CONFERENCE	
	X PHONE CALL	OTHER (SPECIFY)
(Record of item checked above)		
TO: Kerr-McGee Chemical Corporation file	FROM: Alene Coulson Enforcement	DATE: 1/10/92
		TIME: 1330
SUBJECT: Tank Dismantling Project		
SUMMARY OF COMMUNICATION:		
<p>Allen Gaddy called to report that KM is going to be starting a project to close part of the plant and dismantle three 250,000 gallon process tanks which contain a mixture with hexavalent chromium.</p> <p>I advised Allen to sent DEP a written proposed plan for review and comment. This project is very similar to a project that KM was doing when they were inspected and found in violation of RCRA for letting the waste material run out of a cut open tank onto the containment area.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED:		
Review plan with Jeff Denison and respond ASAP		
ROUTE TO: Jeff Denison	FILE: KM	

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> PHONE CALL <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Kerr-McGee Chemical Company file	FROM: Alene Coulson Enforcement	DATE: 1/6/92
		TIME: 1500
SUBJECT: Kerr-McGee FOAV/ORDER issued 12/17/91		
SUMMARY OF COMMUNICATION: Alan Gaddy, Russ Jones and John Stoddard contacted me by conference call to discuss the FOAV/ORDER issued 12/17/91. Alan Gaddy stated that the mud pad area depicted in picture #3 was not properly labeled at the time of the inspection. The labels were put on the same day. Alan said that the process going on in pictures #3-#5 was dewatering, not treatment. The chlorate mud is a D007 and D001 (landband) waste which is not volatile. The waste in pictures #4 & #5 are in a bermed containment area & this was a one time operation to close down the old tank system. He also indicated that the cells in pictures #6-#9 are an ORME waste which does not require a label. He said that KM would provide manifest documentation to DEP.		
CONCLUSIONS, ACTION TAKEN OR REQUIRED: I left a message for Alan Gaddy stating that I recommend that KM attend the enforcement conference as scheduled (1/21/91 at 10:00). I don't believe we can reach an agreement over the phone regarding the treatment issue.		
ROUTE TO:		FILE:

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> PHONE CALL <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Kerr-McGee Chemical Company file	FROM: Alene Coulson Enforcement	DATE: 1/6/92
		TIME: 1500
SUBJECT: Kerr-McGee Inspection dated 6/8/91		
SUMMARY OF COMMUNICATION: <p>Alan Gaddy, Russ Jones and John Stoddard contacted me by conference call to discuss the inspection dated 6/8/91 and the FOAV/ORDER issued 12/17/91.</p> <p>Alan Gaddy would like to know if he can get 2 sets of the inspection pictures, a copy of your field notes and he would also like to know if the inspection narrative is complete because his copy does not address the chlorate cells.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED: <p>Tim, please contact Alan Gaddy, 565-8901, when you get a chance and let him know about the pictures, the field notes and the narrative.</p>		
ROUTE TO: Tim Murphy		FILE:

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management 687-5872
Federal Facilities 687-3880



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

December 18, 1991

NEWS RELEASE

On December 17, 1991, the Nevada Division of Environmental Protection (NDEP) issued a Finding of Alleged Violation and Administrative Order to Kerr-McGee Chemical Corporation located in Henderson, Nevada. This action was initiated as a result of the alleged failure of Kerr McGee Chemical Corporation to comply with State and Federal hazardous waste management regulations including failure to properly package, label and store hazardous waste generated on-site.

The Administrative Order requires that Kerr-McGee Chemical Corporation submit written and photographic documentation of compliance to the Division by January 31, 1992 and to attend an Enforcement Conference at the Division to discuss each alleged violation noted during the site inspection.

For Further Information on this matter contact Verne Rosse, Bureau Chief, Bureau of Waste Management, Nevada Division of Environmental Protection at (702) 687-5872.

PR #:

RECORD OF COMMUNICATION	<input checked="" type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input type="checkbox"/> PHONE CALL OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Kerr-McGee Chemical Company file	FROM: Alene Coulson Enforcement	DATE: 1/6/92
		TIME: 1500
SUBJECT: Kerr-McGee FOAV/ORDER issued 12/17/91		
SUMMARY OF COMMUNICATION: <p>Alan Gaddy, Russ Jones and John Stoddard contacted me by conference call to discuss the FOAV/ORDER issued 12/17/91.</p> <p>Alan Gaddy stated that the mud pad area depicted in picture #3 was not properly labeled at the time of the inspection. The labels were put on the same day.</p> <p>Alan said that the process going on in pictures #3-#5 was dewatering, not treatment. The chlorate mud is a D007 and D001 (landband) waste which is not volatile. The waste in pictures #4 & #5 are in a bermed containment area & this was a one time operation to close down the old tank system.</p> <p>He also indicated that the cells in pictures #6-#9 are an ORME waste which does not require a label. He said that KM would provide manifest documentation to DEP.</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED: <p>I left a message for Alan Gaddy stating that I recommend that KM attend the enforcement conference as scheduled (1/21/91 at 10:00). I don't believe we can reach an agreement over the phone regarding the treatment issue.</p>		
ROUTE TO:	FILE:	

file

STATE OF NEVADA

BOB MILLER
Governor

L. H. DODGION
Administrator

PETER G. MORROS
Director

Administration	(702) 687-4670
Air Quality	687-5065
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Waste Management	687-5872
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Wastewater Treatment Services	687-5870
Water Permits and Compliance	687-4670
Water Quality Planning	687-4670
FAX	885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

December 17, 1991

Rick Stater
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Mr. Stater:

The enclosed Finding of Alleged Violation and Order are issued under the authority of the Administrator of the Division of Environmental Protection pursuant to Nevada Revised Statutes, NRS 459.565 and 459.570.

The Finding of Alleged Violation and Order relate to alleged failure of Kerr-McGee Chemical Corporation to comply with applicable Hazardous Waste (HW) Management regulations.

Any violations of the terms of this Order could subject Kerr-McGee Chemical Corporation to an action for appropriate relief pursuant to NRS 459.565, 459.570, 459.585, and Section 3008 of the Resource Conservation and Recovery Act (RCRA).

Questions regarding this matter may be directed to Alene Coulson at (702) 687-5872.

Sincerely,

Douglas J. Martin
Douglas J. Martin, Supervisor
Compliance/Enforcement Branch
Bureau of Waste Management

AC/klh
Enclosures

CERTIFIED MAIL # P 680 480 977

cc: U.S. EPA Region IX
L.H. Dodgion
Press Release

Alene Coulson
Environmental Commission

P 680 480 977

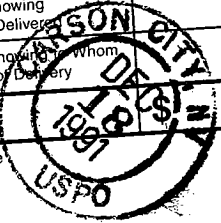
*EMVIR
2/1/84*



Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse) *waste/a.e.*

Sent to		Rick Stater	
Street & No.		Kerr-McGee Chemical Corp.	
P.O. Box 55			
P.O., State & ZIP Code		Henderson, NV 89015	
Postage		\$	
Certified Fee			
Special Delivery Fee			
Restricted Delivery Fee			
Return Receipt Showing to Whom & Date Delivered			
Return Receipt Showing to Whom Date, & Address of Delivery			
TOTAL Postage & Fees			
Postmark or Date			



PS Form 3800 June 1986

PS Form 3811, October 1990 *U.S. GPO: 1990-273-861

5. Signature (Addressee)
[Signature]

6. Signature (Agent)
[Signature]

3. Article Addressed to:
Rick Stater
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89015

4a. Article Number
P 680 480 977

4b. Service Type
 Registered
 Certified
 Express Mail
 Insured
 COD
 Return Receipt for Merchandise

7. Date of Delivery
12-23

8. Addressee's Address (Only if requested and fee is paid)

SENDER:
 • Complete items 1 and/or 2 for additional services.
 • Complete items 3, and 4a & b.
 • Print your name and address on the reverse of this form so that we can return this card to you.
 • Attach this form to the front of the mailpiece, or on the back if space does not permit.
 • Write "Return Receipt Requested" on the mailpiece next to the article number.

1 also wish to receive the following services (for an extra fee):
 1. Addressee's Address
waste/a.e.
 2. Restricted Delivery
 Consult postmaster for fee.

DOMESTIC RETURN RECEIPT

FINDING OF ALLEGED VIOLATION

This Finding is made on the basis of the following facts to wit:

- A. The State of Nevada Department of Conservation and Natural Resources, Division of Environmental Protection (DEP), has the power and duty to administer and enforce the provisions of the Nevada Revised Statutes (NRS) 459.400 and 459.600, inclusive, and all rules, regulations and standards promulgated by the State Environmental Commission and all orders and permits promulgated by the Department, and is authorized by NRS 459.475 in accordance with NRS 459.565 and NRS 459.570 to make findings and issue orders.
- B. June 8, 1991, Division of Environmental Protection (DEP) staff performed a hazardous waste inspection at Kerr-McGee Chemical Corporation to determine compliance with the State and Federal hazardous waste regulations. A copy of the inspection report is attached and hereby made a part of the Finding.
- C. Information gathered at the time of the inspection indicates that Kerr-McGee Chemical Corporation is allegedly in violation of the following provision of the Nevada Administrative Code (NAC) and the 40 Code of Federal Regulations (CFR):
1. **NRS 459.515** Construction, alteration or operation of facility without permit unlawful:

Kerr-McGee Chemical Corporation treated hazardous waste chlorate muds by evaporation, on a concrete pad which is not a process tank or container, without a permit (photos #3 - #5);
 2. **NAC 444.8632** COMPLIANCE WITH FEDERAL STANDARDS:

Failure to comply with all applicable requirements of the 40 Code of Federal Regulations (CFR) Parts 2, 124 and 260 through 270, inclusive, including:
 3. **§ 262.30** PACKING: ORME

Failure to package hazardous waste in accordance with applicable Department of Transportation (DOT) regulations on packaging under 49 CFR Parts 173, 178 and 179, prior to transportation off-site:

N/A

ORME

Kerr-McGee stored improperly packaged hazardous waste anode cells on-site, prior to transportation off-site (photos #6 - #9);

ORME

4. § 262.31 LABELING:

Failure to label hazardous waste in accordance with applicable DOT regulations on labeling hazardous materials, under 49 CFR Part 172, prior to transportation off-site:

Kerr-McGee stored unlabeled hazardous waste anode cells on-site, prior to transportation off-site (photos #6 - #9);

5. § 262.34 ACCUMULATION TIME:

Failure to store accumulated hazardous waste in containers, in compliance with the applicable requirements of Part 265 Subpart I, or in tanks, in compliance with the applicable requirements of Part 265 Subpart J (photo #3-#5);

12-18-91
Date

Tim Murphy
Tim Murphy, EMS III
Compliance & Enforcement
Bureau of Waste Management

IN THE MATTER OF)
Kerr-McGee Chemical Corporation)
December 17, 1991)
Page 4)

ORDER

The following Order is issued this date, pursuant to the powers and duties vested in the Director by the Nevada Revised Statutes (NRS) in accordance with NRS Chapters, 459.565 and 459.470 and issued under the authority of the Administrator of the Division of Environmental Protection (DEP) pursuant to the authority delegated to him by the Director.

On the basis of the Finding of Alleged Violation attached hereto and made a part of this Order, the Administrator has determined that Kerr-McGee Chemical Corporation is allegedly in violation of NRS 459.515, NAC 444.8632 and 40 CFR Parts 262.30, 262.31 & 262.34, outlined in the attached Finding of Alleged Violation.

IT IS HEREBY ORDERED:

Kerr-McGee Chemical Corporation shall:

1. By January 31, 1992, submit written and photographic documentation to Alene Coulson of this Division which demonstrates that Kerr-McGee Chemical Company has corrected each violation listed above; and
2. By January 3, 1992, contact Doug Martin at (702) 687-5872 to schedule an Enforcement Conference to discuss each alleged violation noted in the Finding.

12/18/91
Date

Verne Rosse
Verne Rosse, P.E.
Chief
Bureau of Waste Management

VR/AC:klh



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

RECEIVED
ENVIRONMENTAL
PROTECTION

OCT 15 91

October 10, 1991

Mr. Mark Horn
Horn Environmental Consulting Group, Inc.
P. O. Box 50886
Amarillo, Texas 79159-0886

Dear Mr. Horn:

Subject: J. B. Kelly, Inc.
Underground Storage Tank
Henderson, Nevada Operation

As discussed on 9-27-91, the recent analysis from sub-surface soil sampling under the storage tanks do not conclusively suggest the contaminants could not have originated from the storage tanks.

Since our review of the history of the area revealed no known other potential source of hydrocarbon usage or processing, KMCC advises additional sampling of the sub-soil outside the range of influence of the underground storage tanks. It is suggested that at least three (3) bore holes (one east, one west, and one south) be sampled to provide additional data.

KMCC should be notified prior to sampling to comment on location of bore holes and to witness the sampling.

Should you have any questions regarding this matter, please contact me at 702/565-8901.

Sincerely,

A. J. Gaddy
Environmental Engineer

AJG:j

cc: Jeff Denison/NDEP
Steve Henke/CCHD
S.M. Logan/OKC
JCStauter/OKC

Clark County



**Horn
Environmental Consulting Group, Inc.**

September 27, 1991

P O Box 50886 • Amarillo, Texas 79159-0886 • Phone 806/358-3107 • Wats 1-800-594-0008

Mr. Steve Henke
Clark County Health District
P. O. Box 4426
Las Vegas, Nevada 89127

Re: Jack B. Kelley, Inc.
Underground Storage Tanks
Henderson (BMI Complex), Nevada

9/27

Dear Steve:

Enclosed you will find the three sets of analysis perform on the subsurface soil under the storage tanks on the Jack B. Kelley, Inc. Facility taken June 28, 1991.

Report 01623 clearly indicates Hydrocarbon contamination in the C11-C24 Range under both tanks. Please note, however, that the contamination directly below the tanks was under the allowable limits in the C4-C10 Range.

