FINAL

BASELINE REPORT

ENVIRONMENTAL MONITORING SERVICES for COLORADO RIVER CORRIDOR PLAN

TRAVIS COUNTY, TEXAS
Contract No. PS110046JW

August 2012

Prepared for:
Travis County, Texas

Prepared by:
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John M. Sharp, JR.

PROFESSIONAL GEOSCIENTIST CERTIFICATION

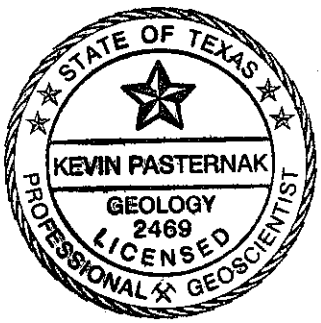
Baseline Report Environmental Monitoring Services for Colorado River Corridor Plan

Travis County, Texas

August 2012

In accordance with the Texas Professional Geoscience Practice Act (Title 6, Texas Occupations Code, Chapter 1002; Senate Bill 405, 77th Legislature) and the Administrative Rules of the Texas Board of Professional Geoscientist (Title 22, Texas Administrative Code, Part 39, Chapter 850 and 851), the geoscientific information contained in the Baseline Report Environmental Monitoring Services for Colorado River Corridor Plan dated August 2012 for Travis County, Texas has been reviewed by a registered professional geoscientist.

This is to certify that the findings, specifications, and/or professional opinions presented in this report have been prepared in accordance with generally accepted professional geologic and hydrogeologic practice. I hereby certify that I have prepared and/or reviewed the information presented in the Baseline Report Environmental Monitoring Services for Colorado River Corridor Plan dated August 2012and have found that the report is consistent with accepted geoscientific principles and practices.



Signature Kevin Pasternak Date 8/23/12

Kevin Pasternak, P.G.
Texas LPG No. 2469
URS Corporation, a Nevada Corporation

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List of Acronyms and Abbreviations

$\mu g/m^3$	micrograms per cubic meter
ABIA	Austin Bergstrom International Airport
ATF	Austin Tree Farm
bgs	below ground surface
CFR	Code of Federal Regulations
CO_3	carbonate
CRC	Colorado River Corridor
CRCP	Colorado River Corridor Plan
db	decibel
dBA	A-weighted sound level
DTW	depth to water
EPA	U.S. Environmental Protection Agency
ETJ	Extra Territorial Jurisdiction
FHWA	Federal Highway Administration
FM	Farm-to-Market
ft	feet, foot
FTA	Federal Transit Administration
GPM	gallons per minute
HCO_3	bicarbonate
ID	identification
IML	Inter-Mountain Labs
in	inch
LCRA	Lower Colorado River Authority
Leq	equivalent steady-state sound level
meq/L	milliequivalents per liter
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
msl	mean sea level
N/A	Not Available
NA	Not Analyzed

List of Acronyms and Abbreviations (Continued)

NAAQS	National Ambient Air Quality Standards
NC	Not Calculated
NM	not measured
NTN	Native Texas Nursery
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PVC	polyvinyl chloride
QC	Quality Control
SH	State Highway
SM	Standard Method
SOP	Standard Operating Procedure
TCEQ	Texas Commission on Environmental Quality
TD	total depth
TDS	total dissolved solids
TOC	top of casing
TSS	total suspended solids
TWDB	Texas Water Development Board
TXI	Texas Industries, Inc.
URS	URS Corporation
WSC	Water Supply Company

1.0 INTRODUCTION

Travis County anticipates that Texas Industries, Inc. (TXI) will begin sand and gravel mining at their Hornsby Bend East and Hornsby Bend West mine locations. This Baseline Environmental Report was prepared by URS Corporation (URS) to document the pre-mining environmental conditions within the vicinity of the anticipated mining locations. The pre-mining environmental conditions were documented by performing three environmental monitoring tasks to determine groundwater availability and groundwater water quality (Task 1), air quality (Task 2), and noise levels (Task 3).

Task 1 Groundwater

The purpose of the groundwater availability and groundwater quality task was to establish existing (i.e., baseline) groundwater conditions. Baseline groundwater availability was monitored by performing synoptic water level measurements across the site and groundwater quality was monitored by collecting and analyzing water samples for basic water quality parameters. Baseline groundwater elevation and water quality data will serve as a reference point for comparison to groundwater conditions during future mining activities.

