

CENWK-EC-HH

May 6, 2005

MEMORANDUM TO OD-R

Subject: Monitoring Program for Regulatory Plan for Commercial Dredging Activities on the Kansas River

1. The purpose of this memorandum is to document the changes in the Kansas River as described in the Regulatory Plan for Commercial Dredging Activities on the Kansas River, Appendix A. The baseline data was collected in 1992 and the most recent data was collected in 2003. The plot of the Kansas River average bed profile is enclosed.
2. Table 1 below shows five-mile-long reaches where the average reduction in riverbed elevation is near or greater than 2 feet. The reduction for the reach was calculated by averaging the difference between 1992 and 2003 riverbed elevations for the reach.

Table 1. Five-mile-long reaches where the average reduction in riverbed elevation is approaching, or has already exceeded 2 feet.

Reach (River Miles)	Reach Length (Miles)	Avg Reduction (ft)	2003 Authorized Dredger	Dredging Boundaries
20.2 - 25.3	5.1	1.2	Holliday Sand	20.35 - 20.6 21.0 - 21.15
24.2 - 30.2	6	2.8		
29 - 34.4	5.4	2.2		River Miles 25.95 - 40.5 are not currently open to commercial dredging.
32.9 - 39.1	6.2	2.4		
45.5 - 50.6	5.1	1.1	Penny's Concrete Kaw Sand Penny's Concrete	45.2 - 46.7 47.1 - 48 49.6 - 51.35
84.5 - 89.9	5.4	2.5	Kansas Sand Holliday Sand	84.5 - 85.8 86.3 - 86.5
87.5 - 93.5	6	1.8	Meiers Ready Mix	90.1 - 91.6

3. According to the Regulatory Plan for Commercial Dredging on the Kansas River Appendix A, Dredging Restrictions, Section VII and VIII there are certain manmade structures and natural formations that warrant close monitoring. The Water District No. 1 weir, located at river mile 15.0, and the Sunflower Army Ammunition Plant water intake structure and diversion jetty, located from river mile 32.9 to 33.1 are two locations containing such structures. Minor degradation has occurred downstream of both of these sites with an average decrease in bed elevation from 1992 to 2003 near 2 feet. The Bowersock Dam, located at river mile 51.8, is also showing signs of degradation downstream, with an average bed elevation change of approximately 3 feet. Increasing degradation downstream of the City of Topeka's water intake structures, diversion jetties, and weir is also apparent. Immediately downstream of the structures, at river mile 86.8 and 86.6, an average bed lowering of 2.8 ft and 3.0 ft, respectively, was identified. Furthermore, a decrease in average bed elevation of 11.3 ft was noted at river

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mile 86.4, half a mile downstream of the structures. Because these structures provide the city with its entire water supply, a decrease in bed elevation at this location could have a detrimental impact on the city's water supply needs. However, the large drop in elevation at cross section 86.4 is believed to be a local phenomenon and is not characteristic of the reach, as the adjacent cross sections do not show similar drops in elevation. As noted in Table 1 above, Holliday Sand and Gravel Company has a dredging permit from river miles 86.3 to 86.5.