Report 01760 samples collected at the depth under the Waste Oil Tank of approximately 12 feet and under the Diesel Fuel Tank at 22 feet clearly indicates less than 10 ppm in the C11-C24 Range; however, we are seeing an increase in the C4-C10 Range at these depths. It seems clear that we have intercepted this contaminate plume from another area on the BMI Complex.

Please advise on your position in this matter. Should you have any question or need additional information, please contact me at 806/358-3025 or 800/594-0008.

Sincerely,

Marc S. Horn

MSH:nm

cc: Mr. Alan J. Gaddy, Kerr-McGee Chemical Corporation
Mr. Jeff Dennison, Nevada EPA

1614W

MET-CHEM

DIVISION OF MET-CHEM TESTING LABORATORIES, INC.

**WEST**

4275 BELL DRIVE #4 • LAS VEGAS, NEVADA 89118 • (702) 368-1082 • FAX (702) 876-6811

Jack B. Kelley, Incorporated
Route 1
Box 400
Amarillo, Texas 79159

DATE: July 10, 1991
REPORT NO.: 01623
P.O. NO.: Paid in Advance
INVOICE NO.: 2678

WORK REQUESTED:

Chemical Analysis per SW-846, Method 1311/High Temperature Modified, California Modified 8015 for:

- (1) TCLP (Metals)
- (2) Total Petroleum Hydrocarbons (TPH)

DESCRIPTION OF SAMPLE:

- Five (5) samples reported to be Soil and identified as:
- (1) Under Waste Oil Tank, 6-28-91, TPH (Waste Oil), TCLP Metal
 - (2) W.O.L. Composite, 6-28-91, TPH (Waste Oil), TCLP Metal
 - (3) East End Diesel, 6-28-91, TPH for Diesel
 - (4) 6-28-91, TPH (Diesel Fuel)
 - (5) Composite Soil, 6-28-91, TPH Diesel Fuel

CHEMICAL ANALYSIS (SW-846, METHOD 1311/HIGH TEMPERATURE MODIFIED, CALIFORNIA MODIFIED 8015)TCLP (Metals).

Parameter	Found/(mg/L)	
	#1	#2
Arsenic	<0.01	<0.01
Cadmium	0.002	<0.001
Lead	<0.001	<0.001
Selenium	<0.01	<0.01
Barium	0.28	0.11
Chromium	0.04	0.01
Mercury	<0.01	<0.01
Silver	<0.001	0.004

(A)

MET-CHEM

DIVISION OF MET-CHEM TESTING LABORATORIES, INC.



WEST

4275 BELL DRIVE #4 • LAS VEGAS, NEVADA 89118 • (702) 368-1082 • FAX (702) 876-6811

Report 01623

Page -2-

CHEMICAL ANALYSIS (SW-846, METHOD 1311/HIGH TEMPERATURE MODIFIED, CALIFORNIA MODIFIED 8015), CONTINUED

Total Petroleum Hydrocarbons (TPH)

<u>Samples</u>	<u>Found/(mg/kg)</u>	
	<u>Range C4-C10</u>	<u>Range C11-C24</u>
#1 Oil	21.5	3,498.2
#2 Oil	<10	2,926.0
#3 Diesel	<10	419.3
#4 Diesel	<10	871.7
#5	74.3	1,073.7

MET-CHEM TESTING LABORATORIES, INC.

Charles I. Robins
Charles I. Robins
President

748W

MET-CHEM

DIVISION OF MET-CHEM TESTING LABORATORIES, INC.



WEST

4275 BELL DRIVE #4 • LAS VEGAS, NEVADA 89118 • (702) 368-1082 • FAX (702) 878-6811

Jack B. Kelley, Incorporated
Route 1
Box 400
Amarillo, TX 79159

Attn: Mr. Marc Horn

DATE: September 26, 1991

REPORT NO.: 01760

P.O. NO.: Verbal

INVOICE NO.: 2818

WORK REQUESTED:

High Temperature Modified, California Modified 8015 for Total Petroleum Hydrocarbons (TPH)

DESCRIPTION OF SAMPLE:

Four (4) samples reported to be, "Soil" and identified as:

- (1) Diesel Tank West, 9-24-91, 9:05 A.M., Cool, 4°C
- (2) Diesel Tank East, 9-24-91, 9:10 A.M., Cool, 4°C
- (3) Waste Oil Tank West, 9-24-91, 9:20 A.M., Cool, 4°C
- (4) Waste Oil Tank East, 9-24-91, 9:25 A.M., Cool, 4°C

TOTAL PETROLEUM HYDROCARBONS (TPH), HIGH TEMPERATURE MODIFIED, CALIFORNIA MODIFIED 8015

Found/TPH (mg/Kg)*

<u>Sample</u>	<u>Range C4-C10</u>	<u>Range C11-C24</u>	<u>Date of Analysis</u>
1 22'	1,579.6	<10.0	9-25-91
2	<10.0	<10.0	9-25-91
3 12'	42.2	<10.0	9-25-91
4	<10.0	<10.0	9-25-91

* C4-C10 - are the lower boiling fractions such as gasoline, etc.
C11-C24 - are the higher boiling fractions such as motor oil, diesel fuel, etc.

REMARKS:

Chain of Custody document enclosed.

MET-CHEM TESTING LABORATORIES, INC.

Charles I. Robins
Charles I. Robins
President



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

September 9, 1991

Cert. Mail #P883 883 373

RECEIVED

SEP 23 1991

ENVIRONMENTAL
PROTECTION

Mr. LaVerne Rosse
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, NV 89710

Dear Mr. Rosse:

Subject: Closed Hazardous Waste Landfill
1991 Groundwater Monitoring Results

Kerr-McGee Chemical Corporation's (KMCC) Henderson facility conducted RCRA groundwater monitoring as required by 40 CFR 265.92 (d)(1) in July 1991. The groundwater sampling event was witnessed by NDEP representative Ms. Jennifer Hughes. The wells sampled are associated with the closed hazardous waste landfill located at the site. Analytical results were compared with baseline values as required under 40 CFR 265.92 (c).

A statistically significant increase in parameters pH and specific conductivity was detected in the upgradient well M-5 during this sampling effort, trending toward an improvement in groundwater quality. Notice of the results is made herein pursuant to 40 CFR 265.93 (c)(1). There is no evidence the landfill could effect upgradient water quality parameters.

All statistically significant changes from baseline detected in the monitoring wells described below reflect an improvement in the groundwater quality when compared to the 1983 baseline values of well M-5.

A statistically significant change from baseline data was detected in the pH and specific conductivity of all three (3) downgradient wells M-6, M-7, and H-28, as well as the TOX of M-7 and H-28.

Additional groundwater samples were collected as required under 40 CFR 265.93 (c)(2) and analyzed for pH at each well. Statistical analysis of the resampled wells did show support for an increase in pH in the wells.

Mr. LaVerne Rosse
Page 2
September 9, 1991

The pH and specific conductivity of the downgradient wells fall within the range of groundwater typical of the Henderson area.

The TOX parameters M-7 and H-28 showed statistically significant improvements in quality when compared to baseline values. An improved quality trend is apparent in the TOC and TOX of all three (3) downgradient wells.

Analytical results, statistical comparisons, resample results, and water levels are attached as Tables I, II, and III, respectively. Analytical results include analysis for chromium. Chromium is the parameter representative of the hazardous constituent contained in the landfill. The absence of elevated chromium in the downgradient wells is the best indication that there have been no impacts from the landfill.

Based on the information herein and the information presented since the June 13, 1984 Closure/Post-Closure Plan (revised October 1984) was submitted, the regulated landfill does not affect groundwater quality.

Should you have any questions, please contact Alan J. Gaddy at 702/565-8901, Ext. 234.

Very truly yours,

KERR-McGEE CHEMICAL CORPORATION



Patrick S. Corbett
Plant Manager

PSC:j

cc: AJGaddy

TABLE I
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY
1991 GROUNDWATER QUALITY PARAMETERS ^(A)
LABORATORY ANALYSIS

	<u>M-5</u> ^(C)	<u>M-6</u>	<u>M-7</u>	<u>H-28</u>
Cl	3900	2200	1800	2200
Cr ^(B)	<0.010	0.040	<0.010	<0.010
Fe	52.0	27.0	0.80	51.0
Phenolics	0.060	<0.010	<0.010	<0.010
Na	1700	1400	1300	1000
SO ₄	1600	2000	2100	470
Mn	3.30	3.20	0.160	1.70
SpCd	13,000	9,200	8,200	7 300

(A) Units = mg/l for all constituents

(B) Chromium added because it is indicative of waste stored in landfill.

(C) Upgradient well

TABLE.I
 AJG:j
 8-28-91

TABLE II
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY

1991 GROUNDWATER INDICATOR PARAMETERS ^(A)

<u>WELL #</u>	<u>PARAMETER</u>	<u>REPLICATES</u>	<u>MEAN</u>	<u>t VALUE</u>
BACKGROUND M-5	pH	Values result of 16	6.34	}Insignificant
	SpCD	replicates	10469	}@ < 2.552
	TOC	(4 per quarter	62.3	}Insignificant
	TOX	from 6/82 to 3/83)	47.7	}@ < 2.602
M-5	pH	6.94, 6.78, 6.73, 6.73	6.795	2.93 *
	SpCd	9450, 9450, 9440, 9370	9427.5	10.048 *
	TOC	49, 45, 42, 48	46	0.66
	TOX	29, 31, 31, 29	30	2.12
M-6	pH	7.8, 7.67, 7.67, 7.68	7.705	8.854 *
	SpCd	7140, 7260, 7300, 7300	7250	30.741 *
	TOC	4.4, 4.2, 3.6, 4.3	4.125	2.36
	TOX	54, 53, 58, 65	57.50	1.16
M-7	pH	7.68, 7.54, 7.56, 7.54	7.58	8.039 *
	SpCd	6860, 6900, 6900, 6950	6902.5	34.419 *
	TOC	3.5, 3.3, 3.1, 3.4	3.325	2.39
	TOX	18, 20, 21, 21	20	3.32 *
H-28	pH	7.41, 7.31, 7.31, 7.31	7.335	6.465 *
	SpCd	5840, 5820, 5800, 5800	5815.0	45.023 *
	TOC	7.5, 7.5, 7.5, 7.2	7.425	2.23
	TOX	6.1, 6.0, 5.1, 5.6	5.7	5.03 *
M-5 Resample	pH	7.00, 7.98, 6.96, 7.00	7.235	4.689 *
M-6 Resample	pH	7.17, 7.27, 7.33, 7.40	7.29	6.142 *
M-7 Resample	pH	7.32, 7.31, 7.32, 7.34	7.323	6.400 *
H-28 Resample	pH	7.22, 7.28, 7.38, 7.46	7.335	6.403 *

(A) Units: pH = std. units; SpCd = umhos/cm; TOC and TOX = mg/l

* Indicates a statistically significant change from baseline values with 99.0% confidence levels.

TABLE.II
 AJG:j
 9-9-91

TABLE III
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY
1991 WATER ELEVATIONS ^(A)

<u>WELL#</u>	<u>JULY 1991 ELEVATION</u>	<u>JULY 1990 ELEVATION</u>	<u>JUNE 1989 ELEVATION</u>
M-5	1709.71	1710.11	1710.96
M-6	1681.19	1689.90	1691.45
M-7	1684.91	1685.96	1687.86
H-28	1691.33	1692.23	1694.13

^(A) Units = feet above sea level

TABLE. III
AJG:j
8-28-91

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
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Wastewater Treatment Services 687-5870
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Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

August 29, 1991

Mr. Alan J. Gaddy, Chairman
Henderson Industrial Site Steering Committee
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89009

RE: Response to questions regarding "Approved Format".

Dear Alan:

Attached are a couple examples of the "DATA RECORD SHEET" from the DOE document that we talked about during the technical committee meeting last Thursday (8/22/91). I recognize that this does not exactly match the format that we want for the Phase 1 Report, but it does demonstrate how the information can be presented in a concise manner with minimal narration.

Call me if you would like to discuss this.

Sincerely

A handwritten signature in cursive script, appearing to read "Jeffrey C. Denison".

Jeffrey C. Denison
Environmental Engineer
Bureau of Waste Management

Enclosures

JCD

BMIGAD2.JCD

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
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Administration (702) 687-4670
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FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

July 9, 1991

Mr. Patrick S. Corbett
Plant Manger
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89009

RE: Approval of Revised Draft Work Plan for Phase 1
Environmental Conditions Assessment of the Kerr-McGee
Facility in Henderson, Nevada.

Dear Mr. Corbett:

The above referenced revised draft work plan has been reviewed by the Division and is approved upon inclusion of the following amendments and clarifying statements:

1. **Page 2, First Full ¶, Third Sentence.** Delete the phrase "may include entities such as" and insert in lieu thereof "shall include the following entities:". The Nevada Division of Environmental Protection shall also be added to the list of required information sources. Colorado River Commission and U.S. Department of Defense sources will be reviewed if warranted by the findings of the preliminary review of required information sources.
2. **Page 3, Task 5.** Delete the phrase ", where appropriate,". The Company is obligated to revise each deliverable to conform to the Division's comments, irrespective of whether the Company believes that a particular comment is "appropriate."
3. **Page 3, Task 6, Second ¶.** Delete "will" in both instances and insert in lieu thereof the word "may".
4. **Page 3, Task 8, First Sentence.** Delete the phrase ", where appropriate,".
5. **Page 3, Task 8, Second sentence.** Delete the reference to item 25. Item 24 prescribes the relevant due date.

Mr. Corbett
July 9, 1991
Page 2

A copy of this letter will be attached to the Revised Workplan to document this change. It is not necessary to resubmit a corrected plan. Also, please be informed that the revised time schedule has been approved and is now in effect. Accordingly, a proposed format for the Phase 1 Report (Task 8) is due on or before July 31, 1991.

In accordance with Section 13 of the Consent Agreement, this letter also serves as notice that I have replaced Adele Alderson as the Division BMI Project Coordinator. Future correspondence regarding the Environmental Conditions Assessment should be directed to my attention. Thank you.

