

Nancy Koon (adpce.ad)

From: Terry Liu (adpce.ad)
Sent: Monday, February 13, 2023 12:39 PM
To: Nancy Koon (adpce.ad)
Subject: FW: Exploratory Ventures - Request to Adopt Higher 7Q10 Flow - NPDES Permit No. AR0053384 (AFIN: 47-01073) [REVISED]
Attachments: EV_NPDES Appl_Addendum_7Q10 Letter Revised_Final_Feb-13-2023.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

From: David Carstens [mailto:dcarstens@harborenv.com]
Sent: Monday, February 13, 2023 12:34 PM
To: Shane Byrum (adpce.ad); Terry Liu (adpce.ad)
Cc: Bryan Leamons (adpce.ad); Jessica Sears (adpce.ad); Zachary Carroll (adpce.ad); Andrew Rike; Dean Caldwell; Booher, Martin T.; Nick Muenks
Subject: RE: Exploratory Ventures - Request to Adopt Higher 7Q10 Flow - NPDES Permit No. AR0053384 (AFIN: 47-01073) [REVISED]

Hello Mr. Byrum and Mr. Liu:

This email is submitted on behalf of Exploratory Ventures, LLC (EV) in Osceola (AFIN: 47-01073).

A revised addendum to EV's November 2022 application for an individual NPDES permit (No. AR0053384) for a new steel manufacturing complex is enclosed.

EV has obtained and completed an analysis of more recent and representative flow monitoring data for the Mississippi River which support a 7Q10 flow of 164,272 cubic feet per second. Detailed information is provided in the attached letter.

Per your request, we have accounted for the flow contributed by three rivers which discharge into the Mississippi River between EV's outfall location and the USGS flow gage in Memphis, Tennessee.

We respectfully request that the DEQ adopt a higher 7Q10 flow for the Mississippi River in Permit No. AR0053384.

Please contact me if you have any questions, comments and/or instructions. Thank you.

David Carstens

David Carstens, Sr. Project Manager
HARBOR · P 501.663.8800 · C 501.574.1169 · dcarstens@harborenv.com
5800 Evergreen Dr | Little Rock, AR 72205

From: Shane Byrum (adpce.ad) <Shane.Byrum@adeq.state.ar.us>
Sent: Thursday, February 9, 2023 12:51 PM
To: David Carstens <dcarstens@harborenv.com>; Andrew Rike <arike@harborenv.com>
Cc: Bryan Leamons (adpce.ad) <Bryan.Leamons@adeq.state.ar.us>; Jessica Sears (adpce.ad) <Jessica.Sears@adeq.state.ar.us>; Zachary Carroll (adpce.ad) <Zachary.Carroll@adeq.state.ar.us>; Terry Liu (adpce.ad)

<Terry.Liu@adeq.state.ar.us>

Subject: RE: Exploratory Ventures - Request to Adopt Higher 7Q10 Flow - NPDES Permit No. AR0053384 (AFIN: 47-01073)

David and Andrew,

OWQ reviewed the request for revised 7Q10 flow sent on January 23, 2023. This letter included the information in the table below.

USGS Station 07032000, MS River @ Memphis		
Data Period	Years of data*	7Q10 (cfs)**
1990 – 2022	12 years	164,780

*USGS website does not have flow data for a 20 year period (October 1994 through September 2014).

**7Q10 calculated using USGS Hydrological Toolbox program.

OWQ has the following comments on the proposed updated 7Q10 listed in above table:

The EV discharge is proposed upstream of the waterbodies listed below. 7Q10 flows derived for the location of the EV discharge would need to be reduced to account for waterbodies contributing to flow between the proposed outfall and USGS Station 07032000.

OWQ notes the following waterbodies flow into MS River between Osceola, AR and Memphis, TN	7Q10 determined from USGS StreamStats
Hatchie River	363 cfs
Loosahatchie River	46 cfs
Wolf River	98 cfs
TOTAL	507 cfs

OWQ requests that the 7Q10 flow from upstream waterbodies be considered in calculating an updated 7Q10. Please submit a revised letter reflecting the contributing flows from the waterbodies upstream of the Memphis gage.

Call or email if you have any questions.

Shane Byrum | Engineer
Division of Environmental Quality | Office of Water Quality
NPDES Permit Section
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.682.0618 | e: Shane.Byrum@adeq.state.ar.us



ARKANSAS
ENERGY & ENVIRONMENT

From: David Carstens [<mailto:dcarstens@harborenv.com>]

Sent: Monday, January 23, 2023 10:31 AM

To: Terry Liu (adpce.ad)

Cc: Bryan Leamons (adpce.ad); Jessica Sears (adpce.ad); Dean Caldwell; Booher, Martin T.; Andrew Rike; Nick Muenks; Wilson, Joshua T.

Subject: Exploratory Ventures - Request to Adopt Higher 7Q10 Flow - NPDES Permit No. AR0053384 (AFIN: 47-01073)

Hello Mr. Liu:

This email is submitted on behalf of Exploratory Ventures, LLC (EV) in Osceola (AFIN: 47-01073).

An addendum to EV's November 2022 application for an individual NPDES permit (No. AR0053384) for a new steel manufacturing complex is enclosed.

EV has obtained and completed an analysis of more recent and representative flow monitoring data for the Mississippi River which support a 7Q10 flow of 164,780 cubic feet per second. Detailed information is provided in the attached letter.

