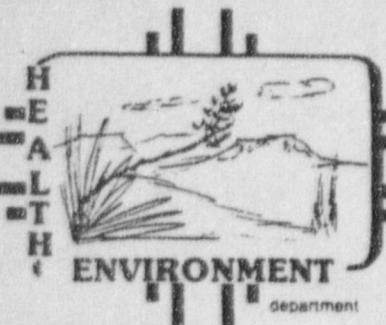




STATE OF NEW MEXICO

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RADIATION PROTECTION BUREAU

M E M O R A N D U M

TO: Jere Millard
THRU: Jerry Stewart
FROM: Sam Simpson *[Signature]*
DATE: September 10, 1982
SUBJECT: Request for Sample Analysis, Mariano Lake Site

-
1. Gulf's project at Mariano Lake is currently being terminated, decommissioning, decontamination, and final clean-up activities are underway. Sample's taken on 8/25/82 by Ted Brough, Bob Barbero and Brian O'Connor in joint effort.
 2. Require Radium 226 analysis of two composite soil samples to assist in determination of background radiation levels at the project site.
 3. The smaller sample is sludge material removed from the west lagoon, require analysis of Ra-226 in this material. This information needed to support decision making on appropriate clean-up approach.
 4. Analysis of these soil samples for Ra-226 is essential before termination of Gulf's Radioactive Material License can be effected.

JS/mp

9805060335 820910
PDR ADOCK 04008908
C PDR



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

Photos taken by Sam Thompson EID Radiation Protection Bureau

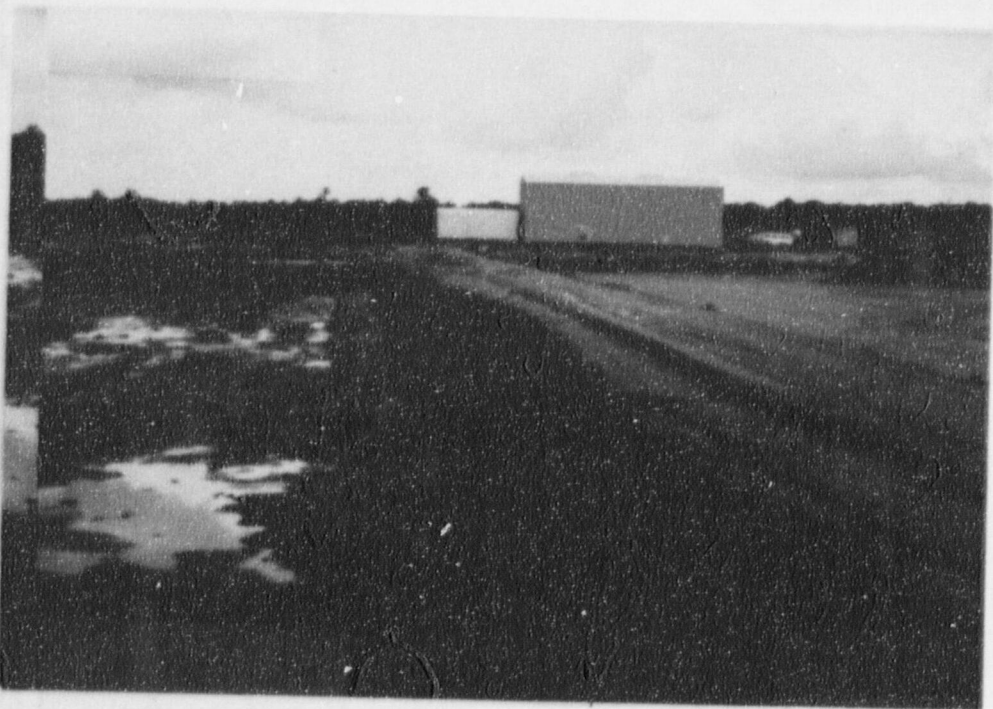
Restricted from release to public by agreement with DOE.

DATE 25 Aug 82 TIME _____LOCATION Marathon Lake
Gulf Project

DESCRIPTION

West pond drained -
liner & sediment in
place - 1X & Barium
Chloride Treatment facilities
in foreground.

