UNITED STATES ARMY CORPS OF ENGINEERS

Record of Decision for Authorization of Commercial Sand and Gravel Dredging on the Lower Missouri River

MARCH 2011

Appendix A Correspondence and Comment Letters

A P P E N D I X A

Correspondence and Comment Letters

The Water Quality Certification Letters from the Missouri Department of Natural Resources and the Kansas Department of Health and Environment are attached below with 15 individual letters received after the Draft EIS comment period or in response to the Final EIS and. Table 3-1 identifies the organizations, groups, and individuals who commented after the Draft EIS comment period or on the Final EIS.

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Thomas Dunne Sr.
J.T.R. Inc. (Jotori Dredging)
2320 Creve Coeur Mill Rd.
Maryland Heights, MO 63043

Dear Mr. Dunne:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Thomas Dunne Sr.
J.T.R. Inc. (Jotori Dredging)
2320 Creve Coeur Mill Rd.
Maryland Heights, MO 63043

Various Counties
Permit Number 2011-178/P-2789
CES002566

Dear Mr. Dunne:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for the Corps' Permit Number 2011-178. The Department understands that J.T.R. Inc. (Jotori Dredging) will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number P-2339 for an additional 60 days, unless an appeal of proffered Department of the Army Permit P-2339 is accepted by the Corps' Northwestern Division, in which case the certification for P-2339 would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers' permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Steve Bohlken
Capital Sand Co., Inc.
P.O. Box 104990
Jefferson City, MO 65110-4990

Dear Mr. Bohlken:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Mr. Lantz Tipton, Northeast Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Steve Bohlken
Capital Sand Co., Inc.
P.O. Box 104990
Jefferson City, MO 65110-4990

Various Counties
Permit Number 2011-361
CEK006761 & CES002561

Dear Mr. Bohlken:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for the Corps' Permit Number 2011-361. The Department understands that Capital Sand Co., Inc. will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number 2001-1429 for an additional 60 days, unless an appeal of proffered Department of the Army Permit 2001-1429 is accepted by the Corps' Northwestern Division, in which case the 2001 certification would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Mr. Lantz Tipton, Northeast Regional Office
File Copy

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Steve Engemann
Hermann Sand & Gravel, Inc.
Route 3, Box 261
Hermann, MO 65041

Dear Mr. Engemann:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Steve Engemann
Hermann Sand & Gravel, Inc.
Route 3, Box 261
Hermann, MO 65041

Various Counties
Permit Number 2011-362
CEK006763

Dear Mr. Engemann:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for the Corps' Permit Number 2011-362. The Department understands that Hermann Sand & Gravel, Inc. will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number 2001-1430 for an additional 60 days, unless an appeal of proffered Department of the Army Permit 2001-1430 is accepted by the Corps' Northwestern Division, in which case the 2001 certification would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

Bureau of Water
Watershed Management Section
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367

Kansas

Phone: 785-296-4195
Fax: 785-296-5509
nps@ks.gov
www.kdheks.gov/water

Robert Moser, MD, Secretary
Department of Health & Environment
Sam Brownback, Governor

March 22, 2011

Mr. Cody S. Wheeler
Kansas City District, Corps of Engineers
Regulatory Branch
635 Federal Building
601 E. 12th Street
Kansas City, MO 64106-2824

RE: USACE request for Missouri River Dredging Section 401 Water Quality Certification 2nd extension for Holliday Sand and Gravel Company, 2001-01431 for 60 days after March 31, 2011.

Mr. Wheeler:

Per our conversation March 17, 2011, the Final Environmental Impact Statement (EIS) prepared by the USACE has been completed and the Record of Decision and Initial Proffered Permits ready and signed by March 31, 2011. Holliday Sand and Gravel Company is currently dredging under permit number 2001-1431 which was extended in December 2010 through March 31, 2011. To allow the dredgers to continue to work under the new limitations and permit conditions identified by the FEIS and ROD while giving them the opportunity to appeal the decision you intend to proffer a new permit numbered 2011-363 that would be valid through the end of 2015 if accepted, while at the same time you will modify the permit numbered 2001-1431 to incorporate all the new limits and conditions and extend that permit for 60 days (the deadline for submitting an appeal), unless an appeal of proffered DA permit 2011-363 is accepted by the Northwestern Division, U.S. Army Corps of Engineers, in which case DA permit No. 2001-1431 will expire 30 days after the final appeal decision. The new permit limitations and conditions were spelled out in the request for 401certification you sent to KDHE on February 17, 2011. Since that time Holiday Sand and Gravel Company has demonstrated that they cannot practicably increase extraction levels in the St. Joseph segment or develop alternate sources on the floodplain of the LOMR in less than three years and they need at least 850,000 tons in the Kansas City segment to remain viable during this three-year period. The USACE has decided to allow a three year transition period to the 540,000 Environmentally Preferred Alternative. Annual extraction will be limited to 1,200,000 tons in 2011; 900,000 tons in 2012; 850,000 tons in 2013, and 540,000 tons in each of 2014 and 2015.

The KDHE has determined that no relatively significant changes have occurred in either state regulations or additional KDHE permitted/monitored facilities since the 1st extension of the 401 water quality certification was issued December 9, 2010. The KDHE agrees to extend the referenced Section 401 Water Quality Certification issued. Therefore, the Holiday Sand and Gravel Company dredging activities on the Missouri River will remain under the referenced Section 401 WQC until further notice by the USACE.

Questions concerning this certification may be directed to Mr. Scott Satterthwaite, 785-296-5573 or by email at: ssattert@kdhe.state.ks.us.

Sincerely,

Scott L. Satterthwaite

Scott L. Satterthwaite, M.S.
Non-point Source Pollution Control Specialist
Bureau of Water-Watershed Management Section

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Mike Odell
Holliday Sand & Gravel Company
6811 West 63rd St.
Overland Park, KS 66202

Dear Mr. Odell:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Mike Odell
Holliday Sand & Gravel Company
6811 West 63rd St.
Overland Park, KS 66202

Various Counties
Permit Number 2011-363
CEK006762

Dear Mr. Odell:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for Corps' Permit Number 2011-363. The Department understands that Holliday Sand & Gravel Company will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number 2001-1431 for an additional 60 days, unless an appeal of proffered Department of the Army Permit 2001-1431 is accepted by the Corps' Northwestern Division, in which case the 2001 certification would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov, or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
File Copy

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Larry W. Moore
Con-Agg of MO, LLC
2604 North Stadium Blvd.
Columbia, MO 65202

Dear Mr. Moore:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Mr. Lantz Tipton, Northeast Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Larry W. Moore
Con-Agg of MO, LLC
2604 North Stadium Blvd.
Columbia, MO 65202

Various Counties
Permit Number 2011-364
CEK006764

Dear Mr. Moore:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for Permit Number 2011-364. The Department understands that Con-Agg of MO, LLC will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number 2001-1434 for an additional 60 days, unless an appeal of proffered Department of the Army Permit 2001-1434 is accepted by the Corps' Northwestern Division in which case the 2001 certification would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Dorothy Franklin, Kansas City Regional Office
Mr. Jimmy Coles, Kansas City Regional Office
Mr. Lantz Tipton, Northeast Regional Office
File Copy

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Brian J. Viehmann
Limited Leasing Company
1777 Highway 79 South
Old Monroe, MO 63369

Dear Mr. Viehmann:

Please replace the Clean Water Act Section 401 Water Quality Certification (certification) dated March 17, 2011, with the enclosed certification.

If you have any questions, please feel free to contact me by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Carrie M. Schulte

Carrie M. Schulte, Chief
401 Water Quality Certification and Stormwater Unit

CMS/pc

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

Recycled Paper

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 23 2011

Mr. Brian J. Viehmann
Limited Leasing Company
1777 Highway 79 South
Old Monroe, MO 63369

Various Counties
Permit Number 2011-177/P-2788
CES002563

Dear Mr. Viehmann:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated February 17, 2011, requesting that your Clean Water Act Section 401 Water Quality Certification (certification) be issued for the Corps' Permit Number 2011-177. The Department understands that Limited Leasing Company will abide by the certification and the Corps issued Clean Water Act Section 404 Permit (permit) for commercial dredging operations in the Missouri River.

This letter also serves as an extension of the certification issued for Permit Number P-2342 for an additional 60 days, unless an appeal of proffered Department of the Army Permit P-2342 is accepted by the Corps' Northwestern Division, in which case the certification for P-2342 would expire 30 days after the final appeal decision.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided the following condition is met:

- The U.S. Army Corps of Engineers permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Missouri Clean Water Law, Chapter 644.052.9 RSMo, gives the Department the authority to collect a fee for the issuance of a certification. As of January 1, 2011, this authority has expired, which means the Department no longer has statutory authority to collect water permit fees. This includes the certification fee. Please do not send a payment to the Department.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Recycled Paper

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E., Chief
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District
Ms. Donna Riebeling, St. Louis Regional Office
File Copy

9/29/10
Holliday Sand & Gravel Company

Requested Alternative - Narrative

Dredging in the KC reach has been reduced from a historic average of 3MM tons to 1.6MM tons to 540,000 tons.
We ask that a compromise of 1.2MM tons be granted in the KC reach.

