



**KERR-McGEE CHEMICAL CORPORATION**

POST OFFICE BOX 55 • HENDERSON, NEVADA 89009

August 15, 1997



Mr. Robert Kelso  
Nevada Division of Environmental Protection  
333 West Nye Lane  
Carson City, NV 89710

Dear Mr. Kelso:

Subject: KMCC Perchlorate Sampling Plan

Attached for your review is a sampling plan, prepared by Kerr-McGee Chemical Corporation (KMCC), to provide information related to perchlorate impact of groundwater at the Henderson, Nevada, facility. KMCC intends to sample the week of August 25<sup>th</sup> and, at Mr. Dogion's request, is making provisions for Nevada Division of Environmental Protection to take split samples.

Please feel free to contact me at (702) 651-2234 if you have any questions or comments related to the sampling plan. Thank you.

Sincerely,

Susan M. Crowley  
Staff Environmental Specialist

Attachment

cc: GDChristiansen  
PSCorbett  
PRDemps  
PBDizikes  
RHJones  
RANapier  
TWRreed (w/attachment)  
FRStater

SMC\Perchlorate SP to Kelso.doc

KERR-McGEE CHEMICAL CORPORATION  
HENDERSON, NEVADA

**PERCHLORATE  
SAMPLING PLAN**

August 15, 1997

Prepared by Kerr-McGee Chemical Corporation

## SCOPE

Kerr-McGee Chemical Corporation (KMCC) plans to conduct field and analytical work at KMCC's Henderson, Nevada, facility to provide information about KMCC facility groundwater perchlorate impact. This Sampling Plan sets out the objectives and scope of the fieldwork and analyses to be performed. A report summarizing the results of the field work and analyses will be prepared and submitted to the Nevada Division of Environmental Protection (NDEP).

## OVERVIEW

The KMCC Site at Henderson, Nevada, occupies part of an industrial area known as the Basic Management Incorporated (BMI) complex (Complex). Figure 1 shows the location of the Facility. Plate 1 is a Facility map showing topographic features and the location of groundwater and recovery wells.

The Complex, including KMCC's property, is located in an unincorporated portion of Clark County, Nevada, and is completely surrounded by the City of Henderson. Originally sited and operated by the U.S. Government as a magnesium production facility, the Complex operated from August 1942 to November 1944 to support the war effort.

Following cessation of magnesium operations, a portion of the Complex was leased from the Government by Western Electrochemical Co. (WECCO) in 1945. In May 1945, WECCO entered into a contract with the Defense Plant Corporation (DPC) for the production of perchlorates at the facility. The plant was designed and operated for the Department of the Navy. One of the ten existing "Units" was rehabilitated for the production of perchlorates to support the World War II war effort. The conversion involved removal of magnesium cell lines and installation of Schumacher type chlorate and perchlorate cells along with other related equipment. By June or July of 1945, the plant was operating even before the conversion was complete. However the plant only operated for

one month as production was stopped the day after V-J day. A clean-up program was initiated, and the equipment was placed in stand-by condition.

Six months later, WECCO negotiated a lease with Reconstruction Financing Corporation (RFC), which had dissolved DPC. WECCO resumed operations in February 1946 for the production of chlorates and perchlorates for the commercial market. By 1952, WECCO had purchased various portions of the Complex. In 1955, WECCO merged with American Potash and Chemical Company (AP & CC). In 1962, AP & CC purchased the current ammonium perchlorate plant, sodium perchlorate plant, and half of the sodium chlorate plant from the Government. KMCC acquired AP & CC by merger in 1967. Later, KMCC acquired the remainder of the sodium chlorate plant. In addition to the production of chemical oxidizers, the Facility also began production of manganese dioxide and boron-based products.

SAMPLING LOCATIONS

Well locations were selected to provide information about facility wide ground water quality. Wells locations are shown on Plate 1. Table 1 lists the wells to be included in the sampling effort.

Table 1. Wells to be Sampled

Location	Well #
Facility Up grading	M-10
North of Unit Buildings	M-11
	M-12
	M-13
	M-29
Leach Latitude	M-32
	M-50
	M-21
Steam Plant Latitude	M-35
	M-34
	M-2
AP Plant Latitude	M-76
	M-39
	M-89
	M-37
AP Pond Latitude	M-17
	M-14
	M-22
	M-36
Intercept Well Latitude	M-25
	M-62
	I-A to I-O (15 wells)
	M-57
Recharge Trench Latitude	M-88
	M-86
	M-86
	M-83
North Drainage Ditch Latitude	M-90
	M-48
	M-23
North Property Boundary	M-44
	M-96

Please refer to the KMCC Phase II Work Plan for well construction details.

## ANALYTICAL DATA

The general quality indicators, pH and specific conductance, will be determined for each well location. In addition, concentrations of perchlorate and chlorate ions will be determined. Table 2 lists the Methods to be used for each analyte.

Table 2. Methods of Analysis

Analyte	Method	Expected Detection Limit
pH	EPA 150.1	NA
Specific Conductance	EPA 120.1	<50 umhos
Perchlorate Ion	X1-C.7.5*	10 ppm
Chlorate Ion	X1-C.7.1*	1 ppm

\* KMCC Internal Method

## DATA COLLECTION and QUALITY CONTROL

Please refer to the Data Collection and Quality Assurance Plan (DCQAP) portion of the KMCC Phase II Work Plan (Section 3) for protocols that will be used for field data collection and quality control. The following exception to this protocol should be noted:

- Samples will be obtained utilizing KMCC personnel without the assistance of ENSR.
- KMCC's laboratory will be utilized for all analytes.

## PROJECT MANAGEMENT

KMCC personnel will coordinate the field related activities associated with this Work Plan. The work group is headed by Susan Crowley, Staff Environmental Specialist at KMCC's Henderson facility. Table 3 summarizes the key personnel for the project.

Table 3. Key Personnel

Title	Location	Name, Phone
KMCC Project Manager	KMCC, Henderson	Susan M. Crowley (702) 651-2234
Site Health & Safety Officer	KMCC, Henderson	Greg B. Cowley (702) 651-2228
Managing Hydrogeologist	KMC, Oklahoma City	Tom W. Reed (405) 270-2654
Regulatory Consultant	KMC, Oklahoma City	Russ Jones (405) 270-2665
Legal Council	KMC, Oklahoma City	Pam Dizikes (405) 270-2878

## HEALTH AND SAFETY

Please refer to the Health and Safety (HSP) portion of the KMCC Phase II Work Plan (Section 3) for protocols that will be used during this sampling effort.