Bryan W. Shaw, Ph.D., P.E., Chairman Toby Baker, Commissioner Zak Covar, Commissioner Richard A. Hyde, P.E., Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 5, 2015

Ms. Laurie MacBean Oakwood Manor LLC 2280 FM-2722 New Braunfels, Texas 78132-2813

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: FM-2722 5 Acre Tract; Located on east side of FM-2722 approximately 2 miles north of intersection with SR-46; outside the extra-territorial jurisdiction of New Braunfels, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Investigation No. 1203287; Regulated Entity No. RN 107762924; Additional ID No. 13-14100701

Dear Ms. MacBean:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Moeller and Associates on behalf of Oakwood Manor, LLC on October 7, 2014. Final review of the WPAP was completed after additional material was received on December 23, 2014, January 6, 2015 and January 28, 2015. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.

PROJECT DESCRIPTION

The proposed single-family residential development project will have an area of approximately 5.85 acres. It will include the addition of 18 individual 640-sq. ft. single-family dwellings and

TCEQ Region 13 • 14250 Judson Rd. • San Antonio, Texas 78233-4480 • 210-490-3096 • Fax 210-545-4329

Ms. Laurie MacBean Page 2 February 5, 2015

asphalt streets. The impervious cover will be 1.05 acres (18.0 percent). According to a letter dated, December 15, 2014, signed by Mr. Robert Boyd, P.E., with Comal County, the site in the development is acceptable for the use of on-site sewage facilities.

PERMANENT POLLUTION ABATEMENT MEASURES

This single-family residential project will not have more than 20 percent impervious cover.

GEOLOGY

According to the geologic assessment included with the application, the site is located entirely on the Kainer Formation of the Edwards Group. The San Antonio Regional Office site assessment conducted on December 8, 2014 revealed that the site was generally as described in the geologic assessment.

One (1) sensitive manmade feature was noted in the assessment by the project geologist. The sanitary setback for feature S-1 (existing water well) will be 50 feet in all directions.

SPECIAL CONDITIONS

I. Since this project will not have more than 20 percent impervious cover, an exemption from additional permanent BMPs is approved. If the percent impervious cover ever increases above 20 percent or the land use changes, the exemption for the whole site as described in the property boundaries required by §213.4(g), may no longer apply and the property owner must notify the appropriate regional office of these changes.

STANDARD CONDITIONS

- 1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
- 2. The holder of the approved Edwards Aquifer Protection Plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
- 3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

- 4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
- 5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved

Ms. Laurie MacBean Page 3 February 5, 2015

WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

- 6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
- 7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
- 8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
- 9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

- 10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
- 11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
- 12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
- 13. Only one (1) well exists on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of

Ms. Laurie MacBean Page 4 February 5, 2015

Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

- 14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
- 15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
- 16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

- 18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
- 19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
- 20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer Protection Plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer Protection Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 21. An Edwards Aquifer Protection Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer Protection Plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

Ms. Laurie MacBean Page 5 February 5, 2015

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Ricardo Macias of the Edwards Aquifer Protection Program, San Antonio Regional Office at (210) 493-4065.

Sincerely,

for

Lynn M. Bumguardner Water Section Manager San Antonio Region Office Texas Commission on Environmental Quality

LMB/RAM/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

cc:

Mr. Shane Klar, P.E., Moeller and Associates Mr. James C. Klein, P.E., City Engineer Mr. Thomas H. Horseth, P.E., Comal County Engineer Mr. Roland Ruiz, Edwards Aquifer Authority TCEQ Central Records, Building F, MC 212

Water Pollution Abatement Plan Application

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

REGULATED ENTITY NAME:	FM 2722 5 AC Tract
------------------------	--------------------

REGULATED ENTITY INFORMATION

- 1. The type of project is:
 - Residential: # of Lots:
 - X Residential: # of Living Unit Equivalents: 18 Commercial
 - Industrial
 - Other: _____

2. Total site acreage (size of property): <u>5.85</u>

- 3. Projected population: ____45___
- 4. The amount and type of impervious cover expected after construction are shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	17,180	÷ 43,560 =	0.39
Parking		÷ 43,560 =	
Other paved surfaces	28,761	÷ 43,560 =	0.66
Total Proposed Impervious Cover	45,941	÷ 43,560 =	1.05
Total Proposed Impervious Cover ÷ Total Acreage x 100 =		18.0%	

- 5. <u>X</u> ATTACHMENT A Factors Affecting Water Quality. A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.
- 6. X Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

FOR ROAD PROJECTS ONLY

Complete questions 7-12 if this application is exclusively for a road project.

- 7. Type of project:
 - _____TXDOT road project.
 - County road or roads built to county specifications.
 - City thoroughfare or roads to be dedicated to a municipality.
 - ____ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

- Concrete
- Asphaltic concrete pavement
- Other:

- 9. Length of Right of Way (R.O.W.): Width of R.O.W.: $L \times W = Ft^2 \div 43,560 Ft^2/Acre =$ acres.
- Length of pavement area: Width of pavement area: 10. feet. Width of pavement area: $L \times W =$ _____ Ft² ÷ 43,560 Ft²/Acre = ____feet. acres. Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = ___% impervious cover.

feet.

feet.