Alternative B is requested for the KC reach:

- Because KC River bed elevations are aggrading.
- Because Holliday's volume has already been cut in half in the KC reach.
- Because Alternative B is an additional reduction of 25% from 2010 levels.
- Because the conservative bed load estimate is 4 times the Alternative B level.
- Because the EIS states that it is likely that reductions in dredging in KC may be of no benefit to bed recovery (because of the higher velocities and boundary shear stresses – see A-62 – Paragraph 2)
- Because significant modifications were made to KC area dikes – lowering them to a new criteria
- Because the recent high stages have moved significant sediments and vegetation from behind the dikes
- Because the bed disruption theory (from cutterheads and excessive wasted fine sand) was the smoking gun in KC – and it is incorrect in theory and magnitude.
- Alternate sources are not there.
- We need the current base tonnage for both Riverside and Randolph. We do not have the equipment and pilots for long towing. A base of 600K tons is absolutely necessary for Riverside. To get adequate tons for Randolph, we need an additional base amount of 600K in the KC reach and a balance of 800K in the Waverly reach. (this does not include Capital in our reach – they are 100 miles away).

Waverly Segment is aggrading and can help provide future demand for KC market.
Increase requested in the Waverly Reach

- Waverly is the source for the future when the economy regains in 2015
- We predict that the economy will begin to recover in 2013 and construction will rebound in 2015.
- We are already dredging 1.6MM tons in the KC reach in the worst economy since the Great Depression (1.5MM tons in 2009). **We have only requested 1.2MM tons – 600K above and below downtown (rm 366.1).**
- Randolph will soon need an average of 1.4MM tons. With our requested 600K tons below downtown, an additional 800K tons must come from the Waverly Reach.
- Capital Sand should not be limited in Lexington by a Holliday's request for 800K tons below RM 357 (Waverly Segment). The Holliday and Capital dredging and markets are 100 miles apart.

Secondary Recommendations

Additional reach limits.
When dredgers already have to tow long distances out of their normal reach, the application of a 500K tons per 10 mile limit is a huge burden. We ask that not be applied to the non-degrading areas adjacent to the KC reach.
For example the St. Joe and Waverly reaches would not have a ten mile tonnage limit such as 500K tons. Both of these reaches have two dredges operating at opposite ends at tonnages below or only slightly above 500K tons per year.

Dike Dredging Requested in the KC Reach
Because of the location of an extensive no-dredge zone near BPU wells and WaterOne's intake, we are forced to move more than 10 miles when we reach 500K tons. Instead of moving up to RM 378, we have to move all the way to 383.4 or 15 miles. To provide mitigation for this we request that we be allowed to dredge an additional 100K tons in the 10 mile reach behind the dikes. This does not increase our requested limit of 600K tons above KC (rm 366.1) or the total 1.2MM tons in the KC reach. It provides another method of reducing local impacts without having to move up 15 miles.

Holliday's Position on Degradation in KC

Dredging is not the root cause:
We believe it is generally understood and stated in the DEIS that dredging is not the root cause of degradation. Degradation is the intended effect of the BSNP. Where and when excessive velocities occur, too much sand is scoured and sediments cannot slow and redeposit. We are confident that the Corps can model and apply revised dike design criteria to stop and reverse the degradation. Some of this has already been done in 2007 in the KC area. We believe we are seeing some dramatic improvements and are anxious to measure the bed elevation again in KC.
Holliday and Ash Grove Materials are responding cooperatively to the apparent need to reduce sediment removal in the KC reach, but in consideration of the following points we feel we are being asked to mitigate the impacts of the BSNP.

1. The MO River bed in KC has been steadily degrading since the 1930's – long before any significant dredging.
2. The River is designed to scour millions of tons of aggregates at low flow.
3. The complete absence of maintenance dredging in the KC reach confirms the EIS statements that the BSNP dikes are overly aggressive in KC.
4. More aggregates are being scoured than we are dredging, more than two-fold.
5. We have proof that dredge holes do not spread, migrate or headcut – we dig a hole and it fills back in within days to weeks.
6. We have evidence of sand waves close to 10 feet high (see final Dredge Hole Study profile section).
7. Low flow velocities in the KC reach are much greater than other reaches (2.73 fps vs. 1.8 fps at Waverly and 1.66 fps at Hermann; all at low flow of 20K cfs). Velocities in KC are great enough to transport pea gravel. Sand is not going to redeposit during low flows.
8. Low and medium level flows have increased significantly – in the range of 24% to 35% increase (Fig. 3.4-11 DEIS) with no change in dike elevation or length criteria.
9. The sill dikes in KC have been 5 to 10 feet too high for over 15 years creating more scour energy at median flows that were designed to overtop the dikes and spread out. Instead, the medium flows stayed restricted in the dikes and created much more scour energy than was ever intended by the designers.
10. The drought from '99 to '07 created the perfect storm – extended periods of low water scour between dikes that were too high. Coupled with record dredging and the L385 dredging above Line Creek. Let's not overreact to a perfect storm.
11. The revetment failure at Mile 380 was not a natural event – it was the result of our new pumper dredging too close to the bank – he literally pumped out the river bank. We repaired it and it won't happen again. If this is the sole revetment failure oft referred to, problem solved with new monitoring equipment.
12. There is a misconception that we make the River bottom finer. The River has a surplus of medium size (0.35mm) sand. We return some of that surplus medium sand to the bed – most of it to our dredge hole. The difference in the average sand size or d50 is 0.25 mm. When you realize there are waves of sand 5 to 10 feet high moving along the bottom, you realize that the river bottom is not armored by

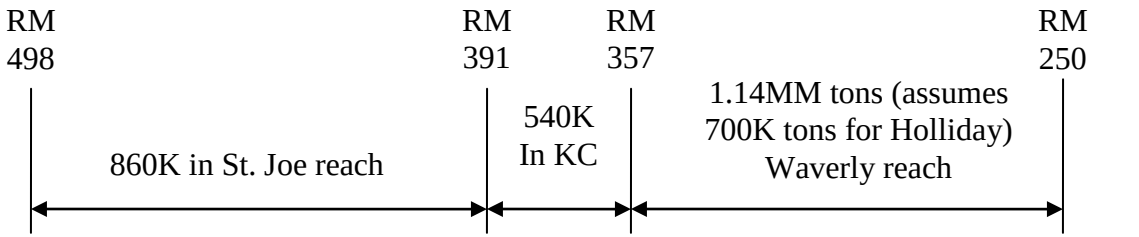
sand and that removing sand that averages 0.6 mm versus the normal 0.35 mm bed material is not going change the sand bed's armoring capability.

13. We should check the bed elevation after this year. The estimated bed load from the huge churning waves of sand going downstream likely dwarf any of the bed load estimates made in the DEIS for normal to low flows**. IF THE BED HAS NOT REFILLED WITH ALL THIS RECENT BED LOAD AND WITH OUR VERY MINIMAL DREDGING, IT NEVER WILL! LESS DREDGING WILL NOT MAKE ONE IOTA DIFFERENCE!**

Comparison of Alternatives for Holliday Sand & Gravel Company

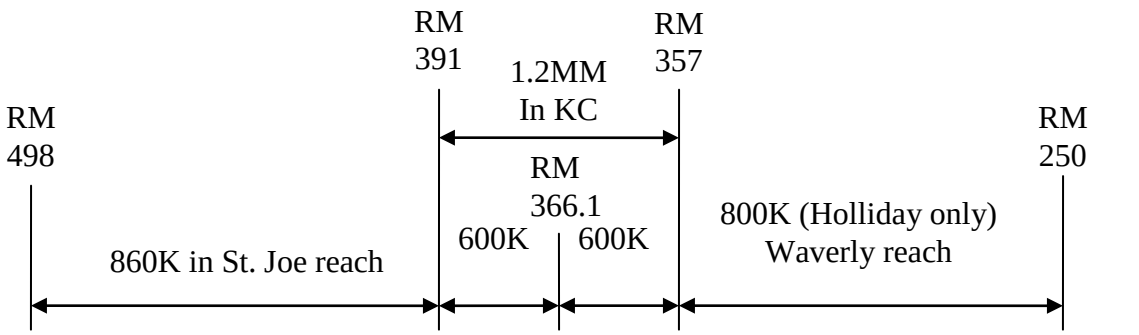
DEIS Preferred Alternative

Alternative B for St. Joe = 860K tons (current level averages 326K tons)
Alternative A for Kansas City = 540K tons (current level averages 2.6MM tons)
Alternative B for Waverly = 1.14MM tons (current level was assumed to be 678K tons)



Totals for these reaches = 2.100MM tons

Holliday's Proposed Alternative
St. Joe Reach - No change at 860K tons
KC Reach – Increase from 540K to 1.2MM (from 10% to 22% of bed load)
Waverly Reach – Increase Holliday from 700K (assumed) to 900K (31% increase from Alt. B)



Proposed totals for these reaches - Holliday's Proposed Alternative = 2.960MM tons

From: Mike Odell
To: Hofmann, Anthony J COL NWK
Cc: Wheeler, Cody S NWK
Subject: Holliday Sand Request - Clarification
Date: Thursday, September 30, 2010 2:27:07 PM

Dear Colonel Hofmann:

Thank you so very much for your time and attentive ear this morning.

