

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank X

Operator: **Marshall & Winston, Inc.**

Telephone: **432-684-6373**

e-mail address: **tbrandt@mar-win.com**

Address: **PO Box 50880, Midland, Texas 79710-0880**

Facility or well name: **King Air State No. 1** API #: **30 015 34342** U/L: **Unit P 660' FSL and 660' FEL, Sec 16 T17S R25E**

County: **Eddy** Latitude N Longitude W NAD: 1927 ☐ 1983 ☐

Surface Owner: Federal State X Private ☐ Indian ☐

Pit

Type: Drilling X Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined X Unlined ☐

Liner type: Synthetic X Thickness: **12ml HDPE liner** Clay ☐

Pit Volume: **4,000 bbl. (Approximately)**

Below-grade tank N/A

Volume: **N/A** bbl Type of fluid: **N/A**

Construction material: **N/A**

Double-walled, with leak detection? ☐ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of groundwater.) **Depth to groundwater pursuant to NM State Engineer's data approximately 140'.**

Less than 50 feet

50 feet or more, but less than 100 feet

100 feet or more

(20 points)

(10 points)

(0 points) 0 pts.

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes

No X

(20 points)

(0 points) 0 pts.

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

200 feet or more, but less than 1000 feet

1000 feet or more

(20 points)

(10 points)

(0 points) 0 pts.

Ranking Score (Total Points)

0 pts.

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. **Digital photos shall be submitted (final report) for before and after remediation activity. Appended composite photos show existing relationship.** (2) Indicate disposal location: **Insitu onsite** If offsite, name of facility: (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: **No X** Yes ☐ If yes, show depth below ground surface ☐ ft. and attach sample results.

(5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: **Please refer to the attached letter for detailed "Closure Plan" information, digital photos, and sample location diagram (final report).**

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: **24 February 2006**

Printed Name/Title **Tom Brandt, Vice President - Operations**

Signature *Tom M Brandt*

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or

Approval:

Printed Name/Title *Mike Brateler*

Signature *Mike Brateler*

Date: **MAR 07 2006**



March 1, 2006

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Avenue
Artesia, NM 88210

Re: King Air, State No.1 Pit Closure Documents

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, enclosed herewith is the completed C-144 Form, digital photos of the existing pit which photographically also demonstrate physical relationships on location (diagrammatic presentment in final report) and additional information constituting the "Closure Plan" for closure of the Marshall & Winston, Inc., hereinafter "Marshall & Winston", King Air, State No. 1, hereinafter "King Air", drilling pit (API No. 30 015 34342) located in U/L P S16 T17S, R25E of Eddy County, New Mexico.

INTRODUCTION

Remediation of the Marshall & Winston King Air drilling pit is targeted to begin 06 March 2006 with completion expected by 10 March 2006, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays or exacerbate the proposed schedule in any way. At the time of this submittal, however, Marshall & Winston hereby also notice the State of New Mexico, OCD that it reserves the option to utilize said drilling pit for additional activity on this well over the next 4 months should it be necessary, after which time closure would follow or the State of New Mexico, OCD would again be approached with decisional information critical to the existence of said drilling pit. Marshall & Winston intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the State of New Mexico, Oil Conservation Division (OCD) regarding this disposal action and permanent closure of the King Air drilling pit.

Potential, temporary contamination from the King Air drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminates of concern are typical mid to high-level concentrations of brines, polymers (such as xanthium gum and starch) and in general, drilling mud and fluids remaining upon completion of said drilling operations.

Area land use is primarily ranching with domestic pasturage and oil and gas production activities. The Marshall & Winston King Air drilling pit is physically located in an area wherein the State of New Mexico and the Operator can obtain reliable analytical data for groundwater table depths sufficient enough to ensure *insitu* disposal is compliant with New Mexico, OCD, Regulatory Performa. Pursuant to the New Mexico State Engineer's Office database, seasonal high groundwater elevation is greater than 140 feet in adjacent proximities, which substantiate the rather consistent geologic infrastructure of the area.

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Consequently, *insitu* disposal shall be engaged pursuant to Form C-144. It is the belief of Marshall & Winston that compliant environmental performance and reduction of liability in this area pursuant to New Mexico, OCD regulations can be achieved with *insitu* disposal predicated upon evidentiary data heretofore presented. Further, should future Regulatory Performa mandate additional action or should the Operator choose to take additional action, the *insitu* option, in this case, (1) limits the environmental impact in general, (2) allows the Operator/government immediate access to said liability, (3) contains said material within the Operator's lease boundary and (4) in the event evidence of water is discovered during the digging of the *insitu* pit, all actions would cease and the State would be immediately notified that a haul off was now mandated substantiated by new data.