Sincerely,



Jeffrey C. Denison
Environmental Engineer
Waste Bureau Management

BMIWPKM:JCD

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management 687-5872



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710
June 21, 1991

Patrick S. Corbett
Plant Manager
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89009

RE: State's clarification of issues discussed during draft work plan meeting of July 20, 1991 in Henderson.

Dear Mr. Corbett:

As discussed in our meeting yesterday, the State agreed to respond to the following issues. The issues of concern and the State's response are summarized as follows:

1. Extent of air emissions study: The observation was made that much of the air quality and air emissions data collected for BMI provides little information as to the extent and location of contaminated sites at the facility. The Division, however, believes that all air emissions data must be considered and evaluated as part of a complete study. The evaluation of air emissions should encompass available air data in a general discussion of air quality impacts (e.g., the Henderson cloud was due to these emissions and is no longer a concern due to...). Emphasis should be placed on those releases that are characterized as depositional in nature in which particulate fallout or fugitive emissions may have contributed to surface contamination at the BMI site or surrounding area, (e.g., particulate emissions of alpha and beta BHC).
2. Inclusion of spills of nonreportable quantities: The Division requests that the Phase I study identify and include those areas which, due to past or current handling practices or processes, are potentially contaminated by small, but sometimes frequent, spills which may not always have been reported.

Mr. Patrick S. Corbett
June 21, 1991
Page 2

3. Extent of Department of Defense and Colorado River Commission file review: Review of Department of Defense (DOD) and Colorado River Commission (CRC) records may begin with a thorough review of available EPA, State and BMI Company files. In particular, information on the DOD production processes, wastes and possible disposal sites should be gathered. This investigation may lead to the discovery of some DOD source files that will require further review and possibly additional time to perform these tasks.
4. Review of Nevada OSHA files: The Division has determined that a review should be conducted of Nevada OSHA reports or files that may indicate the presence of environmental contamination (e.g., wipe tests in production areas that may show presence of dioxins or PCBs, etc.). This review need not consider claims made by disgruntled employees or other unsubstantiated reports.

Please be reminded that the revised draft work plans should incorporate the changes enumerated above in addition to the other comments that were made by the Division in the letter dated May 30, 1991. The revised work plan is due July 1, 1991.

As agreed to by the State, the Division will send a letter to Clark County Health District, U.S. Geological Survey, U.S. Bureau of Reclamation, the Environmental Monitoring Systems Laboratory, EPA Region IX and Ecology & Environment, Lockheed, Colorado River Commission, Desert Research Institute, University of Nevada - Las Vegas, Nevada OSHA and Department of Defense informing them of the BMI study and requesting access to pertinent files. Hopefully, this will help establish contact and cooperation with each of these entities.

Again, we thank you and all who participated in yesterday's meeting and ask that you please contact Dan Gross or myself if you have any questions in this regard.

Sincerely,



Jeffrey C. Denison
Environmental Engineer
Waste Management Bureau

JCD:

KERR MCGEE

6/8/91

1:50 pm

Plant Foreman → Karen Kelly

Karen called made calls to Rik Stater assistant plant manager since 1983. He is going to come to the Plant and accompany us on the generation inspections - 10/15 mud. Alan Haddy was not available.

Time inspec. began 2:25

Graphite Cells w/anodes coated w/ Cr^{5+} . old process generated muds containing Cr^{5+} .

3 ABOVE GROUND storage tanks that had been taken out of operation (date) were in the process of being cleaned out. These tanks used to handle process waters containing muds. Most of the waters had been drained off and of the three tanks, only the northern most tank was being cleaned. One side of the tank had been cut out and the Cr^{5+} muds were clearly visible.



KERR MCGEE
6/8/91

##+ There were hoses running off each tank and appeared, in part to be collecting in the storm drain. It was unclear as to the explanation Rick gave and thought he indicated the water was added back to the process next to the hopper. A puddle of green liquid was standing in the street, next to the hoses.

##+ A recently constructed storage pad, where the muds were air dried was not marked with the appropriate haz labels.

##+ Units Bldgs #4 + ? contain numerous anode cells that are being disposed of as haz waste at US ECO. ~ 500 in one unit, ~ 800 cells in another. These cells are stored on a flatbed truck and then disposed of. The cells were allowed to drain and dry in place within the buildings (what about the liquid - where were they disposed of). The flatbed did not have placards or labels.

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
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Waste Management 687-5872



Wastewater Treatment Services 687-5870
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Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

May 30, 1991

Patrick S. Corbett
Plant Manager
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, Nevada 89009

RE: Draft Work Plan for Phase 1 Environmental Conditions
Assessment of the Kerr-McGee Facility in Henderson,
Nevada.

Dear Mr. Corbett:

The above referenced draft work plan has been found to be deficient in the following areas. Please submit a revised draft work plan which addresses these deficiencies to this office by June 7, 1991. Any questions on the following deficiencies should be discussed with Dan Gross before 4:30 P.M. PDT, June 5, 1991. Until further notice Adele Alderson is not available.

1. Approval of the Table of Contents will be deferred until Day 62 pursuant to Section 2(f) and Appendix C/Task 9 of the Consent Agreement.
2. The Draft Work Plan provides that Kleinfelder "will follow" (p. 2-3) the corrective action authorities of the Resource Conservation and Recovery Act ("RCRA") in performing the environmental conditions assessment. This is inconsistent with Section 2(b)(ii) of the Consent Agreement. The Consent Agreement, not the corrective action authorities of RCRA, prescribes the required work. The Draft Work Plan should be revised accordingly.
3. The Draft Work Plan addresses solely releases from SWMUs. The Draft Work Plan fails to address the development of the information required by sections 2(c)(1), (iii), (iv), (v), (vi), and (vii) of the Consent Agreement.

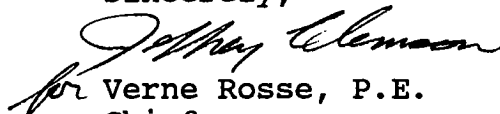
Patrick S. Corbett
Plant Manager
Kerr-McGee Chemical Corporation
May 30, 1991
Page 2

4. The Draft Work Plan does not contain a schedule and a detailed description of the activities to be performed, as required by Section 2(b)(ii) of the Consent Agreement.
5. The Draft Work Plan expressly excludes from the assessment various categories of spills, releases and discharges (pp. 2-3, 2-4). Such exclusions are contrary to Section 2(b)(i) of the Consent Agreement.
6. The Draft Work Plan does not address the potential sampling visit requirements of the RFA Guidance, and Section 2(b)(ii) and Appendix C of the Consent Agreement.

Also, please be advised that the terms of the Consent Agreement shall govern concerning any ambiguities or questions which may arise regarding the obligation of the approved work plan. As an example, in accordance with 2(b)(i) and 2(c) of the Consent Agreement, all permitted releases; storage, disposal, or management units; air emissions from processes, etc. are included in Phase I and not just study of SWMU's in accordance with a RFA. The RFA Guidance document was selected so as to provide for common methodologies in conducting the studies.

We look forward to reviewing the revised work plan. Again, if you have any questions, please contact Dan Gross as soon as possible.

Sincerely,



for Verne Rosse, P.E.
Chief

Bureau of Waste Management

VR/DPG:klh

RECORD OF COMMUNICATION	<input type="checkbox"/> DISCUSSION <input type="checkbox"/> FIELD TRIP <input type="checkbox"/> CONFERENCE <input checked="" type="checkbox"/> PHONE CALL <input type="checkbox"/> OTHER (SPECIFY)	
	(Record of item checked above)	
TO: Alan Gaddy	FROM: Adele Alderson	DATE 5-17-91 TIME 3:10 pm
SUBJECT KMCC Report for BMI Study		
SUMMARY OF COMMUNICATION <p>I called to clarify Patrick S. Corbett's letter of May 7, 1991. Kleinfelder, Inc. was approved to review KMCC operations and practises as part of the BMI Consent Agreement. The May 7, 1991 submittal is intended to fulfill both task 5 & task 8 as outlined in Appendix C of the Consent Agreement</p>		
CONCLUSIONS, ACTION TAKEN OR REQUIRED <p>At this time, Division approval of 4 only task 5 will be considered</p>		
ROUTE TO: 1 _____ 2 _____ 3 _____ File Kerr McGee		



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

May 7, 1991

Ms. Adele Alderson
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

RECEIVED

MAY 16 1991

Dear Ms. Alderson:

ENVIRONMENTAL PROTECTION

Subject: KMCC Report for BMI Study

As you are aware, Kleinfelder, Inc. was approved to review KMCC operations and practices as a part of the BMI Industrial Site Study concerning only KMCC and company contributions to BMI common property. Along the same areas of study, in 1985 KMCC applied for a RCRA Post-Closure Permit for the KMCC Henderson facility Hazardous Waste Landfill.

Attached is Kleinfelder's draft Table of Contents and their Objectives and Approach in securing the RCRA post-closure permit while summarizing KMCC operations and practices within the BMI Complex common areas pursuant to the terms of the Consent Agreement.

A prompt response would be appreciated should you have any comments on Kleinfelder's approach or proposed Table of Contents.

Sincerely,


Patrick S. Corbett
Plant Manager

PSC:j
ALDERSN5.7

cc: AJGaddy
BGreen
JCStauter

TABLE OF CONTENTS
KERR-McGEE CHEMICAL CORPORATION
RCRA FACILITY ASSESSMENT

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 - 2.3 Scope of the RFA
 - 2.4 Technical Approach to the RFA
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2 INTRODUCTION

2.1 Regulatory Background

The Resource Conservation and Recovery Act (RCRA) of 1976 with Hazardous and Solid Waste Amendments (HSWA) of 1984 was the first comprehensive, federal effort to address the issues of solid waste (SW) and specifically, hazardous waste (HW). The congressionally mandated program is identified as RCRA Subtitle C.

The RCRA Section 3001 requires the Environmental Protection Agency (EPA) to develop regulations for the identification of hazardous wastes. The statute allows that hazardous waste may be identified by either of the following methods:

1. The EPA can "list" solid wastes that are hazardous in regulations; or
2. The EPA can list hazardous "characteristics", stating that if a solid waste exhibits at least one of the listed characteristics it is deemed hazardous waste.

The RCRA Section 3010(a) requires that persons or facilities managing a hazardous waste file a notification with the EPA describing their hazardous waste activities. The notification process requires filing in the Federal Register within 90 days of the time EPA first promulgates regulations that identify wastes as hazardous or management activities as RCRA-related. The above procedure allows the EPA to identify persons, companies and organizations that are regulated under the RCRA hazardous waste program.

The RCRA Section 3002 requires the EPA to establish hazardous waste generator standards. The above standards include the preparation of manifests for tracking hazardous waste from "cradle to grave". The generators are also obligated to utilize

transporters and Treatment Storage and Disposal (TSD) facilities that possess an EPA identification number and which are also regulated under RCRA.

The RCRA Section 3003 requires EPA to establish standards for transporters of HW. The regulations are established in conjunction with the Department of Transportation (DOT) regulations mandate compliance with requirements related to recordkeeping, labeling of drums, placarding of trucks, and delivery of HW shipments to approved TSD facilities.

The RCRA Section 3004 required the EPA to establish regulatory standards for TSD facilities. This section of RCRA authorizes the EPA to establish design, location, construction, operation and maintenance standards, as well as insurance and financial requirements regulating the operation of TSD facilities.

The RCRA section 3005 required owners and operators of TSD facilities to obtain a RCRA permit. The TSD facility permits are based on comprehensive standards set forth by the EPA under RCRA Section 3004. The RCRA Section 3005(e) also established the "interim status" designation, allowing TSD facilities in existence as of November 19, 1980 to remain in operation until the site specific RCRA permit could be obtained.

On May 19, 1980 the EPA promulgated regulations that establish basic definitions, hazardous waste identification procedures and the basic standards for generators, transporters, and owners and operators of TSD facilities. The RCRA regulations are published in 40 Code of Federal Regulations (CFR) parts 260 through 280.

2.2 Purpose of the RFA

The RCRA Facility Assessment (RFA) is conducted in three stages to provide the following:

- o Information on releases at RCRA facilities;
- o Information on solid waste management units (SWMUs) and other areas of concern for releases to all media and other regulated units for releases to media other than groundwater;
- o Preliminary assessments regarding releases of concern and requirements for further actions and interim measures at the facility; and
- o Screening from further assessment SWMUs that do not pose a threat to human health and the environment.

The three stage process of the RFA includes the preliminary review (PR), the visual site inspection (VSI), and the sampling visit (SV). The PR consists of an evaluation of existing information. The VSI is an on-site collection of visual information to obtain evidence of release (if releases exist). The SV provides information to close data gaps following completion of the PR and the VSI.

2.3 SCOPE OF THE RFA

The RFA will attempt to identify areas of potential release at RCRA facilities and includes an assessment of releases to the following media:

- o Air;
- o Surface water;
- o Ground water; and,
- o Soils.

Releases to ground water from regulated units will not be covered in the RFA.

The provisions set forth in HSWA Sec. 3004(u) focus on releases from SWMUs at RCRA facilities. For the purposes of the KMCC study Kleinfelder will follow the above provisions. In HSWA Sec. 3004(u) SWMUs are defined as:

- o *Any discernible waste management unit at a RCRA facility from which hazardous constituents might migrate, irrespective of whether the unit*

was intended for the management of solid and/or hazardous waste. The definition of SWMUs includes: containers, tanks, surface impoundments, waste piles land treatment units, landfills, incinerators, and underground injection wells, including those units defined as "regulated units" under RCRA.

- o Recycling units waste water treatment units and other units which EPA has generally exempted from standards applicable to hazardous waste management units.*
- o Areas contaminated by "routine, systematic, and deliberate discharges" from process areas.*

The above definition of a SWMU does not include discharges from accidental spills from production areas and units in which wastes have not been managed.

The following RFA prepared for the KMCC Henderson facility will not address releases that are permitted or required to be permitted under other environmental programs or contamination resulting from permitted discharges.