After leaving our meeting with you this morning we realized that in our haste we may have left the wrong impression concerning a transition period.

We requested 1.2 MM tons in the KC reach because we believe that is a more than reasonable reduction from our historic 3MM tons, combined with significant savings it provides us (and therefore the public) at $55MM over the next 15 years.

Our intention was that the 1.2MM tons in the KC reach _also_ serve the dual purpose of a transition, buying us time to get geared up for 19+ mile towing from the St. Joe reach to the Riverside , and from Waverly to the Randolph terminal.

We want to make clear that we are requesting that the KC reach remain at 1.2MM tons for the duration of the permit.

Thanks again,

Mike Odell
Holliday Sand & Gravel Company
913-208-7309

October 25, 2010

Prepared for:

US Army Corps of Engineers

Douglas L. Baker
Attorney at Law

300 Boulder Street • Lawrence, KS 66049
Phone: (785) 841-8600 • Fax: (785) 841-8600
E-mail: doug@dbakerlaw.com

Missouri Sand Company, LLC
October 25, 2010

TABLE OF CONTENTS

Photos of River Bend, Missouri Sand & Gravel Plant Site ..... Tab 1

Maps of Missouri Sand Company Property Interests ..... Tab 2

Borings Analysis [B-1, B-2 and B-3] ..... Tab 3

Douglas Baker, Attorney, letter to USACE ..... Tab 4

Executive Summary ..... Tab 5

Department of Natural Resources Permit ..... Tab 6

Missouri Department of Transportation Sand Approval ..... Tab 7

RIVER BEND, MISSOURI

MISSOURI SAND COMPANY, LLC

Sand and Gravel Project

at

RIVER BEND, MISSOURI

Map

Stevan Lea Rd
State Hwy 291
State Hwy 291 Old
60th
53rd St
52nd St
Colley Rd
Blackhawk Lake Rd
40th St
0
1281 ft
cares.missouri.edu

Map

State Hwy 13
State Hwy 210
Ramp MO 291 S to MO 210
MO 291 NB Exit
Ramp MO 291 N to MO 210
Gabbert Rd
Outer Rd
B-1 (116)
B-2 (96)
B-3 (94)
0
651 ft
cares.missouri.edu

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION (Surface Elev.: feet)	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ⊙ ★ Moisture ◪ PL ● LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	0					12 inches topsoil					
						SILTY SAND, brown, fine grain					
	5										
	10				SM						
	15										
	20										

Continued Next Page

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ⊙ ☆ Moisture ■ PL ● LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	20					SILTY SAND, brown, fine grain					
	25										
	30				SM						
	35										
	40										

Continued Next Page

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ ★ Moisture ▨ PL ● LL (1–25–50) STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	40					SILTY SAND, gray, fine, trace fine gravel					
	45				SM						
	50										
						POORLY GRADED SAND, gray, fine to medium					
	55				SP						
	60										

Continued Next Page

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ● ★ Moisture ◪ PL ◆ LL (1–25–50) STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	60				SP	POORLY GRADED SAND, gray, fine to medium					
					SM	SILTY SAND, gray, fine, trace fine gravel					
	65										
	70										
					SP	POORLY GRADED SAND, gray, fine to medium, trace fine gravel					
	75										
	80										

Continued Next Page

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ ★ Moisture ◪ PL ● LL (1, 25, 50) STRENGTH, tsf ▲ Qu ● Qp (0, 2.0, 4.0)	Additional Remarks
	80					WELL GRADED SAND, fine to coarse, with fine to coarse gravel, trace cobble					
	85				SW						
	90										
						WELL GRADED SAND, fine to coarse, some fine to coarse gravel, trace cobble					
	95				SW						
	100										

Continued Next Page

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-1

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	20 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ ★ Moisture ◪ PL ✚ LL (1–25–50) STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	100					WELL GRADED SAND, fine to coarse, trace gravel					
	105				SW						
	110										
	115				SW	WELL GRADED SAND, fine to coarse, some fine to coarse, some fine to coarse gravel, trace cobble					
						Auger Refused at 116.5 Feet					

Completion Depth: 116.5 ft
Date Boring Started: 7/15/09
Date Boring Completed: 7/15/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-2

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS

While Drilling	25 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION (Surface Elev.: feet)	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ ★ Moisture ◪ PL ◆ LL (1–25–50) / STRENGTH, tsf ▲ Qu ◉ Qp (0–2.0–4.0)	Additional Remarks
	0					12 Inches of Topsoil					
						POORLY GRADED SAND, gray brown, fine to medium, silty					
	5										
	10				SP						
	15										
	20										

Continued Next Page

Completion Depth: 96.4 ft
Date Boring Started: 7/16/09
Date Boring Completed: 7/16/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-2

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS

While Drilling	25 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ● ☆ Moisture ◪ PL ✚ LL (1, 25, 50) STRENGTH, tsf ▲ Qu ● Qp (0, 2.0, 4.0)	Additional Remarks
	20					POORLY GRADED SAND, gray brown, fine to medium, silty					
	25										
	30				SP						
	35										
	40										

Continued Next Page

Completion Depth: 96.4 ft
Date Boring Started: 7/16/09
Date Boring Completed: 7/16/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-2

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	25 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ ★ Moisture ◪ PL ● LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	40					POORLY GRADED SAND, gray, fine to medium					
	45										
	50				SP						
	55										
	60										

Continued Next Page

Completion Depth: 96.4 ft
Date Boring Started: 7/16/09
Date Boring Completed: 7/16/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-2

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	25 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ● ★ Moisture ■ PL ✚ LL (1 – 25 – 50) STRENGTH, tsf ▲ Qu ● Qp (0 – 2.0 – 4.0)	Additional Remarks
	60					POORLY GRADED SAND, gray, fine to medium					
	65										
	70										
	75										
	80										

Continued Next Page

Completion Depth: 96.4 ft
Date Boring Started: 7/16/09
Date Boring Completed: 7/16/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-2

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS

While Drilling	25 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ ★ Moisture ◪ PL ✱ LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	80					POORLY GRADED SAND, gray, fine to medium					
	85				SP						
	90										
	95					LIMESTONE					
						Auger Refused at 96.4 feet					

Completion Depth: 96.4 ft
Date Boring Started: 7/16/09
Date Boring Completed: 7/16/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-3

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS

While Drilling	23 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION (Surface Elev.: feet)	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA (N in blows/ft; Moisture; PL; LL; 1–25–50) / STRENGTH, tsf (Qu; Qp; 0–2.0–4.0)	Additional Remarks
	0					12 Inches Topsoil					
						POORLY GRADED SAND, gray brown, fine to medium					
	5										
	10				SP						
	15										
	20										

Continued Next Page

Completion Depth: 98.3 ft
Date Boring Started: 7/17/09
Date Boring Completed: 7/17/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-3

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	23 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ⊘ ★ Moisture ◪ PL ✚ LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	20					POORLY GRADED SAND, gray brown, fine to medium					
	25										
	30				SP						
	35										
	40										

Continued Next Page

Completion Depth: 98.3 ft
Date Boring Started: 7/17/09
Date Boring Completed: 7/17/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-3

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	23 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ⊕ ★ Moisture ◪ PL ● LL (1–25–50) / STRENGTH, tsf ▲ Qu ● Qp (0–2.0–4.0)	Additional Remarks
	60				SP	POORLY GRADED SAND, gray, fine to medium					
	65										
					SW	WELL GRADED SAND, gray, fine to coarse, trace gravel					
	70										
	75										
	80										

Continued Next Page

Completion Depth: 98.3 ft
Date Boring Started: 7/17/09
Date Boring Completed: 7/17/09
Logged By: E.G.
Drilling Contractor: Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

TETRA TECH
721 S. Packard
Kansas City, KS 66103
Telephone: 913-321-8100
Fax: 913-321-8181

BORING NO. B-3

Figure No.

Project No.114-390169
Project: Missouri Sand Co. (Sand Exploration)
Location: Independence, Missouri

Drilling Method: CME 550- Hollow Stem Auger
Hammer Type: CME Automatic
Latitude:
Longitude:

WATER LEVELS	
While Drilling	23 ft
At Completion	N/A ft
24 Hours	N/A ft

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	USCS Classification	MATERIAL DESCRIPTION	SPT Blows/N-Value	Dry Density (pcf)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft (Moisture, PL, LL; 1–25–50) / STRENGTH, tsf (Qu, Qp; 0–2.0–4.0)	Additional Remarks
	80					WELL GRADED SAND, gray, fine to coarse, trace gravel					
	85				SW						
	90										
						LIMESTONE with gray shale					
	95										
						Split spoon refusel at 98.3 feet					

Completion Depth:	98.3 ft
Date Boring Started:	7/17/09
Date Boring Completed:	7/17/09
Logged By:	E.G.
Drilling Contractor:	Tetra Tech, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger

Remarks: Borehole collapsed at 25 feet. Backfilled with bentonite chips.