Photo taken after heavy rainfall.
note collection of water on north
side of lagoon, rain run-off

DATE 25 Aug 82 TIME _____LOCATION Marathon Lake Gulf
1X Facility

DESCRIPTION

East section of West
lagoon & right side
of photo is west sector
of center lagoon.



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE 28 Aug 82 TIME _____LOCATION Guy Mariano
Lake 1X Lagoon

DESCRIPTION _____

Photo of West lagoon,
previously drained -
water puddles caused
by recent heavy rain
storm.DATE 28 Aug 82 TIME _____LOCATION Guy Mariano
Lake Lagoon

DESCRIPTION _____

Center lagoon,
sediment previously
removed & processed at
Kerr McGee Inc. w. th
ore



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

Photos taken by Sam Thompson EID Radiation Protection Bureau

Restricted from release to public by agreement with DOE.

DATE 25 Aug 82 TIME _____LOCATION Manzano Lake
Guef Project

DESCRIPTION

West pond drained -
liner & sediment in
place - 1X & Barium
Chloride Treatment facilities
in foreground.

Photo taken after heavy rainfall.
note collection of water on north
side of lagoon, rain run-off

DATE 25 Aug 82 TIME _____LOCATION Manzano Lake Gulf
1X Facility

DESCRIPTION

East section of West
lagoon & right side
of photo is west section
of center lagoon.





STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE 2 Aug 82 TIME _____LOCATION July Mesa
Lake 1x Lagoon

DESCRIPTION _____

Photo of West lagoon,
previously drained -
water puddles caused
by recent heavy rain
storm.DATE 25 Aug 82 TIME _____LOCATION July Mesa
Lake Lagoon

DESCRIPTION _____

Center lagoon,
sediment previously
removed & processed at
Kerr Mc Lee w. th
ore

DATE Aug 21, 82 TIME _____LOCATION Gulf Marinas
Lake Project

DESCRIPTION _____

Mr. Ted Brough taking
sediment sample
from West Lagoon
Depth 7 sediment
Approx 3/8"DATE Aug 21, 82 TIME _____LOCATION Gulf Marinas
Lake 18 Project

DESCRIPTION _____

Mr. Ted Brough taking
Samples of sediment
from West Lagoon



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE Aug 21, 1982 TIME LOCATION Guy Mariano
Lake 1x ProjectDESCRIPTION South Sideof lagoons facing North,
ridge is ^(topsoil) earth removed
when lagoons were
~~excavated~~ excavated.DATE Aug 21, 1982 TIME LOCATION Guy Mariano
Lake 1x ProjectDESCRIPTION Approximate300' from truck, packed
~~and~~ parallel
to south fence line
of lagoon complex



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE Aug 25, 82 TIME _____LOCATION Gulf Marano
Lake 1X Facility

DESCRIPTION _____

5 mi. area of 1X
Complot - Soil samples
taken at 5 locations -
300-500' from fence line
Compacted & sent to
Everline for analysis
for Ra-226. Awaiting
results.

