



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

September 21, 1994

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-963-161

Mr. Brad F. Simmons
RMI Environmental Services, Inc.
P.O. Box 2522
Farmington, New Mexico 87499

Re: Middle Mesa Commercial Disposal Facility
San Juan County, New Mexico

Dear Mr. Simmons:

The permit application for the RMI Environmental Services, Inc. (RMI) Commercial Disposal Facility located in Section 11, Township 32 North, Range 7 West, NMPM, San Juan County, New Mexico is **hereby approved** in accordance with Oil Conservation Division (OCD) Rule 711 and under the conditions contained in the enclosed attachment. The application consists of the original application dated April 25, 1994, and materials dated July 7, 1994 and August 11, 1994, submitted as supplements to the application.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. You are **required** to notify the Director of any facility expansion or modification and to file the **appropriate** application with the Division. Any changes or modifications to the construction or operating conditions must receive prior OCD approval. The Division shall have the authority to administratively modify the terms and conditions of this permit to protect surface and ground waters, public health and the environment.

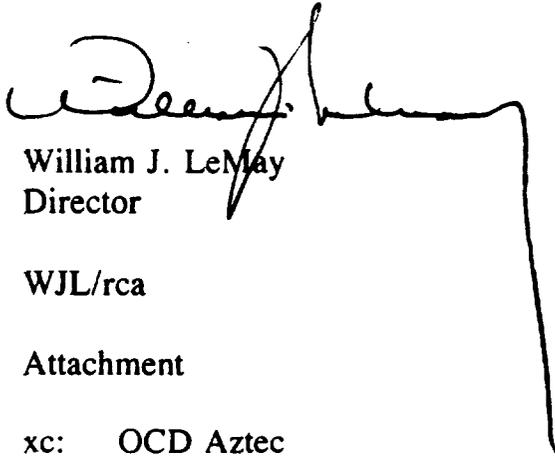
Please be advised approval of this permit does not relieve RMI of liability should the operation result in actual pollution of surface or ground waters or the environment actionable under OCD Rules or other laws and/or regulations. In addition, OCD approval does not relieve RMI of liability for compliance with any other laws and/or regulations.

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This permit is approved for a period of five (5) years. The permit will expire on September 21, 1999 and RMI should submit an application for renewal a minimum of six (6) months before that date.

If you have any questions, please do not hesitate to contact Roger Anderson at (505) 827-5812.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. LeMay". The signature is written in a cursive style and extends to the right, ending in a long vertical line that drops down.

William J. LeMay
Director

WJL/rca

Attachment

xc: OCD Aztec
BLM Farmington

**ATTACHMENT TO OCD 711 PERMIT APPROVAL
RMI ENVIRONMENTAL SERVICES
MIDDLE MESA COMMERCIAL DISPOSAL FACILITY**

BOND AND ACCESS REQUIREMENTS

1. Before commencing construction of the disposal facility, RMI shall have a surety cash bond in the amount of \$25,000 in a form approved by the Division. Before commencing operation the operator will submit and obtain Division approval of a detailed closure plan with a cost estimate from a disinterested third party that includes the following minimum requirements:
 - a. empty the contents of the pond, if necessary, based upon maximum capacity.
 - b. transport and dispose of the water and sludges as necessary.
 - c. remove and dispose of all piping, liners, surface equipment and all other equipment.
 - d. reclamation of the surface to an extent that is protective of the public health and the environment and which is consistent with post-closure land use as may be approved by the Director.

2. The bond amount will be increased to the amount of the above closure estimate according to the following schedule:

Three (3) months after commencing operation or when the pond is filled to one-fourth (1/4) of the permitted capacity, whichever comes first, the bond amount will be one-fourth (1/4) of the estimated closure cost and must be provided to the Director.

Six (6) months after commencing operation or when the pond is filled to one-half (1/2) of the permitted capacity, whichever comes first, the bond amount will be one-half (1/2) of the estimated closure cost and must be provided to the Director.

Nine (9) months after commencing operation or when the pond is filled to three-fourth (3/4) of the permitted capacity, whichever comes first, the bond amount will be three-fourths (3/4) of the estimated closure cost and must be provided to the Director.

One year after commencing operation or when the pond is filled to 100% of the permitted capacity, whichever comes first, the bond amount will be 100% of the estimated closure cost and must be provided to the Director.