The stratification lines represent approximate boundaries. The transition may be gradual.

Douglas L. Baker

Attorney at Law
300 Boulder Street
Lawrence, Kansas 66049
Phone & Fax: (785) 841-8600
E-mail: doug@dbakerlaw.com

September 28, 2010

Cody Wheeler
Regulatory Project Manager
Kansas City District Corps of Engineers
601 E. 12th Street, Room 401
Kansas City, MO 64106

Re: Missouri Sand Company, LLC

Dear Mr. Wheeler:

I write today per our telephone conversation of Thursday, September 16, 2010 regarding the above referenced company. As you are aware, Missouri Sand Company [MSC] is presently producing sand from property located in the Southeast quadrant of the intersection of Hwy 291 and Hwy 210. MSC owns approximately 360 acres of ground near that intersection, of which approximately 125 acres is mineable south of Hwy 210. In addition, MSC has leased the adjacent 120 acres to the south, of which approximately 75 acres is mineable. Both properties have been permitted through the local regulatory authorities and the Missouri Department of Natural Resources.

MSC is presently producing Missouri Department of Transportation [MoDOT] approved specification sand and a high grade lignite free C-33 concrete sand through a new state of the art classifying tower. The sand is being stockpiled in anticipation of the 2011 construction season. The response from Kansas City area concrete and asphalt producers has been very encouraging, with most taking samples of the C-33 sand to prepare their mix designs for 2011.

Notwithstanding comments from another area sand producer, MSC has a significant producible deposit of readily marketable sand. A half dozen bore holes to bedrock [up to 120 feet deep] on both the owned and leased property show a consistent sand deposit with reserves of 26 – 38 million tons. The variance in the estimated reserves is due to two factors: 1) whether the KCPL power transmission lines are relocated; and, 2) the final slope of the excavated pit. Because this is a pit operation the gradation of the deposit is well known and the processes used to mine the property yield a more consistent product than that material produced from the Missouri River.

I hope this letter has been helpful in your consideration of the various alternatives for dredging on the Missouri River. If you need copies of the bore holes referenced herein, or any other information germane to your considerations, please do not hesitate to inquire.

Sincerely,

Douglas Baker

DLB:cl

October 25, 2010

Explanatory Note to Executive Summary

The following Executive Summary was initially prepared in the spring of 2008 for use by Missouri Sand Company, LLC as a means to evaluate the Kansas City metro area as a potential site for a sand and gravel operation. It was amended October 28, 2008 and again April 6, 2009. A change to the original document regarding sand usage in Kansas City is noted on page 1, second paragraph, with said change being bracketed and italicized.

MISSOURI SAND COMPANY, LLC
(a Kansas Limited Liability Company)

Executive Summary

[Updated April 6, 2009]

Introduction:

Missouri Sand Company, LLC is a Kansas Limited Liability Company formed for the express purpose of supplying sand and gravel to the Kansas City metro area market. The principal owners of the company have assembled an experienced management team for the administration and development of this project.

The Kansas City Sand and Gravel Market:

In 2006, approximately 6,400,000 tons of dredged sand and gravel were consumed in the Kansas City metro area market. According to the January 2007 United States Geological Survey report, the bulk of produced sand and gravel is used in the construction industry. The demand is on the rise and "shortages of construction sand and gravel in industrialized and urban areas are expected to increase". This is an accurate assessment of the Kansas City metro area market. [*However, the down turn in the economic climate affected the construction industry and hence the sand and gravel industry. There was an estimated 4,500,000 tons of sand and gravel consumed in the Kansas City metro area market in 2008 and slightly more than 4,000,000 tons in 2009.*]

Sources of Sand and Gravel for the Kansas City Market:

Production of sand and gravel for the Kansas City metro area market comes from three sources: dredging in the Kansas River; dredging in open pits in the Kansas River floodplain; and, dredging on the Missouri River.

"Transportation is a major factor in the delivered price of construction sand and gravel. The cost of moving construction sand and gravel from the plant to the market often exceeds the sales price of the product at the plant. Because of the high cost of transportation construction sand and gravel continues to be marketed locally". For that reason, the only economic sources of sand and gravel *presently* available for the Kansas City metro area market are the three sources listed above and described in more detail below.

Kansas River: In 1990, the US Army Corps of Engineers issued regulations which significantly limited dredging on the Kansas River. The 31 page Appendix A documents the regulations and is titled "REGULATORY PLAN FOR COMMERCIAL DREDGING ACTIVITIES ON THE KANSAS RIVER". That section of the Kansas River for which sand can be produced and economically transported to the Kansas City metro area market is limited to 1.5 million tons annually. This restriction on dredging in the Kansas River, and the resulting

limitation in the volume of sand produced annually from the Kansas River, resulted in increased production from open pits in the Kansas River floodplain and increased dredging and production from the Missouri River.

In the 1998 Executive Summary titled "The Kansas River Corridor – Its Geologic Setting, Land Use, Economic Geology and Hydrology, the Kansas Geological Survey stated the amount of sand produced annually from the Kansas River to be 2.4 million tons, with the greatest demand being in Johnson County, Kansas, part of the Kansas City metro area market.

Documentation of sand and gravel produced from the Kansas River for the Kansas City market can be found in the Kansas Statutes Annotated. K.S.A. 70a-102 provides a royalty of $.15 per ton of river sand removed from the Kansas River shall be paid to the Kansas Department of Revenue. Kansas Department of Revenue public records show royalties for 2006 from the Kansas River were $372,597, representing 2,483,973 tons sold. The Kansas Water Office [KWO.org] confirmed 1.5 million tons was produced by two dredging companies [Holliday Sand and Gravel Company and Kaw Valley Sand Company] from that section of the Kansas River which can economically transport sand and gravel to the Kansas City metro area market.

Kansas River Floodplain: There are presently four active permits for open pit dredging on the Kansas River floodplain. The permits are held by Holliday Sand and Gravel Company, Kaw Valley Sand Company, Kaw Sand Company and Penny Concrete Company. The first two companies are actively mining sand and gravel, while the other two companies have maintained their permits and leverage the same for better prices from Holliday Sand, the principal producer of sand for the Kansas City metro area. These privately owned companies are not required to disclose their annual production from their pit operations. However, industry observers, familiar with these producers and their operations, have calculated annual production from the two active open pits on the Kansas River floodplain to be 1.5 million tons annually.

Missouri River: The largest source of sand and gravel for the Kansas City metro area market is dredging from the Missouri River. In 2006, Holliday Sand and Gravel Company, the only permitted dredging operation on the Missouri River, produced 3.4 million tons for the Kansas City metro area market. A 2007 US Army Corps of Engineers 308 page report titled "DEPARTMENT OF THE ARMY PERMIT EVALUATION AND DECISION DOCUMENT" for the Missouri River can be accessed on the internet at:

http://www.nwk.usace.army.mil/regulatory/MO River Dredging CDD.pdf.

Selected comments from the report are included herein. Because of its size, the regulations referenced above will be available in their entirety only through internet access, and will be referred to hereafter as the Decision Document.

The Negative Impact of River Dredging:

The document which most clearly documents the negative impacts of dredging the Missouri River, and advocates restricting the same, is the 2007 US Army Corps of Engineers report [Decision Document]. The report repeatedly notes five main areas of concern, as follows.

Dredging the Missouri River:

1) is "negatively impacting upland and aquatic habitat and associated fish and wildlife species and their predators" [page 5, Decision Document];
2) will "endanger infrastructure, including utility crossings, water intakes, dikes, revetments and levees" [page 6, Decision Document];
3) "above the horizontal collector well that extract water from the substrate below the Missouri River could negatively affect the rate of water flow through the bed material and reduce its ability to filter out river borne pathogens" [page 11, Decision Document];
4) is not in compliance with other laws, specifically those affecting Section 7 of the Endangered Species Act. The threatened piping plover, the endangered least tern and the endangered pallid sturgeon are subject to negative impacts by dredging [page 5, 11, 22, Decision Document]; and,
5) negatively affects water quality, in more than one way. In an August 14, 2003, letter to the Corps of Engineers, WaterOne [water supply for Johnson County, Kansas] Manager of Facilities, Paul Corkill stated, " From a water quality standpoint, WaterOne has serious reservations about allowing *any* dredging in the reach immediately upstream of our intake .....". He further states "From our records and from conversations with other members of the Corps of Engineers, there has been a three-foot drop in the riverbed in our area since the early 1990's. This degradation is severe enough that the pumping equipment installed at our water intake is rapidly becoming ineffective" [Decision Document].

   In a July 28, 2003 response to a request for public comments regarding dredging on the Missouri River, Friends of the Kaw noted "Dredging pumps hundreds of thousands of tons of sediment into suspension each year, soil which contains unsafe toxins that must be treated at great expense" [Decision Document].