- A rest stop will be included in this project. 11. A rest stop will not be included in this project.
- 12. Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director, Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

_X _ ATTACHMENT B - Volume and Character of Stormwater. A description of the 13. volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and postconstruction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

14. The character and volume of wastewater is shown below:

<u>100</u> % Domestic	<u>4500</u> gallons/day
% Industrial	gallons/day
% Commingled	gallons/day

TOTAL 4500 gallons/day

- 15. Wastewater will be disposed of by:
 - **On-Site** Sewage Facility (OSSF/Septic Tank): Х
 - X ATTACHMENT C Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an onsite sewage facility or identifies areas that are not suitable.
 - Х Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

Sewage Collection System (Sewer Lines):

- Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.
 - The SCS was previously submitted on _____

- The SCS was submitted with this application.
- The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the ______ (name) Treatment Plant. The treatment facility is:

- ____ existing.
- ____ proposed.
- 16. X All private service laterals will be inspected as required in 30 TAC §213.5.

SITE PLAN REQUIREMENTS

Items 17 through 27 must be included on the Site Plan.

- 17. The Site Plan must have a minimum scale of 1" = 400'. Site Plan Scale: 1" = 50'.
- 18. 100-year floodplain boundaries
 - _ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
 - X No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):

- 19. ____ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
 - X The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.
- 20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):
 - X There are <u>1</u> (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
 - The wells are not in use and have been properly abandoned.
 - The wells are not in use and will be properly abandoned.
 - X The wells are in use and comply with 30 TAC §238.
 - There are no wells or test holes of any kind known to exist on the project site.
- 21. Geologic or manmade features which are on the site:
 - X All **sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
 - ____ No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
 - ____ ATTACHMENT D Exception to the Required Geologic Assessment. An exception to the Geologic Assessment requirement is requested and explained at the end of this form.
- 22. X The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. X Areas of soil disturbance and areas which will not be disturbed.

- 24. <u>X</u> Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. X Locations where soil stabilization practices are expected to occur.
- 26. <u>X</u> Surface waters (including wetlands).
- 27. Locations where stormwater discharges to surface water or sensitive features. X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

- 28. X Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 29. X Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION FORM** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Shane Klar, P.E. Print Name of Customer/Agent

have

Signature of Customer/Agent

1/28/15

TCEQ-0584 (Rev. 10-01-10)

HYDRAULIC MULCH

Materials:

Hydraulic Mulches: Wood fiber mulch can be applied alone or as a component of hydraulic matrices. Wood fiber applied alone is typically applied at the rate of 2,000 to 4,000 lb/acre. Wood fiber mulch is manufactured from wood or wood waste from lumber mills or from urban sources.

Hydraulic Matrices: Hydraulic matrices include a mixture of wood fiber and acrylic polymer or other tackifier as binder. Apply as a liquid slurry using a hydraulic application machine (i.e., hydro seeder) at the following minimum rates, or as specified by the manufacturer to achieve complete coverage of the target area: 2,000 to 4,000 lb/acre wood fiber mulch, and 5 to 10% (by weight) of tackifier (acrylic copolymer, guar, psyllium, etc.)

Bonded Fiber Matrix: Bonded fiber matrix (BFM) is a hydraulically applied system of fibers and adhesives that upon drying forms an erosion resistant blanket that promotes vegetation, and prevents soil erosion. BFMs are typically applied at rates from 3,000 lb/acre to 4,000 lb/acre based on the manufacturer's recommendation. A biodegradable BFM is composed of materials that are 100% biodegradable. The binder in the BFM should also be biodegradable and should not dissolve or disperse upon re-wetting. Typically, biodegradable BFMs should not be applied immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.

Installation:

(1) Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where other methods are impractical.

- (2) To be effective, hydraulic matrices require 24 hours to dry before rainfall occurs.
- (3) Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.

Inspection and Maintenance Guidelines:

(1) Mulched areas should be inspected weekly and after each rain event to locate and repair any damage. (2) Areas damaged by storms or normal construction activities should be regraded and hydraulic mulch reapplied as soon as practical.

SILT FENCE

Materials:

(1) Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30. (2) Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 Ib/ft2, and Brindell hardness exceeding 140.

(3) Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

(1) Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1- foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet. (2) Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The fence should be sited so that the maximum drainage area is 1/4 acre/100 feet of fence.

(3) The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.

(4) The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.

(5) Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.

(6) Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

Inspection and Maintenance Guidelines:

(1) Inspect all fencing weekly, and after any rainfall. (2) Remove sediment when buildup reaches 6 inches.

) Replace any torn fabric or install a second line of fencing parallel to the torn section.

(4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points. (5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.