3. RMI grants the State of New Mexico, its agencies, officers, employees, agents, contractors and other entities designated by the State all its rights of entry into, over and

upon the facility property, including all necessary and convenient rights of ingress, egress and regress with all materials and equipment to conduct operation, termination and closure of the facility, including but not limited to the temporary storage of equipment and materials, the right to borrow or dispose of materials, and all other rights necessary for operation, termination and closure of the facility in accordance with the standards set forth in the permit of said facility in the event RMI fails to fulfill the conditions and obligations of the permit.

PRE-OPERATION REQUIREMENTS

1. Prior to commencing operations, RMI will provide the Division with balance sheets and income statements for the past seven (7) years or life of the corporation detailing the financial history of RMI. At RMI's request this information will be held in confidence.
2. Prior to commencing operations, RMI will provide the Division with copies of the Domestic Return Receipts or copies of the notification signed by the landowners for the proof of notification portion of the application.

FACILITY DESIGN AND CONSTRUCTION

1. The pond will be constructed so that the inside grade of the berm is no steeper than 2:1 and the outside grade is no steeper than 3:1. The top of the berm will be at least eighteen inches (18") wide.
2. Liner markings or some other device will be installed to accurately measure freeboard.
3. The evaporation pond will be lined with synthetic materials consisting of a minimum 30 mil impermeable membrane for the primary liner and for the secondary liner. No substitution of different materials will be used without prior approval of the Division.
4. Leak Detection:
 - a. The leak detection system of the design submitted in the application will be installed between the primary and secondary liners. The OCD will be notified at least 72 hours in advance of the scheduled installation to allow a Division representative the opportunity to inspect the leak detection system.
 - b. A network of slotted or perforated drainage pipes will be installed between the primary and secondary liners. The main collector pipes will not be less than two inches (2") in diameter and the laterals will not be less than one inch (1") diameter pipe. The network will be of sufficient density so that no point in the pond bed is more than twenty feet (20') from such drainage pipe or laterals thereof.
 - c. The material placed between the pipes and the laterals will be sufficiently

permeable to allow transport of the fluids to the drainage pipes. The slope of all drainage lines and laterals will be at least six inches (6") per fifty feet (50'). The slope of the pond bed will also conform to these values to assure fluid flow towards the leak detection system. The drainage pipes will convey any fluids toward a corrosion proof sump located outside the perimeter of the pond.

5. Preparation of Pond Bed for Installation of Liners.
 - a. The bed of the pond and inside grade of the levee will be smooth and compacted, free of holes, rocks, stumps, clods, or any other debris which may rupture the liner. If necessary to prevent rocks from damaging the liner, the pond bed will be covered with a compacted layer of sand or other suitable materials.
 - b. A trench will be excavated on top of the levee the entire perimeter of the pond for the purpose of anchoring flexible liners. This trench will be located a minimum of nine inches (9") from the slope break and will be a minimum of twelve inches (12") deep.
 - c. The liner will rest smoothly on the pond bed and the inner face of the levees, and will be of sufficient size to extend down to the bottom of the anchor trench and will come back out a minimum of two inches (2") from the trench on the side furthest from the pond. Wrinkles and folds will be placed at each corner of the pond in accordance with manufacturer's specification to allow for contraction and expansion of the membrane due to temperature variations. The liner will be properly vented.
 - d. An anchor of used pipe or other similar material will be placed over the liner in the anchor trench and the trench back-filled. The anchor trench will extend the entire perimeter of the pond.
 - e. The geotextile membrane layers placed on top of the secondary liner will be done in such a manner that risk of tearing the liner is minimized.
 - f. Fluid discharge points into the pond will be constructed so that no fluid force will be directed toward the liner.
6. Upon completion of construction of the pond, "as built" completion diagrams certified by a registered engineer will be submitted and approved by the Division prior to commencement of operations.
7. A fence will be constructed and maintained around the perimeter of the facility so as to prevent big game, livestock and people from entering the facility area. The fence will not be constructed on the levee and adequate space provided between the levee and the fence for passage of maintenance vehicles.
8. A sign will be posted on the fence at the entrance to the facility. The sign will be legible

from at least fifty feet (50') and contain the following information: a) name of the facility, b) location of quarter-quarter section, township and range, and c) emergency telephone numbers.

9. Above ground tanks that contain materials other than fresh water will be bermed to contain one and one-third the volume of the largest tank or interconnected tank.
10. All below grade tanks and sumps will be constructed with secondary containment and leak detection as approved by the Division.
11. All tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered nonhazardous to migratory birds.