In addition to the above, Kansas City Board of Public Utilities Darrel Dorsey, Manager of Electric Production, noted in his December 29, 2004 letter to the Corps of Engineers, "The Board of Public Utilities operates several water intakes on the Missouri and Kansas Rivers. These intake structures have been severely impacted by the degradation of the Missouri River bed. Flows that once provided the river levels required to service our intakes are now found to be totally inadequate. Our power generation units have been both derated and, at times, shut down completely. This ongoing problem has already cost the utility rate payers millions of dollars to fund the purchase of replacement power and capital project to provide temporary pumping facilities. As the degradation continues, it will cost millions more. We therefore request severe restrictions be placed on all future dredging activities in the Kansas City reach....." [Decision Document].

Finally, dredging on the river is fraught with hazards. There is the potential for fuel or petroleum product leaks into public water intakes or environmentally sensitive areas. The potential for a 'run-a-way' barge full of sand, or the loss of the dredge from its moorings, puts water, power and bridge infrastructures at risk.

All of the above have been studied extensively by the US Army Corps of Engineers for the past five years. There has been hesitation to implement restrictions for dredging on the Missouri River because of the negative impact such restrictions would have on the construction industry and the local Kansas City economy.

Market Niche:

Presently, Holliday Sand and Gravel Company produces 95% of the sand and gravel sold and consumed in the Kansas City metro area market. Over half that amount comes from dredging the Missouri River. The 2007 US Army Corps of Engineers Decision Document extends the existing Holliday Sand Missouri River permit for three years. As part of this extension, there are significant monitoring and reporting requirements which Holliday Sand must implement, as noted below. There are also incremental limitations placed on the amount of sand to be dredged in each successive year of the permit. Inherent in the Decision Document is the understanding the Corps of Engineers will restrict dredging on the Missouri River even further when there is another alternative to supply sand and gravel to the Kansas City metro area market.

The degradation of the Missouri River bed has been studied extensively the past five years. On July 28, 2003, Charles Scott, Field Supervisor for the Fish and Wildlife Service noted, "The Service has previously raised concerns about the effects of excessive dredging on an already degraded reach of the river. Those concerns were based on information from the Corps that indicates sand dredging can exacerbate bed degradation and recommends that proposed dredging be limited to the average annual bed load. In the Kansas City area the bed load is estimated at approximately 1,570,000 tons per year." [Decision Document].

The following quotes from the Decision Document demonstrate the market niche now available:

[page 31] "Denial of all dredging permits or severe or sudden reduction in total extraction allowed would create the potential for significant negative impacts on the dredging companies and consumers of dredged material. The reduction in the Kansas City reach will require sand to be shipped from farther away and increase the cost of sand in the Kansas City area to some degree".

[page 32 – 33] "The need for dredging activities is directly related to an economic problem that is always a major consideration in the sand and gravel industry, namely, the low unit value and bulky nature of its product. The cost of transporting sand and gravel to markets may amount to much more than production value. Consequently, markets are extremely confined. Very little sand and gravel enters the interstate market. Therefore, Missouri is dependent upon local supplies to meet its construction needs".

[page 33] "The Missouri River dredgers provide material to local concrete companies, construction companies, municipalities, highway and maintenance departments, and the general public. With the availability of sand, gravel and manufactured construction materials on the local level, savings to the consumer accrue in the form of reduced travel distance, fuels, vehicle wear, and labor expenditures".

[page 33] "The recommended alternative seeks to balance and protect the economic and ecologic interests by limiting total extraction to 2006 levels, incrementally reducing extraction in the most severely degrading Kansas City reach, limiting total extraction in any 10-mile reach to 1,200,000 tons, requiring more accurate and continuous dredge monitoring, requiring annual hydrographic surveys of dredged reaches, and limiting the permits to 3 years during which an EIS [Environmental Impact Study] is prepared".

On January 30, 2007, Greg Steinhoff, wrote a letter to Colonel Michael Rossi of the US Army Corps of Engineers in which he stated, in part, as follows: "I am the Director of the Department of Economic Development [*for the State of Missouri*]. This decision severely impacts the construction trades, the Missouri Department of Transportation, county and local governments, and public improvements throughout the State of Missouri. I have received numerous contacts from members of the construction community, local contractors, local ready-mix concrete providers, home builders, members of both county and municipal governments, and special districts, including road districts and school districts, regarding their concerns of the prospect of rising concrete and asphalt prices throughout my District. They all have alerted me of their concerns regarding proposed restrictions on Missouri River sand dredging operations and the potential cost increases to public works projects throughout the state" [Decision Document].

The Missouri Department of Transportation [MoDOT], in a January 2007 comment to Mike Wells, Missouri Department of Natural Resources, noted: "MoDOT utilizes natural river sand from the Missouri River to produce concrete and asphalt for its transportation improvement projects..... The affected Dredging companies had indicated that they would supply all their regular customers first before supplying to MoDOT. Depending on the demand from their regular customers they may not supply sand to additional MoDOT projects. This would require sand to be obtained from the Missouri River in St. Charles County or the Mississippi River..... The proposed limiting of dredging on the Missouri River will have substantial fiscal impacts to MoDOT and the taxpayer of Missouri. Also of great concern to MoDOT is the potential for delivery delays in getting sand to our projects. If there are delays in getting sand from alternate locations this will delay projects for motorists. Extending the duration that work zones are in place exposes motorist and highway workers to greater risk of injury and motorists to more delays and safety hazards. These delays will also cause significant financial impacts to our contractors" [Decision Document].

Finally, in a letter to Missouri Governor Matt Blount, Colonel Michael Rossi, US Army Corps of Engineers, defends the Decision Document. The letter clearly indicates the need for an additional source of sand and gravel.

Analysis of Holliday Sand & Gravel Company:

Holliday Sand was formed as a wholly owned subsidiary of List and Clark Construction Company in 1950. Early dredging activity was on the Kansas River supplying sand to the railroad. In the late 1960's Holliday Sand began dredging the Missouri River. For the past 30 years they have been the only dredging operation on the Missouri River. From the 1960's to approximately ten years ago several other dredging companies operated to supply sand and gravel to the Kansas City metro area market, including Kaw Sand Company. Within the past ten years Holliday Sand has acquired, or associated with, all the other dredging operations, excepting Kaw Sand Company which was leased to Penny Concrete, a company nominally engaged in sand production, using the acquisition of Kaw Sand Company as leverage with Holliday Sand for favorable prices.

The Holliday Sand monopoly has resulted in an increase of sand prices from $3.00 per ton ten years ago to a present average price of $7.65 per ton. Given the 2007 regulations adopted for the Missouri River, Holliday Sand increased prices $1.00 per ton in January 2008 [see Holliday Sand December 27, 2006 letter to Cody Wheeler, US Army Corps of Engineers – Decision Document]; and, July 1, 2008 increased prices another to the present average price. A general rule of business may be paraphrased as *"a market with a sole supplier invites competition"*. The end users of sand and gravel in the Kansas City metro market – concrete, asphalt and construction companies, governmental agencies and highway districts, school districts, etc. – will welcome another supplier of sand and gravel. Informal discussions with half a dozen concrete and asphalt companies indicate end users will, at a minimum, split their demand for sand between two companies to contain rising sand and gravel prices.

Holliday Sand has known of the concerns of dredging on the Missouri River since 2001 and likely before then. "In 2004 Holliday Sand requested that the restrictions be delayed to allow them to adjust their operations and find alternate sites. Once again in December 2006 Holliday Sand requested more time before reductions were imposed as they had not yet received the new equipment needed to extend their operation downstream out of the restricted zone. These permits were to expire on December 31, 2001, but were extended while "Holliday worked to complete their acquisition of new equipment." [pages 8 – 9, Decision Document]. This stall and delay tactic was noted at another place in the Decision Document: "They (Holliday Sand) also requested that any reduction in annual extraction limits be delayed for three years so they could develop another source and facility" [page 17]. This response is indicative of management's inability to plan for future events, and is accentuated by 'mature' leadership that has stated it plans to retire within two years. Outside observers note there is no 'heir apparent' and no provisions for the future.

Operating costs for river dredging are high. The sand is first dredged and classified on the river, loaded on to barges, transported by tugs up or downstream [up to ten miles] to the land based processing plant, unloaded by loaders and then reprocessed again to be sold. Seven employees per dredge are required on the Missouri River and three employees per dredge are required on the Kansas River. Each dredge will produce approximately 200 tons of sand per hour. To meet demands for sand, four dredges and their supporting crews operate simultaneously: two on the Missouri River and two on the Kansas River. Fuel consumption for

four dredges, four tug boats and loaders for off-loading the produced sand is staggering. Wages for up to twenty employees for the two river dredging operations is high, especially when the cost of work comp insurance is factored in for the 'high risk' job of operating on these rivers.