2.4 Technical Approach to the RFA Process

The RFA process requires the review of extensive quantities of data relating to KMCC and specific waste management units at the KMCC Henderson facility. The five general categories of data reviewed and evaluated at the facility include the following:

- o Unit Characteristics;**
 - type of unit
 - design features
 - past/present operating procedures
 - period of operation
 - age of unit
 - location of unit
 - physical conditions
 - method of unit closure
- o Waste Characteristics;**
 - type of waste in unit
 - migration and dispersal characteristics
 - toxicological characteristics

- physical and chemical characteristics
- o Pollutant Migration Pathways;
 - geological setting
 - hydrogeological setting
 - atmospheric conditions
 - topographic characteristics
- o Evidence of Release; and,
 - prior inspection reports
 - citizen complaints
 - monitoring data
 - visual evidence
 - physical evidence
 - sampling data
- o Exposure Potential.
 - proximity of affected population
 - proximity of sensitive environments
 - migration potential

The three major steps of the RFA process at KMCC are outlined in the following paragraphs.

Preliminary Review

During the Preliminary Review (PR) Kleinfelder personnel performed numerous tasks related to each of the five characteristics listed above. The following chapters will describe in detail the results of the PR. Table 2-1 is a summary of the PR information gathering process followed by Kleinfelder during the RFA.

Visual Site Inspection

During the Visual Site Inspection (VSI) Kleinfelder personnel visited the solid waste management units listed in Chapter 4 and Appendix XX of this report. Table 2-2 is a summary of the VSI information gathering process followed by Kleinfelder during the RFA.

**TABLE 2-1
PRELIMINARY REVIEW INFORMATION EVALUATION**

UNIT CHARACTERISTICS

For each solid waste management unit Kleinfelder evaluated information on design, age, construction, location and closure methods.

WASTE CHARACTERISTICS

For each solid waste management unit Kleinfelder reviewed historical information on the types, volumes, and characteristics of the wastes handled

MIGRATION PATHWAYS

For each solid waste management unit Kleinfelder reviewed the site hydrogeology, surface water runoff pathways, prevailing winds and other potential migration pathways for waste.

EVIDENCE OF RELEASE

For each solid waste management unit Kleinfelder reviewed historical sampling data, reports of releases, citizen complaints and other data concerning releases.

EXPOSURE POTENTIAL

For each solid waste management unit Kleinfelder reviewed the location of drinking water wells, surface water uses, subsurface migration potential.

TABLE 2-2

VISUAL SITE INSPECTION INFORMATION EVALUATION

UNIT CHARACTERISTICS

For each solid waste management unit Kleinfelder reviewed the general unit conditions, evidence of unit failure, operating practices , and/or other potential problems at open and closed units.

WASTE CHARACTERISTICS

For each solid waste management unit Kleinfelder reviewed the waste management practices and chemical characteristics of the waste.

MIGRATION PATHWAYS

For each solid waste management unit Kleinfelder assessed the potential for erosion, runoff, and other potential pathways to the potential mediums.

EVIDENCE OF RELEASE

- For each solid waste management unit Kleinfelder will obtain visual evidence of releases if they exist or evidence of such does exist.

EXPOSURE POTENTIAL

- For each solid waste management unit Kleinfelder will collect evidence on potential exposure of sensitive environments or humans if such evidence does exist.

2.5 Requirements of Consent Agreement

On April 26, 1991 seven companies (including KMCC) at the BMI complex entered into a Consent Agreement with the Nevada Department of Environmental Protection (NDEP) to complete individual studies of past hazardous waste practices (RFA). The NDEP refers to the RFA process as a "Phase I environmental conditions assessment". The companies (including KMCC) are required to extend their "best efforts to determine, identify, evaluate or otherwise collect documentary information regarding":

- o THIS SECTION WILL SUMMARIZE THE REQUIREMENTS SET FORTH IN THE CONSENT AGREEMENT.*

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management 687-5872



Wastewater Treatment Services 687-5870
Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710
April 22, 1991

Alan Gady
Kerr-McGee Chemical
8000 W. Lakemead Dr. - BMI Complex
Henderson, NV 89015

Dear Alan:

The BMI Consent Agreement has been signed by all parties and fully executed. The effective date of the Consent Agreement is April 25, 1991.

If you have any questions, please contact me or Verne Rosse.

Sincerely,

Handwritten signature "AA" in ink.

Adele Alderson
Environmental Engineer
Waste Management Bureau

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

L. H. DODGION
Administrator

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FAX 885-0868

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710
April 16, 1991

Patrick S. Corbett
Plant Manager
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89009

Dear Mr. Corbett:

This letter is response to your March 5, 1991 letter proposing to utilize Kleinfelder in fulfillment of the Phase I Study of the BMI Complex. NDEP hereby approves Kleinfelder as the outside consultant for the Phase I Study.

If you have any questions, please feel free to contact me at (702) 687-5872.

Sincerely,

A handwritten signature in cursive script that reads "Adele Alderson".

Adele Alderson
Environmental Engineer
Bureau of Waste Management

cc: Alan J. Gaddy



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

April 10, 1991

RECEIVED

APR 18 1991

ENVIRONMENTAL

Ms. Michele Zuleger
The Bionetics Corporation
16 Triangle Park Drive
Cincinnati, Ohio 45246

Dear Ms. Zuleger:

Enclosed is the DMR-QA Laboratory Performance Evaluation Study 11 for the Kerr-McGee Chemical Corporation, Henderson, Nevada facility.

Should you have any questions regarding this study, please contact Alan J. Gaddy at (702) 565-8901.

Sincerely,

Patrick S. Corbett
Plant Manager

PSC:j

cc: AJGaddy
JCStauter
Harry Van Drielen/NDEP

RECEIVED

APR 18 1991

ENVIRONMENTAL PROTECTION

United States Environmental Protection Agency



**NPDES (DMR QA)
Laboratory Performance Evaluation**
(These data are collected under the authority of
the Federal Water Pollution Control Act.)

NV0000078

Current Permittee Address Label... (Make address corrections here for shipping and mailing.)

NV0000078
Kerr-McGee Chemical Corporation
Environmental Coordinator
P. O. Box 55
Henderson, NV 89015

CHEM/

USE DATE
APR 17 1991

Enter Permittee
Name as Desired
for Report Heading

K	E	R	R	-	M	C	G	E	E	C	H	E	M	/
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

Name
Kerr-McGee Chemical
Corp.

Address
8000 White Road
Henderson, NV 89015

Mark 'X' for Type of Laboratory

Federal State Local Government

Name
Data Chem

Address
960 LeVoy Drive
Salt Lake City, UT

Mark 'X' for Type of Laboratory

Federal State Local Government

The Multiple Permit Option was used and the following data were
mailed to another permit number (specify):

(By permit holder or authorized representative)

For Study Number Ten, conducted in February through June 1991 the permittee

	Yes	No
Received Samples		

Permittee Name and Address (street no., city, State, and ZIP Code)
(This section should not be used to make corrections to the above information.)

I certify under penalty of law that this document and all information submitted hereon were prepared by a person or persons who manage the system or systems of this permittee, and that the information is, to the best of my knowledge and belief, true, accurate, and complete, and that I am providing this information, including the possibility of false and misleading information.

Name and Title of Certifying Official (type or print) Signature

Patrick S. Corbett
Plant Manager

Study No.	Permit Number
NV00000078	
1 2 3 4 5 6 7 8 9 10 11 12	

TRACE METALS (Concentration in micrograms/l)

Study and Permit Number	Card No.
-------------------------	----------

Aluminum				Arsenic			
VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
20	21	22	23	24	25	26	27

Cadmium			
VA	MC	< / >	Quantity
28	29	30	31

Study and Permit Number	Card No.
-------------------------	----------

Copper			
VA	MC	< / >	Quantity
32	33	34	35

Manganese			
VA	MC	< / >	Quantity
36	37	38	39

Study and Permit Number	Card No.
-------------------------	----------

Selenium			
VA	MC	< / >	Quantity
40	41	42	43

MISCELLANEOUS

Study and Permit Number	Card No.
-------------------------	----------

pH Analysis			
VA	MC	< / >	Quantity
44	45	46	47

Study and Permit Number	Card No.
-------------------------	----------

Ammonia Nitrogen			
VA	MC	< / >	Quantity
48	49	50	51

Study and Permit Number	Card No.
-------------------------	----------

Dissolved Oxygen			
VA	MC	< / >	Quantity
52	53	54	55

ADDITIONAL MISCELLANEOUS

Study and Permit Number	Card No.
-------------------------	----------

Total Solids			
VA	MC	< / >	Quantity
56	57	58	59

Study No.		Permit Number											
N		NV 0000078											
11		4 6 8 7 8 8 11 12											
WHOLE EFFLUENT TOXICITY DATA (as % of the sample ready for analysis)													
Study and Permit Number	Card No.	FATHEAD MINNOW ACUTE LC50				FATHEAD MINNOW/CHRONIC SURVIVAL, NOEC				FATHEAD MINNOW CHRONIC GROWTH, IC25			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
DUPLICATE	11												
		20	21	22	23	24	25	30	31	32	33	34	35
		FATHEAD MINNOW CHRONIC GROWTH, IC50				FATHEAD MINNOW CHRONIC GROWTH, NOEC				CERIODAPHNIA ACUTE LC50			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35
		CERIODAPHNIA CHRONIC SURVIVAL, NOEC				CERIODAPHNIA CHRONIC REPRODUCTION, NOEC				CERIODAPHNIA CHRONIC REPRODUCTION, IC50			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35
		CERIODAPHNIA CHRONIC REPRODUCTION, NOEC				MYSID ACUTE LC50				MYSID CHRONIC SURVIVAL, NOEC			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35
		MYSID CHRONIC GROWTH, IC25				MYSID CHRONIC GROWTH, IC50				MYSID CHRONIC REPRODUCTION, NOEC			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35
		MYSID CHRONIC FECUNDITY, NOEC				MENDIA ACUTE LC50				MENDIA CHRONIC SURVIVAL, NOEC			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35
		MENDIA CHRONIC GROWTH, IC25				MENDIA CHRONIC GROWTH, IC50				MENDIA CHRONIC REPRODUCTION, NOEC			
		VA	MC	< / >	Quantity	VA	MC	< / >	Quantity	VA	MC	< / >	Quantity
		20	21	22	23	24	25	30	31	32	33	34	35



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

March 5, 1991

RECEIVED

MAR 11 1991

ENVIRONMENTAL PROTECTION

Ms. Adele Alderson
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Dear Ms. Alderson:

Subject: Kerr-McGee Chemical Corporation
Phase 1 Consultant

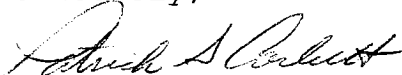
Kerr-McGee Chemical Corporation's (KMCC) Henderson, Nevada facility is proposing to utilize the Kleinfelder organization in fulfillment of the Phase 1 Study of the BMI Complex.

Attached are two (2) copies of the Statement of Qualifications of the project team for your review. KMCC has reviewed and accepted as satisfactory, the team organization as proposed. Kleinfelder has done a great deal of work for KMCC in the past, including P.E. approval of the cap installation at closure of the on-site Hazardous Waste Landfill.

KMCC recommends acceptance of Kleinfelder project team and requests a prompt response upon your review of the attached Statements of Qualifications.

Should you have any questions concerning this submittal, please contact me or Alan J. Gaddy at (702) 565-8901.

Sincerely,


Patrick S. Corbett
Plant Manager

PSC:j
ALDERSON



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

October 23, 1990

RECEIVED

OCT 26 1990

Certified Mail No. P 153 270 082

ENVIRONMENTAL PROTECTION

Mr. Laverne Rosse
State of Nevada
Division of Environmental Protection
123 W. Nye Lane
Carson City, Nevada 89710

Subject: CLOSED HAZARDOUS WASTE LANDFILL
GROUNDWATER MONITORING

Dear Mr. Rosse:

Kerr-McGee Chemical Corporation's Henderson Facility conducted RCRA groundwater monitoring as required by 40 CFR 265.92(d)(1) in July, 1990. The wells sampled are associated with the closed hazardous waste landfill located at the site. Analytical results were compared with baseline values as required under 40 CFR 265.93(c).

A statistically significant increase in parameters pH and specific conductivity was detected in the upgradient well M-5 during this sampling effort. Notice of the results is made herein pursuant to 40 CFR 265.93(c)(1). There is no evidence the landfill could affect upgradient water quality parameters.

A statistically significant change from baseline data was detected in pH of downgradient wells M-6, M-7, and H-28; in the specific conductivity of downgradient wells M-6, M-7 and H-28; and in TOX of downgradient wells M-7 and H-28.

Additional groundwater samples were collected and analyzed as required under 40 CFR 265.93 (c) (2). Statistical analysis of the resampled wells did show support for an increase in pH in wells M-6, M-7 and H-28 and decrease in specific conductivity in wells M-6, M-7, and H-28.

All but one of the parameters indicating a statistically significant change from baseline values reflect an improvement in groundwater quality when compared to baseline values. The pH and specific conductivity of the downgradient wells fall within the range of groundwater typical of the Henderson area.

Page 2
Mr. Laverne Rosse
October 23, 1990

The TOX parameter of downgradient well M-7 did show a statistically significant increase in TOX when compared to baseline values. TOX is not a parameter indicative of the waste within the landfill. Chromium is the parameter representative of the hazardous constituent contained in the landfill. The absence of chromium in the downgradient wells provides the best indication that there have been no impacts from the landfill.

Analytical results, statistical comparisons, resample results, and water levels are attached as Tables I, II, and III respectively.

Based on the information herein and the information presented since the June 13, 1984 Closure/Post-closure Plan (revised in October 1984) was submitted, the regulated landfill does not affect groundwater quality.

Should you have any questions please contact Alan J. Gaddy at (702) 565-8901, Ext. 234.