Further, in conjunction with their normal online databank, the State of New Mexico, OCD is cross-referencing with a groundwater map titled "Eddy County Depth to Groundwater", produced by Wayne Johnson at Chevron/Texaco, dated 9 February 2005. This map does not show elevation definition (flat representation) and has proven to be both accurate and inaccurate at the same time which compounds the Operator and the State's evaluation but does in this case defend a non-water sensitive designation ensuring compliant environmental performance and consequential reduction of Operator and State liability.

Marshall & Winston shall strictly apply the State of New Mexico, OCD standards, i.e. clean-up level for the King Air drilling pit shall meet the less than 100ppm of TPH, ND for BTEX and the less than 250ppm of chlorides unless otherwise approved and substantiated by background sampling information documented to be higher than the above cited indices. At which juncture, Marshall & Winston shall engage the New Mexico, OCD in discussions to remediate at higher levels commensurate with background.

CLOSURE PLAN

Prior to commencement of closure activities, the Marshall & Winston contractor will contact One-Call for line spot clearance and confirm the State of New Mexico, OCD is in agreement with the proposed "Closure Plan" for removal of approximately 2,000 bbl. of liquid followed by the removal of all fines (drill cuttings) providing said fines have either (1) sufficiently dried allowing for maneuverability of heavy equipment in the pit area or that (2) designated mixing shall occur in order to attain sufficient dryness of said fines prior to depositing into the *insitu* 20 ml HDPE liner, enabling *insitu* burial application to take place followed by final pit closure.

Environmental health and safety regulations mandate control of pit volumes at all times. Thus, the liquid material was pumped off as needed and properly disposed of during active drilling in February 2006. All water accumulated since this time is either due to liquid material not completely hauled from actual drilling operations or rain. This water has subsequently been hauled from the location and properly disposed of pursuant to OCD Regulatory Performa.

- ❖ Contractor shall mobilize to King Air drilling pit site located approximately 5 miles West of Artesia, New Mexico (see Form C-144). Personnel necessary to provide for the initiation and completion of said remediation activities presented above shall be engaged as is appropriate to the mandated exercise.
- ❖ No remediation activity shall occur off the existing pad or already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's). Marshall & Winston shall consider weather conditions and necessary equipment positioning to provide a clear area for adequate staging for site control and safety compliance, ensuring operations shall be compliant with New Mexico, OCD Regulatory Performa.
- ❖ The King Air drilling pit is currently lined with a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines *in situ* pursuant to New Mexico, OCD requirements. *In situ* actions provide for the encasement of all drilling pit contents in a 20 ml liner sewn in a rectangular box shape and placed vertically with sufficient depth below ground to ensure surficial placement of a minimum of three feet of topsoil. Should the bottom of the *in situ* pit be composed of extremely hard, sharp caliche or similar material, it shall first be lined with 4 ounce Geotextile Felt placing the 20ml HDPE liner on top of it with the sides of the "container" married to previously undisturbed ground ensuring no objects such as sharp rocks, etc. shall be in the contact area to reduce the potential of puncturing a pressured "container" resulting from (1) the placement of soil during the burying process and (2) the composition of the pit material contained within it, which over time will, to some degree, exude gaseous buildup.
- ❖ Once the burial trench/pit has been dug to sufficient dimensions to ensure proper placement of the pit contents and lined as above, the track hoe shall begin to deposit pit materials within the secured "container" until all pit material has been placed within it. This 20ml HDPE liner "container" shall not be permanently sealed with its 20ml HDPE cap sewn closed until after the drilling pit bottom has been sampled and approved for closure by the State of New Mexico, OCD. In the event more material must be harvested to achieve compliance, and said harvest shall increase the volume of the *in situ* material to such a degree that it will threaten the integrity of the "container" or potentially cause leakage to occur by reason of increased volume, an additional *in situ* 20ml HDPE liner "container" shall be placed adjacent (when space and terrain permits) to the existing "container". Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminants within a specific geographic location within the lease boundary.
- ❖ Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with OCD Standards for remediation of possible soil chloride levels greater than 250ppm. However if levels at the bottom of the drilling pit test too high, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling. No backfilling shall begin without authorization by and prior verbal notification to the State of New Mexico, OCD.

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- ❖ Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with OCD Standards for remediation of possible soil chloride levels greater than 250ppm. However if levels at the bottom of the drilling pit test too high, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling. No backfilling shall begin without authorization by and prior verbal notification to the State of New Mexico, OCD.
- ❖ Backfilling of the King Air drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions. Pursuant to the APD, the King Air site shall be seeded in compliance with State approved seed mixtures.
- ❖ The "Closure Plan" shall include a final report providing lab analysis of the backfill material, digital project photos and evidentiary narrative to support the completed disposition of the reclaimed King Air drilling pit site.

Should you have questions, please call 432-684-6373 (office) or 432-553-9747 (cell).

Sincerely,



Tom Brandt
Vice President - Operations

Enclosures: State of New Mexico, OCD, Form C-144, photos