The cost of operating dredges on the Missouri River increased significantly with the recent Decision Document. "Monitoring Requirements for Renewed Sand Dredging Permits on the Missouri River" is a seven page list of requirements which will substantially increase the cost of dredging, and likely the per ton cost of sand. The March 13, 2007 memorandum is referenced in the Decision Document. It requires hydrographic surveys, data collection [both horizontal and vertical], cross section surveys and the specified equipment to complete the above. The cost of these regulatory requirements will exceed One Million Dollars. Passing along these costs to the consumer will increase the price of Missouri River dredged sand a minimum of five percent (5%).

An additional cost of operating dredges on the Missouri River is the increased distance Holliday Sand must travel to satisfy the Decision Document. In his December 27, 2006 letter to Cody Wheeler [US Army Corps of Engineers], Michael O'Dell, Vice President for Holliday Sand & Gravel Company stated "The additional five miles will add another $1.00 per ton operating cost" [Decision Document]. As noted in Kevan Fouts's October 1, 2007 letter to the Holliday Sand customers, the price of sand was increased $1.00 per ton, effective January 1, 2008. The question now is whether this price increase will cover the cost of the mandated monitoring requirements, the increased distance expenses and the new equipment necessitated by the Corps regulations. While the $1.00 per ton represents a 16% increase in the price of sand, it may not be sufficient to cover Holliday's increased costs.

The final consideration of the Holliday Sand Missouri River operation is whether the US Army Corps of Engineers will extend, or even grant, a dredging permit in 2010 when the current permit expires. If an alternate sustainable long term source of sand and gravel for the Kansas City metro area market is available, the 'tenor' of the Decision Document suggests the answer will be "no". A best case scenario for Holliday Sand when an alternate reliable source of sand and gravel is available is for the US Army Corps of Engineers to limit the extraction of sand from the Kansas City reach of the Missouri River to its annual bed load.

Holliday Sand presently operates two pit operations in the Kansas River floodplain. It also anticipates opening a third operation. The bottom of the sand deposit in these three locations will not exceed a depth of 55 feet, with approximately 15 to 20 feet of overburden [defined as that material which cannot be incorporated into the sand and gravel being sold]. Overburden must be removed to expose the sand and gravel to be produced. The thicker the overburden the more expensive it is to remove it. Much of the overburden at these three locations must be moved twice, which greatly increases the cost of the operation. The 25 to 35 feet of sand reserves below the overburden is estimated by industry sources to represent a ten year supply at the current rate of consumption [assuming Holliday Sand can continue to extract 3.4 million tons from the Missouri River]. Stripping 15 to 20 feet of overburden presents an expense equivalent to operating a dredge on the river with a full complement of barges, tug boats, loaders and the necessary employees.

There is an additional issue to be considered. The stationary sand plant to be built by Missouri Sand Company has been designed by engineers specifically for the sand and gravel deposit located at River Bend. Compare this to the material processed by Holliday Sand from the Missouri River, where production is limited to the "flavor of the day". Dredging on the Missouri River varies greatly from day to day, as different types of material, from fine to coarse, are deposited by river currents. This requires constant "blending" and re-handling of the produced material to make a final product to satisfy market requirements. Compare this to the static and consistent alluvial deposit at River Bend. The sand deposit in an open pit tends to be more uniform. Coupled with a production technique wherein a 100 foot column of sand and gravel can be blended during production, stockpiled sand will provide a superior, consistently uniform product of specifically graded sand. This will result in a better more uniform product than that offered by Holliday Sand [which as noted above is limited by nature to the sand deposit being dredged from the Missouri River on any given day].

Finally, consideration has to be given to the attitude of the Kansas City consumers. The past ten years Holliday Sand has enjoyed a monopoly. All the customers surveyed indicated they will split their business to encourage competitive market prices. As previously noted, Holliday has already informed certain governmental agencies there may not be enough sand available in the future to provide their needs, and the regular customers will be served first. It is reasonable to expect most consumers will choose to purchase from two suppliers, rather than risk not having sand available from just one supplier at a future date when dredging on the Missouri River is further restricted.

ADDITIONAL INFORMATION: As of October 28, 2008, this report is revised to include the following items:

1) Holiday Sand has been sold to Ash Grove Cement Company for a 'rumored' sale price of One Hundred Forty Million Dollars [$140,000,000]; and,

2) A **SPECIAL PUBLIC NOTICE** was issued by the US Army Corps of Engineers February 21, 2008. This notice provides "the failure to complete an Environmental Impact Statement and permit evaluation by December 31, 2009 will mean all commercial sand dredging in the Missouri River will cease on ***January 1, 2010*** [emphasis added], and cannot be re-authorized until the evaluation is complete". If dredging is not permitted on the Missouri River in 2010 and beyond, there will be a shortfall of sand for the Kansas City market. The reality of this shortfall is an increase in the price of sand and serious questions about where that shortfall will be made up.

Most Recent Update – April 6, 2009: ***On January 1, 2009 Holliday Sand, a wholly owned subsidiary of Ash Grove, announced a $1.00 per ton increase in the price of sand. The average per ton price of sand in the Kansas City is now $8.65.***

LAND RECLAMATION COMMISSION

STATE OF MISSOURI
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102
573-751-4041

Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO
MISSOURI SAND COMPANY, LLC

Pursuant to "The Land Reclamation Act," RSMo, 2007, and on conformity with the statements In the application, a permit is hereby granted to engage in surface mining of sand & gravel in the state of Missouri. The extent of the Proposed mining operation(s) will be on 18 acres, more or less.

The locations of the operation(s) under this permit is/are as follows: New

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
Jackson	33, 1, 4	50N, 51N	31W, 32W	0	18	18	River Bend	2307

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2007 or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 23rd day of January, 2009

Dan Schnuttle Director DNR, DRG

DIRECTOR OF STAFF
Land Reclamation Commission

Permit No. 1044
Effective Date 01/23/2009
Expiration Date 01/22/2010

MO 780-1122 (6-95)

Missouri
Department
of Transportation

MoDOT

Elizabeth A. Wright, District Engineer

District 4 – Kansas City Area
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 622-6500
Fax (816) 622-6323
Toll free 1-888 ASK MoDOT
(1-888-ASK-6636)
www.modot.mo.gov

June 7, 2010

Mr. Mark Willoughby
Missouri Sand Company, LLC
1609 Prestwick Drive
Lawrence, KS 66047

Dear Mr. Willoughby:

A source approval sample was obtained from the production of a field deposit of natural sand within the Missouri River Flood Plain located near the intersection of MO Route 210 and MO Route 291. MoDOT facility number 3020701214 has been assigned to this location. The material was tested at our Central Lab and was identified under lab number 104MAP071.

Results of testing indicate your production currently meets MoDOT Standard Specification 1005, Fine Aggregate for Concrete, Class A. Please refer to the attached Quarry Ledge Information Summary-Source. Acceptance of your production is subject to our quality assurance testing. We will verify the quality of your production prior to its incorporation into our roadway and determine if it complies with contract requirements. As needed, production samples will be submitted to our Central Lab to verify testing and monitor the inherent quality of the product.

Thank you for your interest in supplying material to MoDOT. If you have any questions please contact me at (816) 622-6522.

Sincerely,

Bruce A. Harvel, R.G.
Geologist

bh

Attachment

Copies: Mr. Will Stalcup-cm
File

MO Sand Company
Facility No. 3020701214

Jun 7, 2010

QUARRY LEDGE INFORMATION SUMMARY - Source

Missouri Sand Company, LLC **PH# (816)257-1811**

64058 Kansas City County

LL 094 23 48 039 10 54 **PS#: 3020701214**

Ledge	Approval	Formation/Member Lab ID#	Description/Components Date	LA	SPG	Abs	Unit Weight	MoDOT T14	T104	T161
SAND		**Missouri River Field Sand**								
		Material represents Missouri River Field Sand								
		Sample complies with Specification 1005 fine aggregate for concrete. Sand is Class A.								
1005FACCNS..CA		104MAP071	2010 0517		2.626	0.2	110			

STATE OF MISSOURI
BRUCE A. HARVEL
6-7-10
RG0626
REGISTERED GEOLOGIST

Signature

Revised 6/7/07

From:	Mike Odell
To:	Wheeler, Cody S NWK
Subject:	draft of letter to Cody
Date:	Tuesday, November 09, 2010 2:59:25 PM
Attachments:	recv0593-001-2.tif

Cody,
Was any consideration given to the recommendations of the Corps' expert recommendations that were presented to us back in 2004?
(See the attached, specifically the last two pages, 5 and 6.)
Their recommendation was between 2.5 and 5MM tons depending on the annual flow at St. Joe. Their conclusion that 2.5MM tons could be a minimum between RM 340 and 400 should be considered as a knowledgeable and reliable opinion that we hope will help justify Alternative B for the KC reach of 1.2MM tons.
Let me know what you think about this.
Thanks,
Mike

MISSOURI
AMERICAN WATER

November 16, 2010

Mr. Cody Wheeler, Regulatory Project Manager
U.S. Army Corps of Engineers
Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, MO 64106-2896

Re: Missouri American Water – Impacts to facilities
Commercial Sand Dredging Environmental Impact Statement

Dear Mr. Wheeler:

Per your email sent October 27, 2010 you inquired about additional information regarding the current status and significance of our intake structures on the lower 120 miles of the Missouri River. Below is our reply to the email.