Very truly yours,



Patrick S. Corbett
Plant Manager

PSC:j
RCRAMONI.TOR/3

Attachments

cc: AJGaddy
JCStauter

TABLE I
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY
GROUNDWATER QUALITY PARAMETERS (A)
LABORATORY ANALYSIS

	<u>M-5^(C)</u>	<u>M-6</u>	<u>M-7</u>	<u>H-28</u>
Cl	3500	2000	1700	1800
Cr (B)	0.020	0.030	0.020	0.020
Fe	110	13	9	36
Phenolics	0.093	0.014	0.010	0.010
Na	1500	1300	1200	1400
SO ₄	1600	2000	2100	930
Mn	4.5	2.0	0.57	0.74
pH	6.7	7.5	7.5	7.8
SpCd	14000	8700	9200	7700

(A) Units = mg/l for all constituents

(B) Chromium added because it is indicative of waste stored in landfill.

(C) Upgradient well

TABLE-I/DISK3-2
 AJG:j
 9-27-90

TABLE II
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY
GROUNDWATER INDICATOR PARAMETERS (A)

<u>WELL #</u>	<u>PARAMETER</u>	<u>REPLICATES</u>	<u>MEAN</u>	<u>t VALUE</u>
BACKGROUND	pH	Values result of 16	6.3	} Insignificant } @ ≤ 2.878
M-5	SpCd	replicates	10469	
	TOC	(4 per quarter)	62.3	} Insignificant } @ ≤ 2.947
	TOX		47.4	
M-5	pH	7.37, 7.43, 7.43, 7.43	7.42	7.0*
	SpCd	10890, 10770, 10970, 11000	10907.5	4114*
	TOC	42, 46, 46, 45	44.75	0.71
	TOX	29, 25, 31, 35	30	2.10
M-6	pH	7.81, 7.81, 7.79, 7.81	7.81	9.54*
	SpCd	7770, 7720, 7720, 7720	7732.5	26.46*
	TOC	3, 3, 3, 3	3	2.40
	TOX	47, 49, 50, 47	48.25	0.07
M-7	pH	7.80, 7.81, 7.81, 7.80	7.81	9.54*
	SpCd	6710, 6830, 6860, 6900	6825	34.72*
	TOC	3, 3, 3, 3	3	2.40
	TOX	89, 94, 83, 87	88.25	4.81*
H-28	pH	8.8, 8.8, 8.8, 8.79	8.798	16.01*
	SpCd	6300, 6640, 6630, 6700	6567.5	35.08*
	TOC	6, 6, 6, 6	6	2.28
	TOX	3.6, 4.3, 3.6, 3.4	3.725	5.27*
M-5 Resample	pH	7.43, 7.40, 7.39, 7.40	7.405	6.94*
	SpCd	10900, 10970, 11000, 10910	10945	4.58*
M-6 Resample	pH	7.80, 7.78, 7.78, 7.81	7.793	9.46*
	SpCd	7740, 7720, 7760, 7720	7735	26.45*
M-7 Resample	pH	7.80, 7.79, 7.75, 7.77	7.78	9.36*
	SpCd	6930, 6930, 6930, 6930	6930	34.27*
H-28 Resample	pH	8.83, 8.84, 8.83, 8.83	8.83	16.24*
	SpCd	6620, 6670, 6580, 6670	6635	36.95*

(A) Units: pH = std. units; SpCd = umhos/cm; TOC and TOX = mg/l

*Indicates a statistically significant change from baseline values with 99.5% confidence levels.

**TABLE III
KERR-McGEE CHEMICAL CORPORATION
HENDERSON FACILITY**

WATER ELEVATIONS (A)

<u>WELL #</u>	<u>JULY 1990 ELEVATION</u>	<u>JUNE 1989 ELEVATION</u>	<u>JUNE 1988 ELEVATION</u>
M-5	1710.11	1710.96	1711.79
M-6	1689.90	1691.45	1693.14
M-7	1685.96	1687.86	1689.01
H-28	1692.23	1694.13	1695.73

(A) Units = feet above sea level

BOB MILLER, Governor

STATE OF NEVADA

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management (702) 687-5872

Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
Wastewater Treatment Services 687-5870



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

October 19, 1990

Alan J. Gaddy
Kerr-McGee Chemical Corp.
P.O. Box 55
Henderson, NV 89015

Dear Mr. Gaddy:

Enclosed is a copy of the CERCLA Screening Site Inspection for Kerr-McGee Chemical Corporation as requested at the October 11, 1990 meeting of the BMI Steering Committee.

Sincerely,

A handwritten signature in cursive script, appearing to read "Verne Rosse".

Verne Rosse, P.E.
Chief
Bureau of Waste Management

VR:klh

Enclosure

Jul 27/90

BOB MILLER, Governor

STATE OF NEVADA

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management (702) 687-5872

Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
Wastewater Treatment Services 687-5870



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
123 W. Nye Lane
Carson City, Nevada 89710

September 20, 1990

Alan J. Gaddy
Senior Process Engineer/Environmental
Kerr-McGee Chemical Corporation
P.O. Box 55
Henderson, NV 89015

Re: Report of June 28, 1990 Inspection

Dear Mr. Gaddy:

Enclosed you will find my report of the above referenced inspection. The inspection report mainly addresses compliance with the existing discharge permit and current pollution risks. Recommendations are listed on the last page of the report.

Contact Wastewater Treatment Services with any questions or comments on the report.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kent R. Neddenriep".

Kent R. Neddenriep
Environmental Engineer
Wastewater Treatment Services

KRN/kb:003
Gaddy.KRN

cc: Steve Fuller, EPA



United States Environmental Protection Agency
Washington, D. C. 20460

NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code: 1N 25 3NV00000078 11 12900628 17 18C 19S 202

Remarks

Reserved: 67 69 Facility Evaluation Rating: 7d3 BI: 71N OA: 72N 73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected: **Kerr McGee Chemical Corp.**
BMI Complex near Henderson Nevada

Entry Time: AM PM 7:30
Exit Time/Date: 5:00 6/28/90

Permit Effective Date: 6/8/88
Permit Expiration Date: 6/8/93

Name(s) of On-Site Representative(s): **Alan J. Gaddy**
Title(s): **Senior Process Engineer/Environmental**
Phone No(s): **(702) 565-8901**

Name, Address of Responsible Official: _____
Title: _____
Phone No.: _____
Contacted: Yes No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	M	Flow Measurement	N	Pretreatment	S	Operations & Maintenance
S	Records/Reports	N	Laboratory	N	Compliance Schedules	N	Sludge Disposal
S	Facility Site Review	N	Effluent/Receiving Waters	M	Self-Monitoring Program		Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Please see attached report.

Name(s) and Signature(s) of Inspector(s): **Kent R. Neddenriep**
Kent R. Neddenriep

Agency/Office/Telephone: **Nevada Division of Environmental Prot.**
Carson City 687-4670

Date: **9-26-90**

Signature of Reviewer: _____ Agency/Office: _____ Date: _____

Regulatory Office Use Only

Action Taken: _____ Date: _____ Compliance Status: Noncompliance Compliance

Finding of Inspection

Introduction

A compliance evaluation inspection of the Kerr-McGee industrial facilities at the BMI complex near Henderson was conducted by Kent Neddenriep and Julian Bielawski of the Nevada Division of Environmental Protection on June 28, 1990. NPDES Discharge Permit No. NV0000078 has been issued to Kerr McGee. It allows and limits surface discharges of once through cooling water and storm water to the Pittman Bypass which flows into the Las Vegas Wash and Lake Mead. The Permit also allows and regulates both total containment evaporation and process ponds. Alan Gaddy is the Senior Process Engineer/Environmental. He was present for the inspection and answered the inspectors questions.

Compliance Evaluation:

In the past year Kerr McGee has had several discharges to the Pittman Bypass which came from leaks in the water supply lines. The lines contain filtered Lake Mead Water. The permit does not specifically allow the leaks but does regulate them should they pass through the sample points. Therefore, Mr. Gaddy notifies NDEP of any leak and takes measurements of the flow, pH, temperature and total dissolved solids in accordance with the discharge permit and accepted practice. The leaks will typically meet discharge permit limits.

Stormwater discharges are most often sampled in accordance with permit conditions. However, the following problems were noted: Small flow rates past the sample point can not be automatically collected. There is no battery backup for the samplers, there are no comprehensive methods developed to test and calibrate sampler and flow measurement, some samples are missed due to problems with flow meters, the samplers have a limited capacity and can not take flow weighted samples if there are large discharges.

During the past year there was only one small discharge of once through cooling water. It was properly sampled and met all permit limits.

Since the last inspection, the single lined pond leak detection program has been approved by NDEP. It has been implemented by Kerr McGee. So far the results have not shown that there is pond leakage from single lined ponds. The monitoring wells have 3 well volumes evacuated before a sample is taken. Each

well has its own dedicated pump. During the inspection evidence which supports the conclusion that high TDS levels observed in monitoring well 18 came from Timet property was presented.

The double lined pond leak detection program shows no leaks from double lined ponds.

The annual waste stream analysis and pond summary has been submitted in accordance with the permit as has the semi annual report of solids removed from ponds. It was noted that there are no accurate measurements of the volumes of wastes or process waters discharged to each pond.

Walk Through Inspection:

The operation and configuration of the facilities was found to be very similar to that described in past inspection reports with exceptions noted in this report. Pond P-3 has been taken out of service and is drying. The solids from the old pond P2 (different from new pond called P2A) have been removed from the pond and are piled nearby awaiting transport to the disposal site. It was observed that some of the pipes which allow inspection of sumps between liners of double lined ponds did not have caps. It was evident that two feet of freeboard was not always maintained in all ponds.

Solids had been removed from the Ammonium Perchlorate Pond number AP1. It was noted that the dikes around AP1 had evidence of erosion which suggested that the pond had been overfilled and spilled onto the ground. The recent pond level records were examined and found to be in order with no indication of a high level in this pond. Mr. Gaddy did not know the cause of the erosion.

One of the two proposed vapor recompression units was on line and receiving a waste stream flow of approximately 50 gallons per minute. It operates 24 hours per day and receives most process wastes as well as a flow from pond WC-2. A concentrated bine flow of approximately 5 gallons per minute is directed from the unit to pond WC-1. The unit produces approximately 37 gallons per minute of pure water which is reused as process water. The second Vapor Recompression unit is expected to be on line in September 1990. It was noted that the Vapor Recompression Units will not function with wastes high in phosphorus and therefore the Cathode Washings can not be directed to the units. Also cooling water blowdown was not directed to the unit because it was already very high in TDS.

The old woden cooling tower has been torn down and hauled to the sunrise land fill. This removes the risk of spills from this source.

Most areas of the plant where spills are likely or where more significant pollution would result from a spill have spill containment. However, it was observed the sulfuric acid tank in the Manganese Dioxide Process area was not bermed nor were the leach tanks. It was reported that both of these tanks would be replaced.

The liner in the basement of unit 6 (manganese dioxide electrolytic cells) was found to be in good condition and is inspected regularly.

The pile of tailings from the manganese dioxide purification process has been reshaped and covers the location where the old cooling tower once was. Any runoff from this pile would go to through sample point 003.

1. Develop a more comprehensive method of testing the sampling and flow measurement equipment. Consideration should be given to introducing a measured flow of water from a fire hydrant and verifying that both flow measurements are accurate and sampling equipment works properly.
2. Install battery backup on both the samplers and flow meters.
3. Modify sampling equipment to allow it to take a automatic composite sample of the widest range of dsicharges. By removing the bottles and allowing the sample to be discharged into the base of the sampler the volume of discharge which can be automatically sampled is approximately doubled.
4. Maintain a cap on the pipes which allow sampling and inspection of the sumps in all doubel lined ponds.
5. Maintain a minimum freeboard depth of two feet in all process and disposal ponds.
6. Continue to work towards providing spill containment berms and dikes for all process areas.

7. Submit plans and specifications for all improvements or modificataions to all treatment works, at the Kerr McGee Henderson facility, to NDEP for review and approval prior to the start of construction. This is required by Nevada Revised Statute 445.212. The definitiion of a treatment works is given in NRS 445.186 and includes any devices and systems used in the storage, treatment, recycling and reclamation of industrial wastes of a liquid nature.

Gaddy.krn
9/20/90

LAW OFFICES

300 CAPITOL HALL, SUITE 1700
POST OFFICE BOX 3034
SACRAMENTO, CALIFORNIA 95812-3034

(916) 444-3910
TELECOPIER
(916) 446-1698

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R. JAMES BIEPENBOCK
ROBERT B. WULF
STUBS A. JOHNSON
JOHN S. GILMORE
THOMAS A. CRAVER
DAVID A. BIESEL
WILLIAM B. SHLES
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JAMES I. FREEMAN
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JUSTIN HANNING ALBERT
MARTIN B. HARRISON
MARTIN J. MARTINELLI
PAUL W. HARRISON
DAVID J. OCKENSON

August 17, 1990

RE: Aerojet-General v. PEPCON
Our File No.: 23963

Mr. Rick Griffith
HELLER, EHRMAN, WHITE & MCAULIFFE
333 Bush Street, Suite 3100
San Francisco, CA 94104-2878

Dear Mr. Griffith:

Enclosed please find a list of users or handlers of ammonium perchlorate prepared from non-privileged, non-confidential materials in the PEPCON litigation:

- Atlantic Research
- Avibras Industria Aeroespacial
- Clear Creek Engineering
- Cobro International
- Com-Tek Communications
- D.P.S. Associates Co., Ltd.
- Defense Supply
- Girindus
- Goex Inc.
- Government of Israel
- Hercules Magna
- Internal Ballistics
- Island Pyrochemical
- Milfield Mfg. Co.
(Morton Thiokol-Wasatch)
- Multi Sciencetech Co.
- Naval Ordnance
- Naval Weapons Center
- Ontek

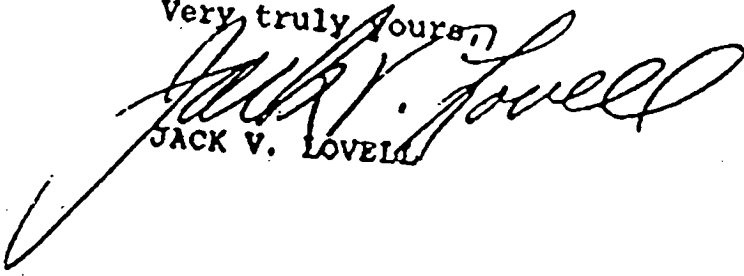
Defense Systems

COPIES 15 4/18/92
GENERAL INVESTIGATIVE
DIVISION
FEDERAL BUREAU OF
INVESTIGATION
U.S. DEPARTMENT OF JUSTICE

Ravenna Rocket Research
Reaction Labs, Inc.
Rocket Research
S.E.R.A.
Safety Consulting Engineers
Sesa Elektronik Systems
Talley Defense Systems
USN Weapons
(United Technologies Corp.)
Veritay Technologies
Vulcan Systems
Watergreen Corp.