Task 2 Air

The purpose of the air quality task was to measure the levels of suspended particulate matter (PM) in the 2.5 microns ($PM_{2.5}$) and 10 microns (PM_{10}) size fractions upwind and downwind of the proposed mining area under representative pre-mining conditions. The intended use of the measurement data is to provide a baseline from which to assess potential air quality impacts caused by future mining activities.

Task 3 Noise

The purpose of the noise study task was to document baseline noise levels near the TXI Hornsby Bend East and Hornsby Bend West sites and at nearby sensitive receptor locations. The resulting baseline noise levels will be used as a comparison tool with future noise levels during subsequent phases of the project to determine potential noise impacts once TXI mining operations begin in the project area.

The work described herein was performed in accordance with methods described in the ***Sampling and Analysis Plan for Environmental Monitoring Services for Colorado River Corridor Plan*** (URS, October 2011) (hereafter referred to as the ***Sampling and Analysis Plan***) URS performed the work for Travis County under the Professional Services Agreement between Travis County and URS for Environmental Monitoring Services for Colorado River Corridor Plan (CRCP), contract number PS110046JW.

Limitations and Qualifications

URS' work on this project shall not be intended as a warranty or guarantee of site conditions other than that it reflects professional judgment which is based on present standards and care of the profession.

1.1 Background

The CRCP study area covers over 30,000 acres in eastern Travis County (Figure 1-1). The CRCP study area is bounded by US 183 on the west, the Travis County/Bastrop County line to the east, by Farm-to-Market (FM) 969 to the north and State Highway 71 to the south. Approximately 3,000 acres within the Colorado River Corridor (CRC) will be mined for sand and gravel by TXI at their Hornsby Bend East and Hornsby Bend West sand mining sites. The proposed TXI mining sites are located east of State Highway (SH) 130 and south of FM 969 along both sides of Dunlap Road (Figure 1-2).

Geology and Groundwater

The surface strata over much of the CRCP study area consist of scattered remains of terrace deposits and stream or river alluvium, ranging in age from Pleistocene to Recent. The terrace deposits consist of sand, gravel, and clay. They occur at higher elevations than the more recent floodplain deposits. The stream or river alluvium is composed of up to 60 feet (ft) of unconsolidated material, chiefly gravel, sand, and silt. Underlying the terrace and alluvial strata is the Cretaceous-aged Navarro and Taylor Groups, consisting of massive beds of shale, siltstone, marl, and chalk with clay (Brune and Duffin, June 1983). Based on a review of lithologic logs and well reports, the Navarro and Taylor Groups contact with the overlying alluvial deposits is at approximately 65 to 30 ft below ground surface (bgs).

The principal source of usable groundwater in the CRCP study area is from the Colorado River Alluvial Aquifer. This aquifer produces small to very large quantities of fresh to slightly saline groundwater. Based on a review of lithologic logs and well reports, the sand and gravel deposits within the Colorado River Alluvial Aquifer range from approximately 8-to 60-ft thick. Recharge to the aquifer in the CRCP study area is principally from rainfall on the outcrop and tributary streams. The Colorado River is in hydraulic contact with the aquifer and is suspected of influencing groundwater elevations and movement within the aquifer.

The Navarro and Taylor Groups can produce small quantities of groundwater, particularly in the weathered surface layers where fractures and shrink/swell cracking of the clay-rich surface occurs and conveys water into thin sand layers. Historically, many wells placed into this formation have been abandoned due to poor production (CRCP, July 2011).

1.2 Objectives

The objectives of this Baseline Environmental Report are to:

