

**NPDES PERMIT NO. TX0124656**  
**STATEMENT OF BASIS**

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

**APPLICANT:**

McBee Operating Company, LLC  
4311 Oak Lawn Avenue, Suite 310  
Dallas, TX 75219

**ISSUING OFFICE:**

U.S. Environmental Protection Agency  
Region 6  
1445 Ross Avenue  
Dallas, Texas 75202-2733

**PREPARED BY:**

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**DATE PREPARED:**

April 2, 2015

**PERMIT ACTION**

It is proposed that the facility be reissued an NPDES permit for a 5-year term in accordance with regulations contained in 40 Code of Federal Regulations (CFR) 122.46(a).

40 CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of March 27, 2015.

**RECEIVING WATER – BASIN**

The facility discharges to a ditch 300 feet above an unnamed lake, which flows into an unnamed intermittent stream and then Little Cypress Creek in Segment 0409 of Cypress Creek Basin.

**DOCUMENT ABBREVIATIONS**

For brevity, Region 6 used acronyms and abbreviated terminology in this Statement of Basis document whenever possible. The following acronyms were used frequently in this document:

|                  |   |
|------------------|---|
| BAT              | Best Available Technology Economically Achievable)                |
| BOD <sub>5</sub> | Biochemical oxygen demand (five-day unless noted otherwise)       |
| BPJ              | Best professional judgment  |
| CFR              | Code of Federal Regulations                                       |
| cfs              | Cubic feet per second   |
| COD              | Chemical oxygen demand  |
| COE              | United States Corp of Engineers                                   |
| CWA              | Clean Water Act   |
| DMR              | Discharge monitoring report                                       |
| ELG              | Effluent limitation guidelines                                    |
| EPA              | United States Environmental Protection Agency                     |
| ESA              | Endangered Species Act  |
| F&WS             | United States Fish and Wildlife Service                           |
| GPD              | Gallon per day  |
| IP               | Procedures to Implement the Texas Surface Water Quality Standards |
| µg/l             | Micrograms per liter (one part per billion)                       |
| mg/l             | Milligrams per liter (one part per million)                       |
| Menu 7           | Intermittent stream with perennial pools                          |
| MMCFD            | Million cubic feet per day  |
| MGD              | Million gallons per day   |
| MSGP             | Multi-Sector General Permit                                       |
| NPDES            | National Pollutant Discharge Elimination System                   |
| MQL              | Minimum quantification level                                      |
| O&G              | Oil and grease  |
| RRC              | Railroad Commission of Texas                                      |
| RP               | Reasonable potential  |
| SIC              | Standard industrial classification                                |
| s.u.             | Standard units (for parameter pH)                                 |
| TAC              | Texas Administrative Code   |
| TCEQ             | Texas Commission on Environmental Quality                         |
| TDS              | Total dissolved solids  |
| TMDL             | Total maximum daily load  |
| TOC              | Total Organic Carbon  |
| TRC              | Total residual chlorine   |
| TSS              | Total suspended solids  |
| TSWQS            | Texas Surface Water Quality Standards                             |
| WET              | Whole effluent toxicity   |
| WQMP             | Water Quality Management Plan                                     |
| WQS              | Water Quality Standards   |

## I. PROPOSED CHANGES FROM CURRENT PERMIT

1. Polycyclic Aromatic Hydrocarbon (PAH) limitations and monitoring requirements has been removed from the current permit.

## II. PERMIT ACTION

This is a modification to a current permit issued on October 30, 2014, with an effective date of November 1, 2014, and an expiration date of October 31, 2019.

This permit modification is prepared in response to McBee Operating Company letter dated November 10, 2014, requesting modification of the current permit. The facility believes that PAH is not part of its treated effluent and is not present in the groundwater. The facility has submitted laboratory analysis that supports its beliefs. PAH is the sum of acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3 cd)pyrene, naphthalene, phenanthrene, and pyrene.

A review of the three sample results dated January 19, 2015; January 26, 2015; and January 30, 2015 showed that Polycyclic Aromatic Hydrocarbon (PAH) were non-detect in the facility's treated effluent. As a result, PAH will be removed from the current permit.

## II. APPLICANT LOCATION and ACTIVITY

Under the Standard Industrial Classification (SIC) Code No. 1311, the applicant is engaged in groundwater remediation – Oil & Gas Exploration and Production.