The parentheses indicate a party in the PEPCON litigation.
Should you have any questions, please do not hesitate to contact
me.

Very truly yours,


JACK V. LOVELL

JVL:hg
cc: Jo P. Vaughan
007\23963.014

Ammonium Perchlorate

PRIMARY DOMESTIC AP USERS FOR PROPULSION APPLICATIONS

Produced at the request of AFMC LO/JAV - January, 1998

53171/15
 10101-52

FACILITY NAME AND LOCATION	TYPE	AP-RELATED PRODUCTS
Air Force Research Laboratory (formerly Phillips Lab) OELAC PL/RK 5 Pollux Drive Edwards AFB CA 93524-7048	Government research laboratory for propulsion	Propellants and rocket motors.
Alliant Techsystems Allegany Ballistics Laboratory 210 State Route 956 Rocket Center WV 26726 (304) 726-5000	Propulsion manufacturer/ subcontractor	Solid propellant tactical rocket motors and propellant production and research.
Alliant Techsystems Bacchus Works PO Box 98 Magna UT 84044 (formerly Hercules Aerospace) (801) 250-5911	Propulsion manufacturer/ subcontractor	Solid propellant strategic and space motors production and research. Recent AP reclamation pilot plant
Army Aviation & Missile Command Redstone Arsenal AL 35898 (205) 876-2151 (205) 876-1500	Government propulsion research lab	Solid propellant tactical motors and propellant research
Atlantic Research Corporation 5945 Wellington Road Gainesville VA 20155 (703) 754-5316	Propulsion manufacturer/ subcontractor	Production and research of solid propellant tactical motors, propellants, and plastic-bonded explosives containing AP
Atlantic Research Corporation PO Box 1036 Camden AR 70701 (501) 574-0610	Propulsion manufacturer/ subcontractor	Production of tactical solid propellant rocket motors
Industrial Solid Propulsion Inc. 1955 S. Palm St. Suite 15 Las Vegas NV 89104 (702) 641-2302	Manufacturer	Production of small solid propellant motors and gas generators
Gencorp Aerojet PO Box 13222 Sacramento CA 95813 (916) 351-8668	Propulsion manufacturer/ subcontractor	Production and research of solid propellant rocket motors, liquid propellant engines. Propellant washout facility.
NASA Marshall Space Flight Center AL 35812 (205) 544-2121	Government propulsion research lab	Solid propellant test motors
Naval Air Warfare Center Weapons Div 1 Administration Circle China Lake CA 93555 (760) 939-9011	Government propulsion research lab	Propellant and rocket motor research
Naval Surface Warfare Center Indian Head Div 101 Strauss Ave Indian Head MD 20640 (301) 743-4000	Government propulsion research lab	Propellant and rocket motor research, plastic-bonded explosives

Pratt & Whitney Space Propulsion Operations Chemical Systems PO Box 49028 San Jose CA 95161 (408) 776-9121	Propulsion manufacturer/ subcontractor	Production of solid propellant space and tactical motors
Talley Industries Inc. PO Box 849 Mesa AZ 85205	Propulsion manufacturer/ subcontractor	Production of small ejection rocket motors
Thiokol Corporation Utah DLV Operations and Space Operations PO Box 707 Brigham City UT 84302 (facilities located near Promontory UT) (801) 863-3511	Propulsion manufacturer/ subcontractor	Production and research of solid propellant launch, strategic, and tactical rocket motors. Propellant washout/AP reclamation facilities
Thiokol Corporation Elkton DLV Operations PO Box 241 Elkton MD 21922 (410) 392-1429	Propulsion manufacturer/ subcontractor	Production and research of solid propellant space motors and propellants.
Universal Propulsion Company (unit of Talley Ind.) 25401 N. Central Ave Phoenix AZ 85027-9801 (602) 869-8067	Propulsion manufacturer/ subcontractor	Production of small boost and seat ejection solid propellant motors.
FORMER FACILITIES		
Alliant Techsystems McGregor TX 76657 (formerly Hercules, also Rocketdyne Solid Rocket Division of Rockwell prior to acquisition by Hercules)	Propulsion manufacturer/ subcontractor	Solid propellants and rocket motors (facility closed 1996).
California Institute of Technology Jet Propulsion Laboratory North Edwards CA	Propellant research lab	Solid propellant research and development (facility closed 1995).
Gencorp Aerojet Azusa MS	Propulsion manufacturer/ subcontractor to NASA	Space Shuttle Advanced Solid Rocket Motor (cancelled, facility closed 1993, subscale propellant manufacture only prior to shutdown)
Lockheed Propulsion Company Redlands CA (former Grand Central Rocket Co.)	Propulsion manufacturer/ subcontractor	Solid propellants and rocket motors 1961-1975
Thiokol Corporation Huntsville Division (at Redstone Arsenal AL)	Propulsion manufacturer/ subcontractor	Solid propellants and tactical and space rocket motors (facility closed 1996).

MAJOR AP SUPPLIERS FOR PROPULSION APPLICATIONS:

Western Electrochemical Company (WECCO), a subsidiary of American Pacific Corp.
PO Box 629
Cedar City UT 84720

Note: *Cedar City plant* in Iron County, UT was opened in 1989 following 1988 explosion at *former plant in Henderson, NV*; company known at that time as Pacific Engineering and Production Company (PEPCON). In 1992, WECCO quoted planned production quantities of 20 million lb per year.

Kerr-McGee Chemical Corp
Henderson NV
(headquarters Oklahoma City OK)

Note: Quoted production capacity of 40 million lb per year. However, in October 1997, Kerr-McGee announced the sale of its AP manufacturing business to American Pacific. Kerr-McGee retains the Henderson plants and will continue to produce other chemical products there.

Other companies that produced AP in large quantities in the 1960s include:

Hooker Chemical - plant location unknown (Hooker was taken over by Occidental Chemical Corp - may be able to get further information from Occidental at www.oxychem.com)

Pennwalt - plant location unknown (merged with Elf Atochem North America in 1989 - may be able to get more information from Elf through www.elf-atochem.com)

American Potash (acquired by Kerr-McGee in 1967)

RECOMMENDED REFERENCES:

Schitt, Alfred A., Northern Illinois University, *Perchloric Acid and Perchlorates*, published by the G. Frederick Smith Chemical Company, 867 McKinley Ave., Columbus OH 43223, 1979.

ADDITIONAL SUGGESTED CONTACT:

Bay Area Water Authority
San Jose CA

(Monitors water supply in proximity of United Technologies/Pratt & Whitney plant)

Potential Applications for AP Biodegradation - Contact Information - 4/30/97

Company/Organization	Contacts/Position	Phone/FAX/e-mail	Problem/Interest
GenCorp - Aerojet PO Box 13222 Sacramento CA 95813-6000 Fed Ex: Hwy 50 & Aerojet Rd Attn: Gerald Newman Dept 1372, Bldg 2019, Rm 106 Rancho Cordova CA 95670	Gregory Meagher Manufacturing Gerald Newman Manager of Contracts	Phone: (916) 355-2457 FAX: (916) 355-2897 e-mail: meagher_gregory@aphub. aerojetpd.com Phone: (916) 355-2881	Minuteman stage 2 manufacturer Very interested! In process of designing IWTP to handle all propellant wastes and eliminate OB/OD - wants alternate to explosives manufacturing - mostly 1.3, some 1.1 with HMX, RDX and nitroguanidine
Alliant Techsystems State Rt. 956-MS-26P Rocket Site, WV 26726 Magna, UT	John Waugaman Alan Staggs Environmental John R. (Jack) Hamilton Environmental Remediation	Phone: (304) 726-5218 Phone: (304) 726-5244 FAX: (304) 726-5562 Phone: (801) 251-6935 FAX: (801) 251-6254	New machining facility driving need to dispose of AP in an energetic matrix Initially concerned about remediation applications
United Technologies Company - Chemical Systems Div. 600 Metcalf Road San Jose, CA 95138	Ron Borcharding Environmental	Phone: (408) 776-4139 FAX: (408) 776-4820 e-mail: ronb@post.csd.com	New hydrolysis facility just completed. Interested in treating propellant hydrolysate
Thiokol Corporation Highway 83, Bldg M-345 Mail Stop 301-A Thiokol, Utah 84302 Elkton, MD	Glenn Mower Manager, Chemical Processes Bill Lucas - Env. Mgr	Phone: (801) 863-3087 FAX: (801) 863-6767 e-mail: mowergl@tc.thiokol.com Phone: (410) 392-1626	Building prototype to treat AP contaminated wastewater
Atlantic Research Corp. 5945 Wellington Road Gainesville, VA 22065	Tim Holden Environmental	Phone: (703) 754-5106	Produces the MLRS using HTPB AP based propellant - 3 facilities - still planning to open burn

Company/Organization	Contacts/Position	Phone/FAX/e-mail	Problem/Interest
<p>Western Electrochemical Co. (WECCO) PO Box 629 Cedar City, UT 84721 Fed Ex: 10622 West 6400 North Cedar City, UT 84720</p>	<p>Ray Smith Consultant/Marketing Greg Howearth Environmental/Safety</p>	<p>Phone: (801) 865-5022 Phone: (801) 865-5026 FAX: (801) 865-5092 e-mail howearth@apfc.com</p>	<p>AP Manufacturer Must treat AP in evaporation ponds. Considering Thiokol's K+ precipitation process - Need AP bio of resultant brine.</p>
<p>Commander Naval Surface Weapons Center (NSWC) Attn: Code 4073 (name) 300 Highway 361 Crane, IN 47522</p>	<p>Dan Burch Ordnance Engineering</p>	<p>Phone: (812) 854-3505 FAX: (812) 854-6836 DSN: 482-xxxx e-mail: db3739@smtpl.nwscc.sea06.navy.mil</p>	<p>Generates wastewater from conventional weapons demil. JOCG & ESTCP sponsorship. Interested in biodegradation of wastewater from a process that recovers RDX from munitions</p>
<p>NSWC Attn: Code PM4A 101 Strauss Ave. Indian Head, MD</p>	<p>Charles Painter Environmental Program Manager</p>	<p>Phone: (301) 743-6627 FAX: (301) 743-4187</p>	
<p>JOCG US Army Defense Ammunition Center 3700 Army Depot Road Savanna IL 61074-9639</p>	<p>Jim Wheeler Program Director</p>	<p>Phone: (815) 273-8084 FAX: (815) 273-8718 DSN: 585-xxxx</p>	<p>Supports AP biodegradation program, large rocket motor demil programs, and conventional demil programs</p>

MEMORANDUM

August 6, 1990

TO: Verne Rosse
Jolaine Johnson

FROM: David Emme DE

Subject: Review of Screening Site Inspection Reports for Montrose Chemical and Kerr-McGee Chemical Corporation, prepared by Ecology and Environment, Inc..

I have reviewed the referenced reports for immediate public concerns that may be raised by the reports. A complete review of the technical content will require more time as specified in our Superfund Cooperative Agreement.

The conclusions drawn in each of the referenced reports are identical. Although E & E states that the Kerr-McGee site 'appears eligible for the NPL', this statement is not made regarding the Montrose site. E & E suggests that both sites are characterized by large quantity and toxicity of waste discharged to the BMI ponds, large areas of contaminated soil, and large population potentially exposed via a surface water/human food chain pathway and the air pathway. The groundwater pathway is probably not a concern except as it serves to transport contaminants to the air or surface water pathways.

In addition, E & E states that the BMI ponds may require emergency response since the ponds are not fenced or covered to prevent public access. Sampling data indicates contamination of pond sediments with DDT and DDE from the Montrose facility and chromium (total not hexavalent) derived from Kerr-McGee.

Under the heading Regulatory Involvement, both reports discuss NDEP efforts to negotiate an agreement with BMI, although there is no indication or recommendation of deferring clean-up oversight to the state. Given the conclusions it is likely that a Listing Site Inspection, the next step in the assessment process, would be recommended. It should be noted that LSI's are generally done in preparation for proposing sites to the NPL. See attached flowchart.

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management (702) 687-5872

BOB MILLER, Governor

STATE OF NEVADA



Handwritten: Keir-McGee Corp. Grant
Handwritten: C. [unclear] Waste Mgmt

Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
Wastewater Treatment Services 687-5870

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane
Carson City, Nevada 89710

July 18, 1990

Alan Gaddy
Keir McGee Corporation
P. O. Box 55
Henderson, NV 89015

Re: Single Lined Pond Leak Detection Program Approval.

Dear Mr. Gaddy:

With this letter I conditionally approve the proposed single lined pond leak detection program which was submitted January 2, 1990 and required by part I.A.7. of discharge permit No. NV0000078. The conditions of approval are as follows:


1. Continue to sample wells M-76 and M-50 on a monthly basis until the contents of pond P-3 is removed or its contents attain a concentration of 50% solids or greater.
2. Monitoring wells M-19 and M-22 will be sampled on a monthly basis for specific conductivity and NaCl. Monitoring well M-25 will be sampled on a monthly basis for $\text{NH}_4 \text{ClO}_4$, specific conductivity and NaCl.
3. All monitoring wells to be sampled for the single lined pond leak detection program will be sampled on a monthly basis and the elevation of the free water surface recorded. The results of sampling and measurements will be submitted to NDEP in graphical and numerical form in accordance with part I.C.2. of the permit.