We respectfully request that the DEQ adopt a higher 7Q10 flow for the Mississippi River in Permit No. AR0053384.

Please contact me if you have any questions, comments and/or instructions. Thank you.

David Carstens

David Carstens, Sr. Project Manager

HARBOR · P 501.663.8800 · C 501.574.1169 · dcarstens@harborenv.com

5800 Evergreen Dr | Little Rock, AR 72205

February 13, 2023

Mr. Terry Liu, P.E.
Engineer
Water Permits Branch
Office of Water Quality
Division of Environmental Quality (DEQ)
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

RE: Addendum to Application for NPDES Permit No. AR0053384 (Revised)
Use of Higher 7Q10 Flow for Mississippi River
Exploratory Ventures, LLC, Osceola, Mississippi County, Arkansas
AFIN: 47-01073

Dear Mr. Liu:

Harbor Environmental and Safety (Harbor) is pleased to submit the enclosed correspondence on behalf of Exploratory Ventures, LLC (EV) in Osceola, Arkansas. As you know, an application for an individual National Pollutant Discharge Elimination System (NPDES) permit for the wastewater treatment facilities for a new steel manufacturing complex was submitted to the DEQ on November 9, 2022.

EV anticipated that pending NPDES Permit No. AR0053384 would be based on a 7-day, 10-year (7Q10) low-flow value for the Mississippi River of 119,000 cubic feet per second (cfs). The cited 7Q10 value is used in NPDES Permit No. AR0052582 (effective December 1, 2021) for the adjacent steel mill operated by Big River Steel LLC. The DEQ also used the same 7Q10 value in several recent NPDES permits for other Arkansas industrial facilities on the Mississippi River. This 7Q10 value was obtained from a 1983 Arkansas Geological Commission Map. The 7Q10 value was measured at U.S. Geological Survey (USGS) Gage Station No. 07032000 located on the Mississippi River at Memphis, Tennessee. It is based on flow monitoring data collected between 1951 and 1978.

Since submission of the permit application, EV has obtained and completed an analysis of more recent and representative flow monitoring data for the Mississippi River which support a higher 7Q10 flow of 164,780 cfs. The updated 7Q10 value was derived using the USGS's "SWToolbox" program. The flow monitoring data was collected at Gage Station No. 07032000 on the Mississippi River at Memphis. Approximately 12 years of reliable USGS flow data (1990 through 1994 and 2014 through 2022) were utilized. The data reflect the most recent flow conditions and climatic trends in the Mississippi River basin.

The Memphis Gage Station No. 07032000 is downstream of the proposed EV discharge location. There are three rivers that discharge into the Mississippi River between the proposed EV discharge location and Gage Station No. 07032000. These rivers and their corresponding 7Q10 flow rates at their confluence points with the Mississippi River, as determined using the USGS's "StreamStats" website, are as follows:

- Hatchie River: 7Q10 = 363 cfs
- Loosahatchie River: 7Q10 = 46.3 cfs
- Wolf River: 7Q10 = 98 cfs
- Total: 7Q10 = 507.3 cfs

The 7Q10 flows for these three rivers were subtracted from the 7Q10 flow rate value for Gage Station No. 07032000. Rounding up to the nearest whole number, the total flow to be subtracted from the Gage Station No. 07032000 flow is 508 cfs, which results in a 7Q10 flow rate at the proposed EV discharge location of 164,272 cfs (164,780 cfs – 508 cfs).

Derivation of the updated 7Q10 value was performed in accordance with the DEQ's draft 2020 Continuous Planning Process document and the Environmental Protection Agency's "Low Flow Statistics Tools" handbook for NPDES permit writers published in October 2018 (EPA-833-B-18-001).

It is important to note that the Tennessee Department of Environment and Conservation recently issued an NPDES permit that includes a 7Q10 value of 159,270 cfs for the Mississippi River in Memphis. Permit No. TN0000108 was issued for the ExxonMobil Pipeline Company's Memphis Terminal in March 2020. The cited 7Q10 value was derived using the USGS's "SWToolbox" program based on flow data collected between 1990 and 2020.

We respectfully request that the DEQ utilize a 7Q10 flow of 164,272 cfs for the Mississippi River in EV's NPDES permit. We can provide supporting documentation, modeling software, and/or flow monitoring data to the DEQ if needed.

Mr. Terry Liu, P.E. – DEQ Office of Water Quality
Application for NPDES Permit No. AR0053384 – Higher 7Q10 Value for Mississippi River (Revised)
Exploratory Ventures – Osceola, Arkansas
February 13, 2023 – Page 3

Your timely consideration of our request to adopt a higher 7Q10 flow for the Mississippi River in Permit No. AR0053384 is greatly appreciated. Please contact us at (501) 663-8800 if you have any questions or need further information.

Sincerely,

HARBOR ENVIRONMENTAL AND SAFETY



David Carstens
Sr. Project Manager
dcarstens@harborenv.com



Andrew Rike, P.E.
Principal
arike@harborenv.com

cc: Bryan Leamons, P.E., DEQ
Jessica Sears, P.E., DEQ
Shane Byrum, DEQ
Lenore Trammell, EV
Dean Caldwell, EV
Martin Booher, Esq., BakerHostetler
Nick Muenks, Geosyntec