MOAW provides service to approximately 370,000 customers in the St. Louis Metro area with a population in excess of 1 million people. Service is provided to residential, commercial, industrial, municipal, and sale for resale customers in St. Louis County, St. Charles County, and Jefferson County.

Source water is treated from both the Missouri and Meramec Rivers. Normally 80% of the source water is supplied from the Missouri River, 20 % from the North County Water Treatment Plant (NCWTP) and 80% from the Central County Water Treatment Plant (CCWTP). The NCWTP has the ability to treat 96 million gallons per day, while the CCWTP can produce 217 million gallons per day.

Intake structures for the NCWTP are located at river miles 20.2 and 20.5, referred to as the East and West Intakes, respectively. The East Intake facility consists of four (4) 36-inch submerged concrete pipelines. The pipes start at the intake caissons and extend approximately 258 feet out and into the Missouri River. The top of the strainer pipe is at elevation 407 feet USGS, approximately. There are four (4) intake pumps having a total pumping capacity of approximately 68 million gallons per day.

The West Intake facility consists of four (4) 36-inch submerged lock joint concrete pipelines. The pipes start at the intake caissons and extend approximately 158 feet out and into the Missouri River. The top of the strainer pipe is at elevation 407 feet USGS, approximately. There are four (4) intake pumps having a total pumping capacity of approximately 50 million gallons per day.

Intake structures for the CCWTP are located at river miles 36.2 and 36.3, referred to as the A/B Intakes and C/D Intakes. The A/B Intakes consist of eight (8) 36-inch lock joint concrete and ductile iron pipelines. The pipes start at the intake caissons and extend approximately 484 feet our and into the Missouri River. The centerline of the strainer pipe is located at elevation 415 feet USGS, approximately. There are eight (8) intake pumps having a total pumping capacity of approximately 184 million gallons per day.

The C/D Intake structure was built in 1993 on the banks of the Missouri River. Sluice gates open to fill the intake caissons directly from the river source. There are five (5) intake pumps having a total pumping capacity of approximately 147 million gallons per day.

Please contact me if you have any questions or comments.

Sincerely,

Christopher M. Parrish, PE
Planning Engineer

RECEIVED
REGULATORY BRANCH
2010 NOV 22 AM 11: 15

Missouri American Water
727 Craig Road
Creve Coeur, MO 63141

T 314 996 2334
F 314 569 3972
E christopher.parrish@amwater.com
W www.amwater.com

Holliday
SAND AND GRAVEL COMPANY
9660 LEGLER ROAD
PH: (913) 492-5920 LENEXA, KS 66219-1291 FAX (913) 438-0200

March 25, 2011

Mr. Cody Wheeler, Regulatory Project Manager
U.S. Army Corps of Engineers
Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, Missouri 64106-2896

Re: Missouri River Commercial Dredging EIS

Dear Mr. Wheeler:

First off, we are very disappointed that our extensive comments provided for the DEIS were dismissed and had no impact on the Preferred Alternatives. We believe our knowledge and experience with dredging sand and of Missouri River conditions were not adequately valued.

Here are just some of our DEIS comments that were evidently ignored:

- KC and most other reaches have been steadily degrading long before any significant amount of dredging occurred.
- More than twice the amount of sand is being scoured from the river bed by the Corps' BSNP dikes structures – as they were designed to do.
- The Corps' own Dredge Hole Study demonstrated that dredge holes do not headcut upstream. This was actual data the Corps gathered and then dismissed.

Until recently we believed that the EIS and/or the Corps would surely modify the Preferred Alternative for the KC Segment. We believed that they would respect our knowledge of our own industry and realize the severe impacts to Holliday Sand, their customers and the construction industry in Kansas City. We believed that they would more than just acknowledge other factors contributing to degradation, such as the BSNP, but would make significant reductions, but would not put us out of business. We have never felt we needed to be concerned about an agenda. But we have realized all along that the same authority that supplied all the un-reviewed data for the EIS, that determined the EIS scope and alternatives, that would cling to the EIS like a preacher to a Bible and

determine the fate of dredging is the same entity that created and completely controls the river channel and the system of dikes that scour the river bottom. The same entity that had not until 2007 maintained BSNP dikes elevations to the design criteria which we contend has exacerbated any degradation caused by the 1993 flood and by river dredging. The same entity that determined that their own dredging of millions of tons in one spot near Line Creek would be OK because it would fill in within months (L385 Levee).

Yes we are very much like a pallid sturgeon – running out of sandy spots to produce, struggling with the excessive river velocity and soon to be extinct.

This ends our editorial comment.

From here on, as opposed to our DEIS comments, we will address those portions of the FEIS (Final EIS) that are of utmost importance to the survival of our business.

Exact quotations from the FEIS appear indented, in quotes and in italics. We have bolded key words for emphasis and easier identification.

Only Holliday is being held to the "minor or slight" impact level.

From FEIS Page ES-6
ES.5.7 Environmentally Preferred Alternative

> *"…The Environmentally Preferred Alternative was identified from among these alternatives by selecting the alternative for each segment that allowed the* ***largest amount of dredging in each segment while keeping the risk of future bed degradation to a minor or slight level.*** *The Environmentally Preferred Alternative is a composite alternative that includes:*
> *• St. Joseph Segment – Alternative B*
>
> *• Kansas City Segment – Alternative A*
>
> *• Waverly Segment – Alternative B*
>
> *• Jefferson City Segment – Alternative C*
>
> *• St. Charles Segment – Alternative C"*

Holliday Sand & Gravel Company is the only Missouri River commercial dredger that is being required to reduce their tonnage.

One would think that is because these reductions, per Alternatives 'A' and 'B', are needed to reduce impacts below the impact level of the other Segments of the Missouri River.

However, a review of <u>Table 4.2-7 Summary of Potential Impacts on Geology and Geomorphology</u>, in regard to the deciding issue stated above from EIS page ES-6: "*keeping the risk of future bed degradation to a minor or slight level",* indicates no such thing!
Holliday is being held to a standard of "slight" (less than 2 feet) impact to bed and water surface elevations, but all other dredgers are being allowed "moderate" (2 – 4 feet) to <u>"substantial" (>4 feet</u>) impacts to bed and water surface elevations. <u>Only Holliday is being held to the "minor or slight" impact level.</u>

Yes, all other dredgers are being allocated sand tonnages that will result in substantial impacts in river Segments that already have significant degradation.

True, degradation is the greatest in KC, but not that much greater (3 feet greater than Boonville and 4 feet greater than Jeff City and Hermann).

One might say, well, we just can't allow any additional degradation in KC. OK, then what about Waverly and St. Joseph where there is zero degradation?

ES6.1 (page ES-7):

> *"The Waverly segment has been stable or aggrading based on river bed elevation and water surface profiles."*

Holliday (and Capital Sand) is being limited to "slight" (0-2 feet) degradation in Waverly. Why? There is zero degradation and zero risk in the Waverly Segment Why can't Holliday dredge as much in Waverly as other Dredgers are being allowed to in Segments that already have 5 to 6 feet of degradation?

This makes no sense to us and we must conclude that Holliday has been discriminated against.

Measured from EIS Figures 3.4-24 – 28 (pages 3.4-75 to 83):

Location of Gage	Total Bed Degradation through 2009
St. Joseph	0 feet
Kansas City	9 feet
Waverly	0 feet
Jefferson City	5 feet
Boonville	6 feet
Hermann	5 feet

Page ES-2, Paragraph2:

> *Recent observations near Kansas City indicate that the rate of degradation is accelerating (USACE 2010b).*

The above statement is not supported by either Figure A-41 or 3.4-25 in the EIS. Both figures depict not only a reduction in the rate, but reversals of the degradation at the KC gage (Fig. 3.4-25, page 3.4-77) and the entire KC Segment upstream of the Gage at 366.1 (Fig. A-41, pg. A-89) since 2007.

ES6.1 (page ES-7)

> *In the Kansas City segment, the river bed and low-flow water surface elevations have dropped 10–15 feet over the past 50 years, with one-half of the degradation occurring in the past 15 years.*

The 10 to 15 feet of degradation described above was actually 14 feet at the KC Gage and that would be from highest ever bed elevation in 1935 to the lowest ever in 2007. The current net degradation in KC is 9 feet (1928 to 2009). (See Figure 3.4-25 on EIS page 3.4-77.)

The worst degradation in the KC Segment is in the reach of RM 385 to 388 where no one has ever dredged! RM 383 is as far as we have dredged (from Riverside) and we have dredged very little above RM 380.

This is how the degradation is described for the other River Segments:

> *The Jefferson City segment has experienced **moderate** degradation over the past 40 years and exhibits the only instance of increase in low-flow water surface elevation among the Project area segments. The St. Charles segment also **has experienced** river bed degradation near the urban area.* . ES6.1 (page ES-7)

OK, "moderate" and "has experienced" describes degradation elsewhere. But in fact by the same measure used in KC, the maximum degradation at both Hermann and Boonville is 8 feet. Why is degradation being overstated in KC and understated in other segments? (See Figures 3.4-27 and 28 on EIS pages 3.4-81 and 83.)