This approval is made with the knowledge that ponds C-1 and AP-2 are expected to be taken out of service in 1991. Furthermore, it is understood that this leak detection program is an interim measure which appears appropriate under the circumstances, but may not allow one to conclusively determine if a pond is leaking or has leaked.

Alan Gaddy
July 18, 1990
Page Two

Please contact me with any questions at 687-4670. NDEP expects you to implement the program within 30 days of the receipt of this letter.

Sincerely,


KENT R. NEDDENRIEP,
Environmental Engineer
Bureau of Wastewater Treatment Services

KRN:dc**1

cc: Joe Livak
Dan Gross ✓

A:\pondlk.krn

Keir - file

Administration (702) 687-4670
Air Quality 687-5065
Mining Regulation and Reclamation 687-4670
Waste Management (702) 687-5872

STATE OF NEVADA

Water Permits and Compliance 687-4670
Water Quality Planning 687-4670
Wastewater Treatment Services 687-5870



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

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Alan Gaddy
July 18, 1990
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Sincerely,


KENT R. NEDDENRIEP,
Environmental Engineer
Bureau of Wastewater Treatment Services

KRN:dc**1

cc: Joe Livak
Dan Gross

A:\pondlk.krn

Letter going to:

*Jennifer:
Pls file w/your
Bm I
mgt!*

- Kleinfelder
- Ray Jackson
- J.M. Mont.



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89000

April 12, 1990

*Phoned Alan Gaddy on 4/16/90
& relayed noted comments.
Wester
Montgomery*

Larry Peterson
Kleinfelder Associates Engineers
6000 South Eastern, Bldg. 5-D
Las Vegas, Nevada 89119

Dear Mr. Peterson:

Kerr-McGee Chemical Corporation (KMCC) is requesting a proposal for the review of certain environmental data and a summarization of its past waste handling practices at its Henderson, Nevada facility. The facility was constructed in 1945 by the United States government to produce magnesium. Kerr-McGee purchased a segment of the facility in 1967 and is now a part of the Basic Management Industries (BMI) group. This group currently consists of Titanium Metals, Inc. (TIMET), Pioneer, Chemstar and Kerr-McGee, who all own and operate portions of the original government complex. Additionally, Montrose and Stauffer Management have owned portions of the complex in the past.

The Kerr-McGee Henderson facility produces sodium chlorate, ammonium perchlorate, boron, boron tribromide, boron trichloride, and manganese dioxide. Wastes from these processes have historically been disposed of on site as well as in certain portions of the property now under the care of BMI. There is a closed hazardous waste landfill located on the northwest corner of the Kerr-McGee property. It no longer received waste after January 23, 1983. Closure of the landfill was approved by the State of Nevada on January 17, 1986. A post-closure plan was submitted to the Nevada Department of Environmental Protection (NDEP) on July 24, 1987; however, the post-closure permit has not been issued.

) was plan approved?

Over the past several years, Ecology and Environment, Inc., under contract with the EPA, has investigated each of the BMI facilities as well as some that are no longer in operation. Reports covering their findings have been released for TIMET and Pioneer. Reports on Montrose (no longer in operation) and Kerr-McGee have yet to be issued.

Page 2
April 12, 1990

In lieu of potential Superfund action by EPA Region IX, the companies named above are negotiating an agreement with the NDEP to conduct a study of the BMI complex. The companies will compile and assess available data on past waste management practices, each will prepare a report using in-house or outside expertise. No field sampling is anticipated for Kerr-McGee's report. These individual reports will be submitted to an independent consultant who will compile the reports and submit them to the NDEP. The combined report will be used to identify areas where additional information may be needed to characterize the overall site.

probably on
due to later
review by
NDEP.

This request for proposal shall consist of the following activities:

1. Review and summarize facility records on past waste management practices on-site, including types and quantities of wastes handled and locations of waste management units. Examine existing monitoring and mitigation activities to identify if additional work is needed to obtain the post closure permit for the closed hazardous waste landfill.
2. Review and summarize facility records on KMCC's past waste management practices on the common BMI properties. This will include waste types, quantities, and locations.
3. Prepare a synopsis of State Industries' operations as a tenant of KMCC property. (State Industries operated a water heater manufacturing facility on the south side of the Henderson plant from 1969 to 1988.) This will involve a review of records pertaining to a pickling liquor impoundment which has since been closed.
4. Prepare a report on the above items 1, 2, and 3 for KMCC review by September 28, 1990. The final report shall be completed for submittal to the NDEP by October 31, 1990, and shall be in a format specified by KMCC. Items 2 and 3 of the report and pertinent backup documentation shall be made available to the common consultant to inclusion in the combined BMI report.

reformat → also present is better format raw data

(concern is
don't lose
data)

as agreed
to by
NDEP &
BMI
Task Force

ITEM #1 ? Must include

1) All individual reports by company contractors & common consultants must be provided to State

Page 3
April 12, 1990

Written proposals for conducting the above activities shall contain, at a minimum:

1. An organization chart showing the project team members and resumes of each team member, with special emphasis on RCRA experience and experience working with NDEP personnel;
2. Information on hourly rates of team members and estimated manhours to complete the project;
3. Maximum guaranteed cost and any contingencies.

The consultants desiring to bid on this project are requested to make a 20 minute presentation on the capabilities of the individual firm with particular emphasis on RCRA post-closure related experience. → *and RFI work*

Kerr-McGee requires that contractors doing work in the plant have current certificates of insurance on file. These coverages include Nevada State Industrial Insurance System (SIIS) workmen's compensation, and public liability and property damage (PL&PD).

The successful bidder will be required to enter into KMCC's Engineering Services Agreement, a contractual agreement covering work in our plant (sample copy attached).

Bids must be written, sealed, and sent to the attention of:

Mrs. D. G. Elmer, Plant Accountant
Kerr-McGee Chemical Corporation
P. O. Box 55
Henderson, NV 89015

The outside of the envelope must be plainly marked: "Sealed Bid: Henderson Industrial Study, Phase I, KMCC." Bids must be received by 4:00 P.M. on May 4, 1990. Kerr-McGee Chemical Corporation reserves the right to refuse any and all bids.

All technical questions and arrangements for a facility tour should be directed to Alan Gaddy at (702) 565-8901, Ext. 234.

Very truly yours,

Alan J. Gaddy
Environmental Engineer

AJG:j

cc: DGElmer

Permit No. NV0000078

AUTHORIZATION TO DISCHARGE

In compliance with the provisions of the Clean Water Act, as amended (33 U.S.C. 1251, et. seq.; the "Act"), and the Nevada Revised Statutes,

Kerr-McGee Corporation
Kerr McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

is authorized to discharge from a facility located at

Kerr-McGee Chemical Corporation
BMI Complex
P.O. Box 55
Henderson, Nevada 89015

Discharge Serial Numbers:

001--Non-contact cooling water and storm water runoff	36°02'31" Lat., 115°00'51" Long.
002--Non-contact cooling water and storm water runoff	36°02'32" Lat., 114°59'51" Long.
003--stormwater runoff	36°02'38" Lat., 114°59'59" Long.

to receiving waters named:

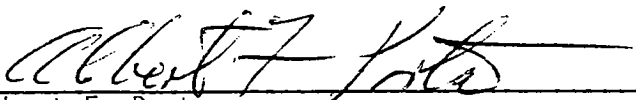
Las Vegas Wash via the Pittman Bypass pipeline

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective on *8 June 88*

This permit and the authorization to discharge shall expire at midnight, *8 June 93*

Signed this *8th* day of *June*, *1988*.


Albert F. Porta
Permits Officer



KERR-MCGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89015

March 15, 1990

Certified Mail No. P 153 270 053

RECEIVED

MAR 22 1990

ENVIRONMENTAL
PROTECTION

Mr. Laverne Rosse
State of Nevada
Division of Environmental Protection
201 So. Fall Street
Carson City, Nevada 89710

Dear Mr. Rosse:

Subject: 1989 Hazardous Waste Report

Attached are the 1989 Hazardous Waste Report forms involving a completed Form IC, GM, and OI.

Should you have any questions concerning this report, please contact me or Alan J. Gaddy at (702) 565-8901.

Sincerely,

Patrick S. Corbett
Plant Manager

PSC:j
ROSSE3.15

cc: PBDizikes
AJGaddy
JCStauter

NVD 008 290 330
 Kerr-McGee Chemical Corp.
 8000 Lake Mead Drive
 Henderson, NV 89015



U.S. ENVIRONMENTAL
 PROTECTION AGENCY

1989 Hazardous Waste Report

FORM
 IC

IDENTIFICATION AND
 CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 7 of the 1989 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete items A through H. Check the box in items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 7.

A. EPA ID No. Same as label or _____
 B. Site/company name Same as label or _____

C. Has the site name associated with this EPA ID changed since 1987? 1 Yes 2 No

D. Street name and number. If not applicable, enter industrial park, building name or other physical location description. Same as label or _____

E. City, town, village, etc. Same as label or _____
 F. County _____
 G. State Same as label _____
 H. Zip Code Same as label _____

SEC. II Mailing address of site. Instruction page 7.

A. Is the mailing address the same as the location address? 1 Yes (SKIP TO SEC. III) 2 No (COMPLETE SEC. II)

B. Number and street name of mailing address
 P. O. Box 55

C. City, town, village, etc. Henderson
 D. State N V
 E. Zip Code 8 9 0 1 5 - 0 0 5 5

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 7.

A. Please print: Last name Gaddy
 First name Alan
 M.I. J.
 B. Title Envir. Engr.
 C. Telephone 7 1 0 2 5 6 5 - 8 9 0 1
 Extension 2 3 4

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 8.

A. 2 8 1 9
 B. N I A
 C. N I A
 D. N I A

SEC. V I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Number of form pages submitted
 Form IC 2 Form GM 0 Form WR 0 Form PS 0

B. Please print: Last name Corbett
 First name Patrick
 M.I. S.
 C. Title Plant Manager

D. Signature Patrick Corbett
 E. Date of signature 03 11 9 79
 MO. DAY YR.

Sec. VI	Generator Status	
<p>A. 1989 generation (CHECK ONE BOX BELOW) Instruction page 8</p> <p><input type="checkbox"/> 1 No (CONTINUE TO BOX B)</p> <p><input checked="" type="checkbox"/> 2 LQG</p> <p><input type="checkbox"/> 3 SQG</p> <p><input type="checkbox"/> 4 CESQG</p> <p>(SKIP TO SEC. VII)</p>		
<p>B. Reason for not generating (CHECK ALL THAT APPLY) Page 10</p> <p><input type="checkbox"/> 1 Never generated</p> <p><input type="checkbox"/> 2 Out of business</p> <p><input type="checkbox"/> 3 Only excluded or delisted waste</p> <p><input type="checkbox"/> 4 Only non-hazardous waste</p> <p><input type="checkbox"/> 5 Periodic or occasional generator</p> <p><input type="checkbox"/> 6 Waste minimization activity</p> <p><input type="checkbox"/> 7 Other (SPECIFY IN COMMENTS)</p>		

Sec. VII	On-Site Waste Management Status	
<p>A. Storage Instruction page 11</p> <p style="text-align: center;">1</p>		
<p>B. RCRA treatment, recycling, or disposal Page 11</p> <p style="text-align: center;">1</p>		
<p>C. RCRA-exempt treatment, recycling, or disposal Page 12</p> <p style="text-align: center;">2</p>		

Sec. VIII	Waste Minimization Activity during 1988 or 1989	
<p>A. Did this site begin or expand a <u>source reduction</u> activity during 1988 or 1989? Instruction page 12</p> <p><input checked="" type="checkbox"/> 1 Yes</p> <p><input type="checkbox"/> 2 No</p>		
<p>B. Did this site begin or expand a <u>recycling</u> activity during 1988 or 1989? Page 13</p> <p><input checked="" type="checkbox"/> 1 Yes</p> <p><input type="checkbox"/> 2 No</p>		
<p>C. Did this site conduct a <u>source reduction or recycling opportunity assessment</u> during 1988 or 1989? Page 13</p> <p><input checked="" type="checkbox"/> 1 Yes</p> <p><input type="checkbox"/> 2 No</p>		

D. What factors have limited this site from initiating new source reduction activities during 1988 or 1989?
(CHECK ALL THAT APPLY)
Page 13

01 No factors have limited new source reduction activities.

02 Insufficient capital to install new source reduction equipment or implement new source reduction practices.

03 Lack of technical information on source reduction techniques applicable to the specific production processes.

04 Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment.

05 Concern that product quality may decline as a result of source reduction.

06 Technical limitations of the production processes.

07 Permitting burdens.

08 Other (SPECIFY IN COMMENTS)

E. What factors have limited this site from initiating new on-site or off-site recycling activities during 1988 or 1989?
(CHECK ALL THAT APPLY)
Page 13

01 No factors have limited new recycling activities.

02 Insufficient capital to install new recycling equipment or implement new recycling practices.

03 Lack of technical information on recycling techniques applicable to this site's specific production processes.

04 Recycling not economically feasible: cost savings in waste management or production will not recover the capital investment.

05 Concern that product quality may decline as a result of recycling.

06 Requirements to manifest wastes inhibit shipments off site for recycling.

07 Financial liability provisions inhibit shipments off site for recycling.

08 Technical limitations of product processes inhibit shipments off site for recycling.

09 Technical limitations of production processes inhibit on-site recycling.

10 Permitting burdens inhibit recycling.

11 Lack of permitted off-site recycling facilities.

12 Unable to identify a market for recyclable materials.

13 Other (SPECIFY IN COMMENTS)

Comments:

NVD 008 290 330
 Kerr-McGee Chemical Corp.
 8000 Lake Mead Drive
 Henderson, NV 89015



U.S. ENVIRONMENTAL
 PROTECTION AGENCY

1989 Hazardous Waste Report

FORM
 GM

WASTE GENERATION AND
 MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 14 of the 1989 Hazardous Waste Report booklet before completing this form.