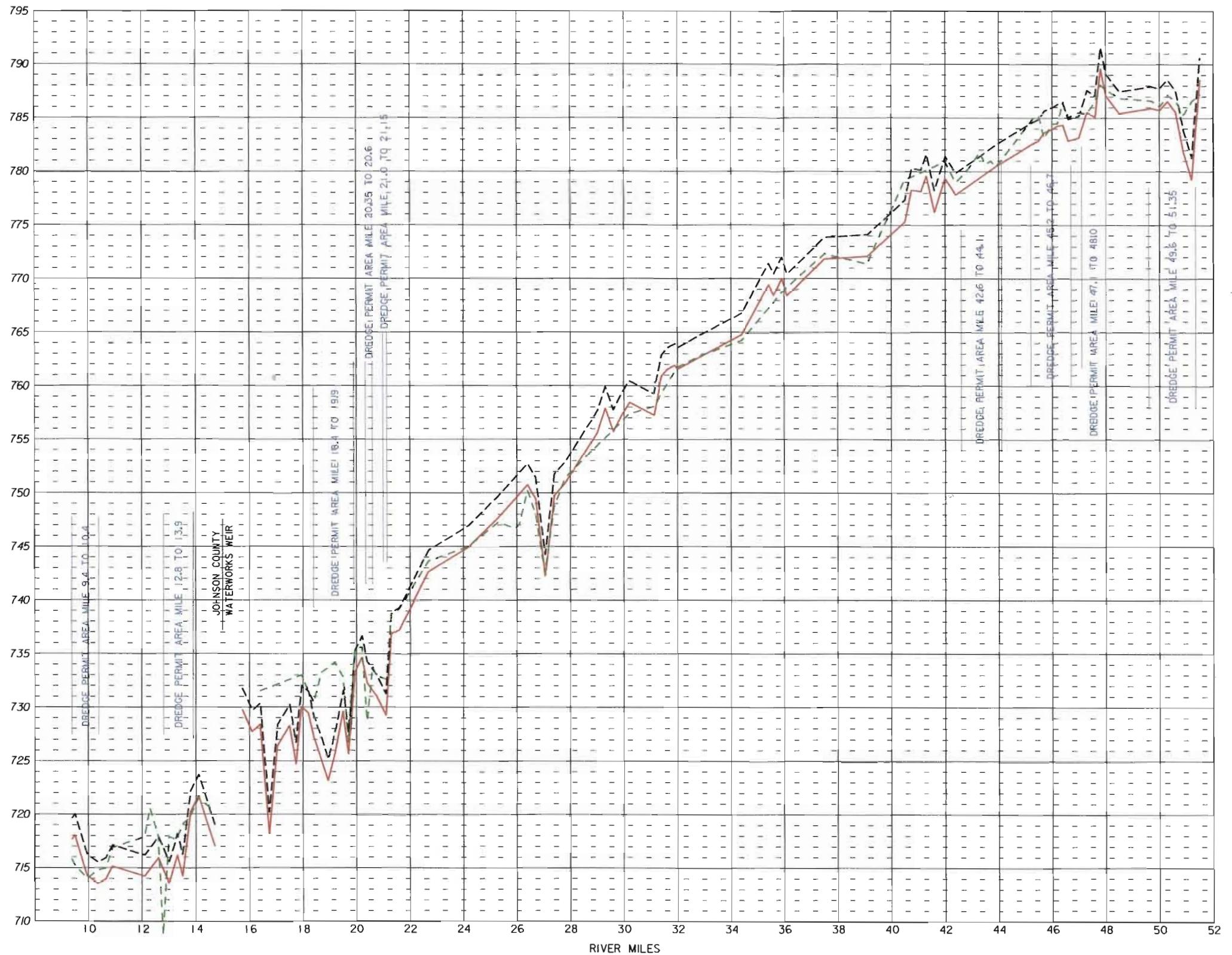


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Enclosure

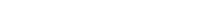
TURNER TO LAWRENCE KANSAS

NATIONAL GEODETIC VERTICAL DATUM OF 1929



TURNER BRIDGE	MILE 9.3
J.C.W.D. NO. I WEIR	MILE 15.0
I-435 BRIDGE	MILE 15.6
K-7 BRIDGE	MILE 20.2
OESOTO BRIDGE	MILE 31.0
EUDORA BRIDGE	MILE 42.5
BOWERSOCK DAM	MILE 51.8
SARDOU AVE BRIDGE	MILE 83.0
U.P. R.R. BRIDGE	MILE 83.7
KANSAS AVE BRIDGE	MILE 84.1
TOPEKA AVE BRIDGE	MILE 84.5

LEGEND

1992 MEAN BED BASELINE EL. -----
1992 MEAN BED BASELINE
EL. (MINUS 2 FEET) 
2003 MEAN BED EL. -----

Revisions		
Symbol	Descriptions	Date

**U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI**

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

KANSAS RIVER
COMMERCIAL DREDGING

KANSAS RIVER
COMMERCIAL DREDGING