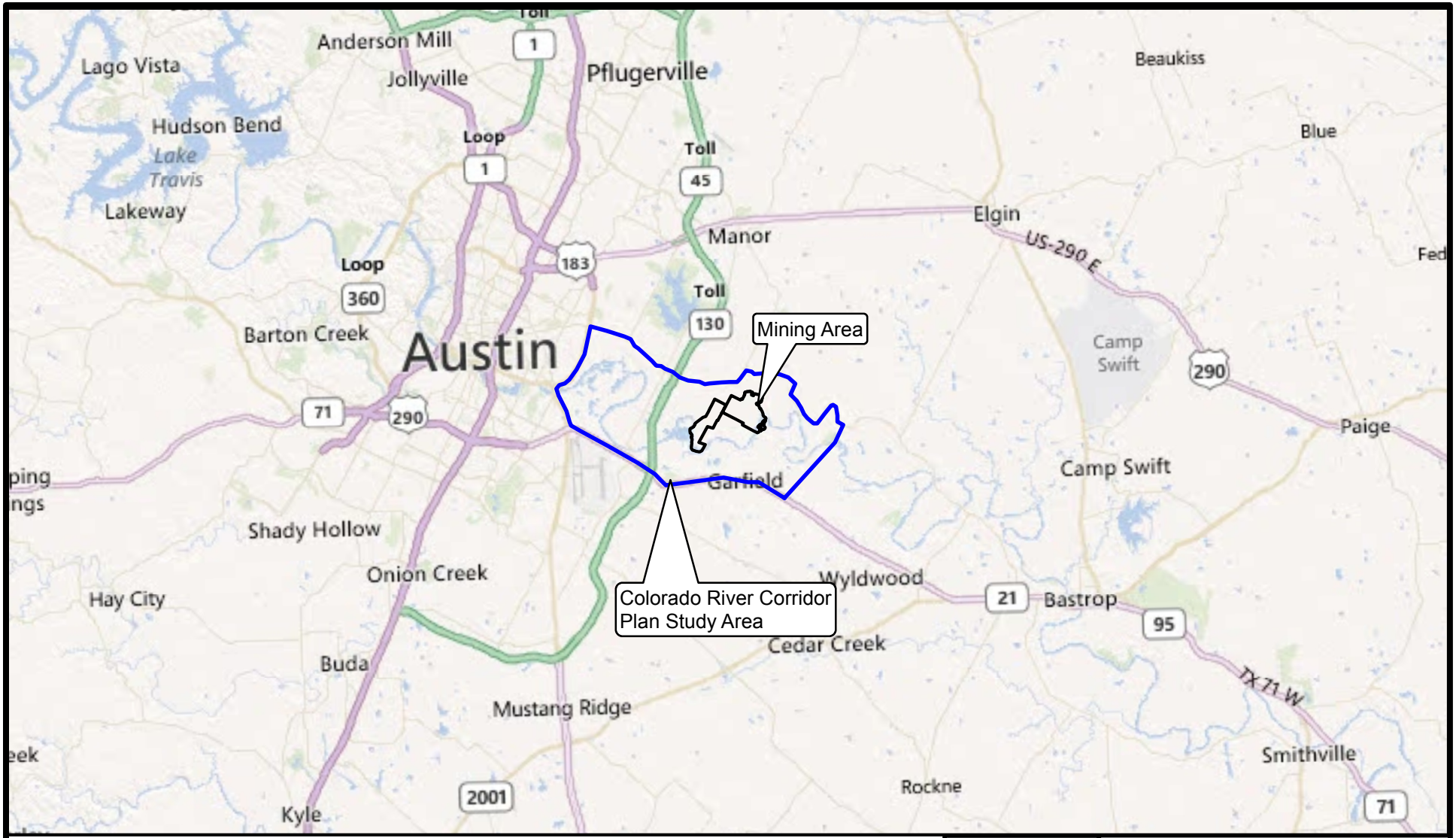
- Summarize all field activities and laboratory analyses performed for environmental monitoring of groundwater, air and noise;
- Present field data and analytical results;
- Provide an interpretation of the environmental monitoring results;
- Identify baseline environmental conditions and trigger levels; and
- Present conclusions and recommendations.

1.3 Report Organization

The Baseline Report is organized as follows:

Section 1.0 – Introduction
Section 2.0 – Initial Field Activities
Section 3.0 – Environmental Monitoring Field Activities
Section 4.0 – Environmental Monitoring Data Evaluation
Section 5.0 – Conclusions & Recommendations
Section 6.0 – References

Field notes are included in Appendix A, laboratory analytical reports are included in Appendix B, noise data are included in Appendix C, and historical precipitation data is included in Appendix D.



Legend

- Mining Area
- Colorado River Corridor Plan Study Area

N

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Miles

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Site: Travis County CRCP

Title: **Figure 1-1 Regional Location Map**

Drawn by:	Date:	Drawing File:	Figure:
Gary_Callahan	22 Aug 2012	Fig 1-1 Loc Map	1-1