Sec. I	A. Waste description Instruction Page 15				A toxic chromium containing chemical, sodium bichromate. Entrainment occurs wherever process purification filtration is required.				
B. EPA hazardous waste code Page 15				C. State hazardous waste code Page 16					
D. SIC code Page 18				E. Source code Page 18		F. Form code Page 18		G. Origin Page 18 Code	
H. TRI constituent Page 17				I. CAS numbers Page 17					

Sec. II	A. Quantity generated in 1988 Instruction Page 17		B. Quantity generated in 1989 Page 17		C. UOM Page 18	D. Density Page 18	E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? Page 18		
SYSTEM 1		SYSTEM 2		SYSTEM 1		SYSTEM 2			

Sec. III	A. Was this waste shipped off site? Instruction Page 19			B. EPA ID No. of facility to which waste was shipped Instruction Page 19			C. System type Page 19		D. Total quantity shipped in 1989 Page 19		
Site 1	Site 2			Site 1		Site 2		Site 1		Site 2	

Sec. IV	A. Waste minimization results in 1989 Instruction Page 20					B. Activity Page 21		C. Other effects Page 21		D. Quantity recycled in 1989 due to new activities Page 21		E. Activity/Production Index Page 21		F. Source Reduction Quantity Page 22	
---------	--	--	--	--	--	------------------------	--	-----------------------------	--	---	--	---	--	---	--

Comments: Sec. 1.F - D007 waste ranges from specific process waste (B516) to other general waste (B302)

NVD 008 290 330
 Kerr-McGee Chemical Corp.
 8000 Lake Mead Drive
 Henderson, NV 89015



U.S. ENVIRONMENTAL
 PROTECTION AGENCY

1989 Hazardous Waste Report

FORM
 GM

WASTE GENERATION AND
 MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 14 of the 1989 Hazardous Waste Report booklet before completing this form.

Sec. I	A. Waste description Instruction Page 15 Misc. waste from 2 sources: 1) Off-spec oxidizer product and 2) Flammable liquid Lab Pack waste from Lab reagents				
B. EPA hazardous waste code Page 15 D 0 0 1 N A N A N A			C. State hazardous waste code Page 16 N A N A		
D. SIC code Page 16 2 8 1 9		E. Source code Page 16 A 5 9		F. Form code Page 16 B 0 0 9	
G. Origin Page 16 Code 1 System type M N A		H. TFI constituent Page 17 2			
I. CAS numbers Page 17 1. N A - - - - - 2. N A - - - - - 3. N A - - - - - 4. N A - - - - - 5. N A - - - - -					

Sec. II	A. Quantity generated in 1988 Instruction Page 17 1 3 5 2 0 5 6	B. Quantity generated in 1989 Page 17 1 1 4 4 2 8 3	C. UOM Page 18 1	D. Density Page 18 1 lbs/gal 2 sg	E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? Page 18 <input type="checkbox"/> 1 Yes (CONTINUE TO SYSTEM 1) <input checked="" type="checkbox"/> 2 No (SKIP TO SEC. III)
SYSTEM 1 System type Page 18 M			SYSTEM 2 System type Page 18 M		
Quantity treated, disposed or recycled in 1989 Page 18			Quantity treated, disposed or recycled in 1989 Page 18		

Sec. III	A. Was this waste shipped off site? Instruction Page 19 <input checked="" type="checkbox"/> 1 Yes (CONTINUE TO BOX B) <input type="checkbox"/> 2 No (SKIP TO SEC. IV)				
Site 1	B. EPA ID No. of facility to which waste was shipped Instruction Page 19 N V T 3 3 0 0 1 0 0 0 0	C. System type Page 19 M 1 3 2	D. Total quantity shipped in 1989 Page 19 4 3 5 0 0		
Site 2	A Z T 0 5 0 0 1 0 1 8 0	M 0 4 1 1	1 8 3		

Sec. IV	A. Waste minimization results in 1989 Instruction Page 20 <input type="checkbox"/> 1 Yes (CONTINUE TO BOX B) <input checked="" type="checkbox"/> 2 No (THIS FORM IS COMPLETE)				
B. Activity Page 21 W W W W	C. Other effects Page 21 <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	D. Quantity recycled in 1989 due to new activities Page 21	E. Activity/Production Index Page 21	F. Source Reduction Quantity Page 22	

Comments: Sec. 1.F - Waste flammable reagents from laboratory

NVD 008 290 330
 Kerr-McGee Chemical Corp.
 8000 Lake Mead Drive
 Henderson, NV 89015



U.S. ENVIRONMENTAL
 PROTECTION AGENCY

1989 Hazardous Waste Report

OFF-SITE IDENTIFICATION

FORM
 OI

INSTRUCTIONS: Read the detailed instructions on the back of this page before completing this form.

Site 1	A. EPA ID No. of off-site installation or transporter NVT330010000	B. Name of off-site installation or transporter U. S. Ecology, Beatty, Nevada site
	C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> TSDR	D. Address of off-site installation Street Highway 95 City Beatty State NV Zip Code 89003

Site 2	A. EPA ID No. of off-site installation or transporter ARID069748192	B. Name of off-site installation or transporter Ensco, Inc.
	C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> TSDR	D. Address of off-site installation Street American Oil Road City El Dorado State AR Zip Code 71730

Site 3	A. EPA ID No. of off-site installation or transporter SICID050882422	B. Name of off-site installation or transporter Unison Transformer Service
	C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> TSDR	D. Address of off-site installation Street White Perimeter Road - donaldson Center City Greenville State SC Zip Code 29605

Site 4	A. EPA ID No. of off-site installation or transporter OHD981093420	B. Name of off-site installation or transporter Unison Transformer Services
	C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> TSDR	D. Address of off-site installation Street 1032 West 38th Street City Astabula State OH Zip Code 44004

Site 5	A. EPA ID No. of off-site installation or transporter NYD980769947	B. Name of off-site installation or transporter Hazmat Environmental
	C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input checked="" type="checkbox"/> Transporter <input type="checkbox"/> TSDR	D. Address of off-site installation Street _____ City _____ State _____ Zip Code _____

Comments:

NVD 008 290 330
 Kerr-McGee Chemical Corp.
 8000 Lake Mead Drive
 Henderson, NV 89015



**U.S. ENVIRONMENTAL
 PROTECTION AGENCY**

1989 Hazardous Waste Report

OFF-SITE IDENTIFICATION

FORM

01

INSTRUCTIONS: Read the detailed instructions on the back of this page before completing this form.

Site 1	A. EPA ID No. of off-site installation or transporter A R D 0 6 9 7 4 8 1 9 2	B. Name of off-site installation or transporter Ensco, Inc.
C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input checked="" type="checkbox"/> Transporter <input type="checkbox"/> TSDR		D. Address of off-site installation Street _____ City _____ State _____ Zip Code _____

Site 2	A. EPA ID No. of off-site installation or transporter N V D 0 0 9 6 9 9 3 8 0	B. Name of off-site installation or transporter Frehner Trucking Service, Inc.
C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input checked="" type="checkbox"/> Transporter <input type="checkbox"/> TSDR		D. Address of off-site installation Street _____ City _____ State _____ Zip Code _____

Site 3	A. EPA ID No. of off-site installation or transporter C A T 0 0 0 6 2 4 2 4 7	B. Name of off-site installation or transporter M P. Vacuum
C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input checked="" type="checkbox"/> Transporter <input type="checkbox"/> TSDR		D. Address of off-site installation Street _____ City _____ State _____ Zip Code _____

Site 4	A. EPA ID No. of off-site installation or transporter A Z T 0 5 0 0 1 0 1 8 0	B. Name of off-site installation or transporter Chemical Waste Management
C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> TSDR		D. Address of off-site installation Street 2301 W. Broadway Rd. City Phoenix State AZ Zip Code 85041

Site 5	A. EPA ID No. of off-site installation or transporter N/A	B. Name of off-site installation or transporter NA
C. Handler type (CHECK ALL THAT APPLY) <input type="checkbox"/> Generator <input type="checkbox"/> Transporter <input type="checkbox"/> TSDR		D. Address of off-site installation Street NA City _____ State _____ Zip Code _____

Comments:



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

201 South Fall Street
Carson City, Nevada 89710
February 28, 1990

Patrick S. Corbett
Kerr-McGee Chemical Corporation
P.O. Box 33
Henderson, NV 89015

Dear Mr. Corbett:

This letter is to confirm that the Division has granted your request to reduce and modify the reporting frequency for the Chromium Mitigation Program at Kerr-McGee Chemical Corporation's Henderson Facility. This approval is limited to those items as formally submitted in your correspondence dated February 16, 1990. The amended reporting requirements are again outlined as follows:

- KMCC shall submit a semi-annual report which will contain weekly summaries of the groundwater treatment analyses indicating volume of water treated and treatment effluent concentrations, monthly water level charts from M-78 and M-80, and monthly chromium concentrations in Appendix J wells.
- KMCC shall also submit semi-annually a potentiometric surface map showing quarterly intervals for the Consent Order Area.

Please be advised that this approval may be revoked or again revised if it is ever determined by the State to be necessary in order to adequately monitor the Chromium Mitigation Program.

Please contact me or Jeff Denison at (702) 687-5872 if you have any questions concerning this matter.

Sincerely,

Handwritten signature of H. LaVerne Rosse in cursive.

H. LaVerne Rosse, P.E.
Program Director
Waste Management Section

HLR/jcd
cc: Jeff Denison
Joe Livak
Jennifer Hughes



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89015

February 16, 1990

RECEIVED
FEB 26 1990
ENVIRONMENTAL
PROTECTION

Mr. Jeffery Dennison
State of Nevada
Division of Environmental Protection
201 So. Fall Street
Carson City, Nevada 89710

Dear Mr. Dennison:

Subject: Semi-Annual Reporting for
Chromium Mitigation Reports

With the mailing of the Fourth Quarter 1989 Performance Report for the Chromium Mitigation Program at Kerr-McGee Chemical Corporation's (KMCC) Henderson Facility, a request was made to reduce the frequency of the reporting.

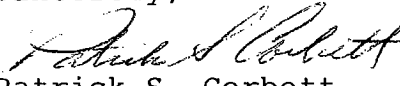
To clarify our request, KMCC proposes to submit a semi-annual report which will contain weekly summaries of the groundwater treatment analyses indicating volume of water treated and treatment effluent concentrations, monthly water level charts from M-78 and M-80, and monthly chromium concentrations in Appendix J wells. These monitoring parameters are currently being submitted and are not proposed for reduction at this time.

KMCC does propose to reduce the production of a potentiometric surface map for the Consent Order Monitoring Area from a monthly to a quarterly basis.

The semiannual report will continue to provide significant data on operations but will monitor the potentiometric surface contour over a longer period of time, since the contours have stabilized relative to a month to month contour.

Should you have any questions regarding this semiannual report format, please contact me or Alan J. Gaddy at (702) 565-8901.

Sincerely,


Patrick S. Corbett
Plant Manager

PSC:j
DENNISON/AJG#5

cc: PBDizikes
AJGaddy
JLux
JCStauter



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89015

July 17, 1987

Certified Mail No. P-519 565 218

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JUL 21 1987

**ENVIRONMENTAL
PROTECTION**

Mr. LaVerne Rosse
State of Nevada
Division of Environmental Protection
201 South Fall Street
Carson City, NV 89710

Dear Mr. Rosse:

This report describes the progress of the chromium mitigation project at Kerr-McGee Chemical Corporation's Henderson facility for the second quarter of 1987.

Interceptor and Monitor Wells

Interceptor and monitor well networks are complete. The locations of these wells were submitted to NDEP as Appendix C on October 9, 1986. The pumping system, which will intercept the groundwater, has been designed and is now out for bids. Final installation is expected September 9, 1987.

Treatment Plant

Equipment for the Andco treatment plant, whose technology was approved by NDEP on December 18, 1986, has been installed. Equipment will be tested in early August to assure working condition before the September 9 startup. Testing will include a stabilized water run to check lines and fittings for leaks. At this time we request permission to discharge this stabilized water to the recharge trenches. This will serve a dual purpose of testing the recharge trench lines.

Recharge Trenches

Recharge trenches have been constructed as described in Appendix I submitted to NDEP on October 23, 1986. They are ready for use.

Page 2
July 17, 1987

The groundwater recovery treatment program will start September 9, 1987.

If you have any questions or comments, please contact Susan Crowley at (702) 565-8901, Ext. 234.

Very truly yours,

KERR-McGEE CHEMICAL CORPORATION



P. S. Corbett
Facility Manager

PSC:j
NDEP7.17



KERR-McGEE CHEMICAL CORPORATION

POST OFFICE BOX 55 • HENDERSON, NEVADA 89015

April 14, 1987

Certified Mail No. P 254 929 530

LaVerne Rosse
State of Nevada
Division of Environmental Protection
201 South Fall Street
Carson City, NV 89710

RECEIVED

APR 16 1987

ENVIRONMENTAL
PROTECTION

Dear Mr. Rosse:

This report describes progress of the chromium-mitigation project at Kerr-McGee Chemical Corporation's Henderson facility for the first quarter of 1987.

Interceptor and Monitor Wells

Interceptor and monitor well networks are complete. Locations of these wells were submitted to NDEP as Appendix C on October 9, 1986. Final pumping tests confirm that the placement of interceptor wells will provide overlapping cones of depression and an effective water capture. The pumping system design is in the final stages and will be installed by September 9, 1987.

Treatment Plant

Equipment for the Andco treatment plant, whose technology was approved by NDEP on December 18, 1986, has been received at the Henderson facility. Installation of the plant has begun and will be complete by July 9, 1987.

Recharge Trenches

Funds have been approved for installation of the recharge trenches. Construction of the trenches will be as described in Appendix I submitted to NDEP on October 23, 1986. The recharge trenches will be completed by August 9, 1987.

The groundwater recovery treatment program will start September 9, 1987.

If you have any questions or comments, please feel free to call S. M. Crowley at (702) 565-8901, Ext. 234.

Sincerely,

P. S. Corbett
Plant Manager

PSC:jc