DATE Aug 25, 82 TIME _____LOCATION West of Lagoon
Gulf Marano Lake 1X
Facility

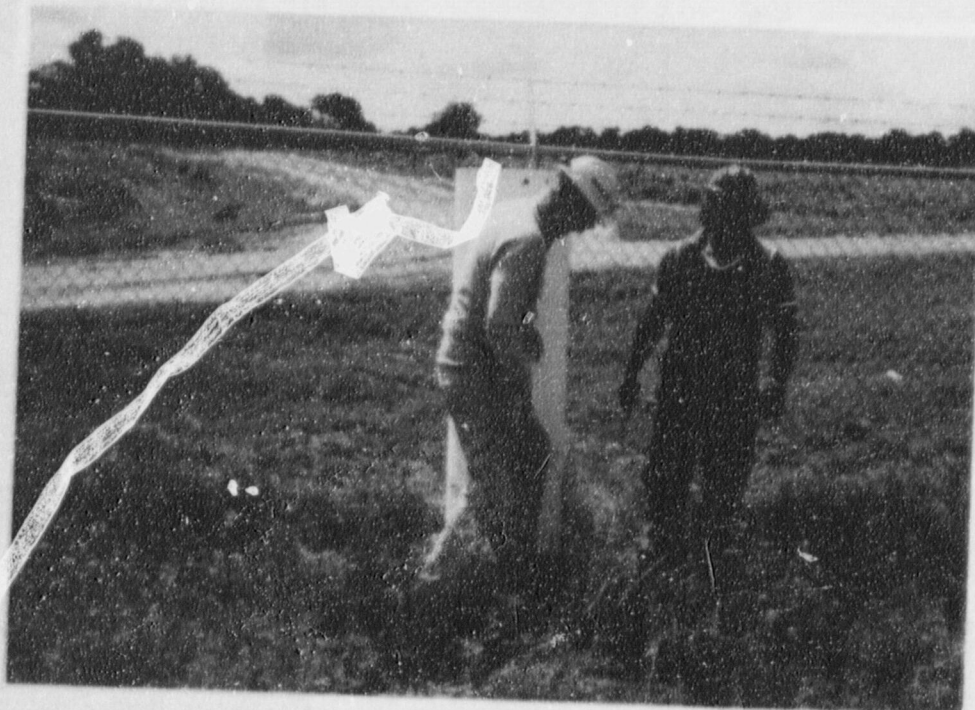
DESCRIPTION _____

500' - Gamma
reading 15 cps/hr.



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU



DATE Aug 25, 1971 TIME _____

LOCATION Gulf Marais

Lake 1X Project

DESCRIPTION _____

Lusand (EIN) installing

Rodor-222 Sample collection

system S.E. corner -

48 hr bag sample

.190 pCi/l

Average Radon background
levels are $.55 \pm .07$ pCi/l



DATE Aug 25, 1971 TIME _____

LOCATION Gulf Marais

Lake 1X Project.

DESCRIPTION S.W. Corner

of fenced lagoon area

Rodor 222 Sample being
installed.

48 hr bag sample

.49 pCi/l

Average Radon background
levels are ~~not~~ determined
at: $.55 \pm .07$ pCi/l



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE Aug 25, 82 TIME _____LOCATION Guy MarianoLake 1X Project

DESCRIPTION _____

Lucas (EIN) installingRadon-222 Sample collectionsystem S.E. corner -48 hr bag sample.190 pCi/lAverage Radon background
levels are $.55 \pm .07$ pCi/lDATE Aug 25, 82 TIME _____LOCATION Guy MarianoLake 1X Project.DESCRIPTION S.W. Cornerof fenced lagoon areaRadon-222 Sample being
installed.48 hr bag sample.49 pCi/lAverage Radon backgroundlevels are ~~not~~ determinedat: $.55 \pm .07$ pCi/l.



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE Aug 25, 82 TIME _____LOCATION Mariano LakeProject 1X Facility

DESCRIPTION _____

Approximately 350'
North side of lagoon
sewer-line. Example
of headcutting arrays
Cut through in one
storm event.

DATE Aug 25, 82 TIME _____LOCATION Mariano LakeProject 1X Facility

DESCRIPTION _____

Approx 300' north
of lagoon sewer
line, view of
arrays eroded
in one storm event
within 5 ft.



STATE OF NEW MEXICO

RADIATION PROTECTION BUREAU

DATE Aug 20/72 TIME _____LOCATION Marion's Lake
1x Project Guy

DESCRIPTION _____

Gamma reading
taken at sediment
area 66 yd/hr,
West Lagoon.DATE Aug 20 TIME _____LOCATION Guy/Marion's
Lake right

DESCRIPTION _____

Extra photo of
taking samples of
sediment in West
Lagoon



DATE Aug 12 TIME

LOCATION Chief Marano
Rake 18 Facility

DESCRIPTION

Extra photo
of West Lagoon

DATE TIME

LOCATION

DESCRIPTION