As described in the application, the facility is located at 2086 feet northeast of Bison and Cherokee Trace Road in Gilmer, Upshur County, Texas. Discharges of impacted groundwater from an air stripper system is to stock ponds with overflow to an unnamed tributary, thence to another tributary of little Cypress creek in Segment 0409 of Cypress Creek Basin.

Discharges are located on that water at:

Outfall 001: Latitude: 32° 46' 36"; Longitude: 95° 01' 28"

## III. PROCESS AND DISCHARGE DESCRIPTION

The remediation system processes collected groundwater discharged from a natural spring. The affected groundwater enters the top of the process unit and flows downward by gravity through a series of four perforated, plastic trays and is collected in the bottom of the unit before final discharge. Concurrently, air flow from a blower (integral to the process unit) flows in an upward direction and removes the light hydrocarbon (benzene) in the groundwater by exchange under ambient conditions. The discharge from the air stripper is to a ditch 300 feet above an unnamed lake, which flows into an unnamed intermittent stream and then Little Cypress Creek, in Waterbody Segment No. 0409 Cypress Creek.

### Table 1: Discharge Characteristics for Outfall 001

The table below shows facility's pollutant concentrations obtained from the NPDES application.

| Parameter       | Max Concentration, mg/L unless noted | Average Concentration, mg/L unless noted |
|-----------------|--------------------------------------|--|
| Flow, MGD       | 0.002                                |  |
| BOD             | 2.79                                 |  |
| pH, su          | 5.1 – 7.2                            |  |
| TSS             | 3.00                                 |  |
| Ammonia         | ND                                   |  |
| TOC             | 1.77                                 |  |
| Temperature, °C | 7.67(winter); 26.20 (summer)         |  |
| Xylene          | 0.1                                  |  |
| Benzene         | ND                                   |  |
| Toulene         | ND                                   |  |
| PAH             | ND                                   |  |

#### IV. ANTIDegradation REVIEW

The Texas Commission on Environmental Quality, Texas Surface Water Quality Standards, Antidegradation, Title 30, Part 1, Chapter 307, Rule §307.5 sets forth the requirements to protect designated uses through implementation of the State WQS. The limitations and monitoring requirements set forth in the modified permit are developed from the State WQS and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water. The modified permit has removed limitations and monitoring requirements for PAH.

A Tier 1 antidegradation review has determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. The modified permit has removed limitations and monitoring requirements for PAH. A Tier 2 antidegradation review reveals that no significant degradation of water quality is expected in Little Cypress Creek in Segment 0409 of Cypress Creek Basin. The designated uses of Segment 0409 are primary contact recreation, high aquatic life and public water supply. Existing uses will be maintained and protected. This determination may be modified if new information is available which was not available at the time of this permit modification.

#### V. ANTIBACKSLIDING

The proposed permit is consistent with the requirements and exemption to meet Antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR Part 122.44(i)(B), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance. The proposed permit maintains the limitation requirements of the previous permit for pH, oil & grease, total BETX, TPH, and benzene. Limitation and monitoring requirement for PAH has been removed in the current permit.

**VI. CERTIFICATION**

This permit is in the process of certification by the Railroad Commission of Texas following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

**VII. FINAL DETERMINATION**

The public notice describes the procedures for the formulation of final determinations.

**VIII. ADMINISTRATIVE RECORD**

The following information was used to develop the proposed permit:

**A. APPLICATION**

NPDES Application for Permit to Discharge, Form 1 & 2C, received on November 12, 2013. Additional permit application information was received on March 20, 2014.

**B. State of Texas References**

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

"Procedures to Implement the Texas Surface Water Quality Standards via Permitting," Texas Commission on Environmental Quality, June 2010.

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.9, effective September 23, 2014.

**D. 40 CFR CITATIONS**

Sections 122, 124, 125, 133, and 136

**E. MISCELLANEOUS CORRESPONDENCE**

Letter from Mr. Mike Chaffin, Project Manager, Geo Logic Environmental Services, LLC to Ms. Maria Okpala, dated February 12, 2015 on the analytical results for Polycyclic Aromatic Hydrocarbons (PAH).

Letter from Mr. Mike Chaffin, Project Manager, Geo Logic Environmental Services, LLC to Mr. William K. Honker, Director, Water Quality Protection Division dated November 10, 2014, on the removal of PAH.