FACILITY OPERATIONS

1. Only produced water that has passed through the RMI reverse osmosis treatment facility will be allowed into the pond. Produced water from sources not passing through the RMI reverse osmosis treatment facility will not be accepted without prior approval from the OCD.
2. All produced water will be unloaded into tanks and the oil removed prior to disposal into the pond. Oil recovered will be stored in closed storage tanks or drums and then transported to an OCD approved oil reclamation facility. Per OCD General Rule 310, oil shall not be stored or retained in earthen reservoirs or in open receptacles. Any oil which is accidentally discharged into the pond must be removed within twenty-four (24) hours.
3. The pond will have a minimum freeboard of two feet (2"). If overtopping occurs at any time, the freeboard will be increased to prevent reoccurrence.
4. The spray evaporation system will be operated in a manner that all spray will remain in the confines of the lined portion of the pond. An anemometer with automatic shutdown will be installed and utilized such that the spray system will not operate when winds, sustained or in gusts, cause windborn drifts to leave the confines of the lined portion of the pond.
5. Any ~~sludge~~ build-up in the bottom of the pond in excess of twelve inches (12") will be removed and disposed at an OCD approved disposal facility.
6. The leak detection system will be inspected on daily basis and records made and kept on file for five (5) years from the date of record. If fluids are found in the leak detection system the following steps will be taken:
 - a. The operator will notify the OCD Aztec and Santa Fe offices within twenty-four (24) hours of discovery.

- b. The fluids will be sampled and analyzed to determine the source.
 - c. The fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.
7. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency plan under the direction of the OCD:
 - a. Introduction of fluids into the pond will cease.
 - b. Enhanced evaporation will commence, provided atmospheric conditions are such that the spray systems can be operated in accordance with the provisions of this permit.
 - c. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the proven location of the leak in the liner.
8. The outside walls of all berms will be maintained in such a manner to prevent erosion. Inspections of the outside portion of the berms will be made weekly and after any rainfall of consequence.
9. All records required in this permit will be maintained for a period of five (5) years.

H₂S PREVENTION & CONTINGENCY PLAN

1. Monitoring of the pond's contents will include the following:
 - a. Daily tests will be conducted and records made of the pH in the pond. If the pH falls below 8.0, remedial steps will be taken immediately to raise the pH to 8.0.
 - b. Weekly tests will be conducted and records made of the dissolved sulfide concentration in the pond.
 - c. Dissolved oxygen monitoring will be conducted a minimum of twice daily that includes measurement of the dissolved oxygen one foot (1') off the bottom of the pond.
2. If the residual dissolved oxygen concentration falls below 0.5 parts per million (ppm) an aeration system will be installed to provide sufficient oxygen to the pond. Tests will be conducted and records made to determine the dissolved oxygen levels in the pond according to the following procedure:
 - a. Tests will be conducted at the beginning and end of each day, or at least twice every twenty-four hour period.

- b. The sample for each test will be taken one foot from the bottom of the pond.
 - c. The location of each test will vary around the pond.
 - d. If any test shows a dissolved residual oxygen level of less than 0.5 parts per million (ppm), immediate steps will be taken to oxygenate the pond and create a residual oxygen level to at least 0.5 ppm. Remedial measures may include adding chemicals or increased aeration.
3. Tests of ambient H₂S levels will be conducted and records made. Such tests will be made at varying locations around the berm of the pond and around the perimeter of the facility. Tests will be conducted twice per day. The wind speed and direction will be recorded in conjunction with each test.
4. If an H₂S reading of 0.1 ppm or greater is obtained:
 - a. A second reading will be taken on the down wind berm within one hour;
 - b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment will be determined;
 - c. Tests for H₂S levels will be made at the fence line, downwind from the pond.
5. If two consecutive H₂S readings of 0.1 ppm or greater are obtained:
 - a. The operator will notify the OCD Aztec office immediately;
 - b. The operator will commence hourly monitoring on a 24-hour basis;
 - c. The operator will obtain daily analysis of dissolved sulfides in the ponds.
6. If an H₂S reading of 10.0 ppm or greater at the facility fence line is obtained:
 - a. The operator will immediately notify the OCD and the following public safety agencies:
State Police
County Sheriff
 - b. The operator will initiate notification of all persons residing within one (1) mile of the fence line and assist public safety personnel with evacuation as requested.