<u>What happens when construction returns to the 2006 level, which it likely will by 2015?</u>

2.3.2.2 Available Capacity of Existing Alternate Sources

From Page 2-40:

> *"Using this approach, an estimated 4.5 million tons of sand and gravel were produced from 2,483 acres of existing open-pit mines permitted by MDNR (without limits on production). An additional 18,000 tons were estimated to be produced by open-pit mines with production limits (less than 5,000 tons per year). Historical production data were used to estimate the available capacity of MDNR-permitted operations. Specifically, an expansion factor was calculated using 2009 production levels (approximately 5.5 million tons) relative to 2006 levels, when production peaked at approximately 10.8 million tons annually. The assumption is that existing operations can produce at least as much sand and gravel as was produced in 2006. The capacity expansion factor is calculated to be 1.94. This factor was applied to open-pit mines*

permitted by MDNR, except those limited to 5,000 tons per year. A comparable expansion factor was calculated for Meramec River operations. For mines with permit caps, available capacity was based on the different between estimated production and permitted levels. ***Based on these assumptions, an estimated 4.4 million tons of available capacity are present in open-pit mines throughout Missouri."***

The proposed reduction of dredging from the Missouri River as stated in the Preferred Alternative will result in the loss of 1.13MM tons of sand per year. This is all from Holliday Sand and is a **minimum reduction** as it is based on the years 2004-2008 that were a recent "average" and not by any means the peak demand years for sand such as 2000 – 2006.

Here is our point: The EIS analysis of Alternate Sources (see the paragraph excerpted above) is based on the premise that since Alternate sources produced more in 2006 than they are now (in 2009) there is 4.4MM tons of production available. That is only a temporary situation!

Back in 2006 everyone was producing everything they could, including the MO River dredgers and all the Alternate sources or pit miners. There is no excess capacity once the economy recovers and pent-up construction demand starts up.

Question:

What happens when construction returns to the 2006 level, which it likely will by 2015?

Answer:

There will be shortages of available sand in Missouri, especially in the KC Metro.

We guess the authors assume we are stuck at present levels of construction permanently. We have been in a severely depressed construction market since 2007. Loss of Missouri River dredging tons will not be available from Alternate sources once they return to 2006 production levels, which they will in the next five or so years – it will happen. The EIS' assumption that excess production from pits is available is irresponsible and cavalier. The "recent and current" 4.4MM tons of surplus production will not be there when it is actually needed.

The first projects to not get sand will be the Missouri State paving projects. This will dramatically drive up paving prices on State projects. Our regular retail customers will be priority. This has been explained to the Corps several times.

Tonnage Shortfalls - even with Alternative 'C' or "Status Quo"
Page 2-42:

"Under the Proposed Action and Alternative C, permitted dredging from the LOMR would meet ***current and recent*** *levels of demand for commercial sand and gravel; therefore, no increase in the use of alternate supplies likely would be needed. With an available capacity of approximately 7.9 million tons, the alternate sources would be able to produce the required amount of replacement sand and gravel supplies under all of the alternatives, including the No Action Alternative (where dredging of the LOMR would cease entirely)."*

Remember: Alternative 'C' is a "current and recent" average (2004-2008) chosen by the EIS as a status quo for the MO River Dredgers. Allowing 2004-2008 tonnages will not meet the 2000-2006 levels of demand that taxed both dredging in the River and existing Alternate sources. 2007 and 2008 were depressed years (and 2009 was in the toilet).
There has been no allocation for long term growth or even a return to long-term average levels of construction. That is irresponsible. Our population is still growing and our infrastructure is in a deteriorated condition! The authors of the EIS evidently are not concerned about the future.

Page 2-43, paragraph 3:

> *"Accordingly, this likely would result in the need for new mining operations to restore long-term equilibrium in the sand and gravel market in Missouri."*

That is all that is said. The EIS authors assume there will be more sand coming from somewhere, somehow. Who knows where it will be and how much the price will increase?

Holliday provided extensive comments and data on the feasibility and cost increases associated with pit sites as we have extensive experience with pit operation. These specific comments seem to have been ignored:

- There are significant difficulties in purchasing and zoning pits anywhere near the metro. All that is addressed in the EIS are permitting issues.
- There are significant siting difficulties in regard to operation near water wells and federal flood control levees.
- There are significant operation cost increases with pits.
- There is significant reduction in pit sand quality resulting in increased cement (and asphalt oil) for concrete which alone increase the cost of using pit sand $5 per ton.
- There will be significant transport cost increases because of the more remote location of pits - $2-4 per ton.
- There will be significant increased traffic congestion, pavement deterioration and exhaust emissions from the increased trucks haul distances. (The authors of the EIS think that the increase in trucking will be a boon for Missouri employment!)

Ignoring these significant impacts is contrary to our Local, State and National transportation and energy goals – it is irresponsible!

<u>Alternative A is not practicable.</u>

2.4 DEVELOPMENT OF ALTERNATIVE ACTIONS

Page 2-46"

> *"In accordance with 33 CFR 325, Appendix B and 40 CFR 1500–1508,* ***this EIS evaluates a range of practicable alternatives to meet the basic and overall purpose of the Proposed Action.*** *Alternatives to the Proposed Action were identified through review of the record of previous*

dredging authorizations; analysis of bed material load of the LOMR and recent and historical degradation; discussions with USACE staff from the Regulatory, Engineering, and other divisions; and an understanding of the broader aggregate market."

The Dredgers were not consulted regarding whether Alternatives A or B were practicable or would meet the overall purpose of the Proposed Action. Alternative 'A' is in fact not practicable and therefore does not meet the overall purpose of the commercial dredgers.

The EIS authors and Corps may have assumed that "something is better than nothing". True, but that is not the purpose and need stated in the EIS.

Alternative 'A' in Kansas City reduces Holliday's annual tonnage from 2.52 Million down to 540,000 tons – a 78.5% reduction (1.98 MM tons). Although tonnage in the neighboring segments is available, it is too little (only 850,000 tons of the 1.98MM) and the 530,000 tons allocated in the St. Joseph Segment under Alternative 'B' is too far from Kansas City. A round trip beyond 19 miles cannot be completed in the 12 hour maximum shift time. This would require towboats with quarters and resident crews. Approximately $6MM capital expenditure would have to be made for only 530,000 tons and increased costs of $3.00 per ton. Again this is not a practicable alternative and will result in the closing of our Riverside Facility requiring even more tonnage to be made up by pits. (We cannot move our dock upstream 19 miles because there is not highway access and it is too far from customers.)

A practicable Alternative would be 850,000 tons in the KC Segment instead of only 540,000 tons (still a 66% reduction in the KC Segment).

Note:

- **The River bed level at KC (and most other river segments) has been aggrading since 2007 at dredge levels in excess of 2MM tons.** (See Figure 3.4-25 on page 3.4-77)
- **For this reason it is not too much to ask for 850K tons in the KC Segment if degradation is currently improving at 2MM tons.**

<u>BSNP</u>
Page 2-47

"While dredging may not be the only cause of bed degradation, data collected over the last 15 years suggest that increased dredging, combined with the BSNP and changes in flow regime, are likely the dominant causes of degradation (USACE 2009b)."

Although the EIS authors and the Corps were gracious enough to admit that the BSNP structures are meant to scour the river bottom and prevent deposition of sand in the navigation channel and are also therefore a dominant cause of degradation, somehow dredging in KC must endure the most severe Alternative that allows any dredging at all.

For this and a multitude of reasons, the EIS needs to state that the Preferred Alternatives were selected and developed with limited data. The interpolation and inherent inaccuracies should certainly allow for some deviation in tonnage with respect to

theoretical impacts. This would be a reasonable and prudent statement since there was no attempt to determine the impact from the BSNP.

In the absence of this in the EIS, it would certainly be reasonable and prudent for the Corps to slightly modify the Preferred Alternative tonnages in order to provide truly practicable alternatives (versus the Proposed Action).

<u>The economic evaluation of alternate sand sources is probably the weakest part of the EIS.</u>

ES.8.2.4 Regional Economic Effects (page ES-15)

> *"The loss of jobs, income, and economic output in the dredging industry would be offset in some cases by increased employment in the trucking industry, as additional supplies would be hauled longer distances from the alternate sources of supply. In response to reduced supplies from the LOMR, new sand and gravel operations likely would be developed in the Missouri River floodplain in the long term. The long-term cumulative impacts associated with new floodplain operations could be a decline in the cost of sand and gravel in the region relative to the use of existing sources because, at least in some areas, new floodplain sources likely would be located in proximity to the areas with the greatest demand. A reduction in the delivered cost of sand and gravel would benefit the construction industry with lower-cost inputs to production."*

This statement is incorrect for the following reasons:

1. Existing River Dredging operations use larger crews of skilled, union operators (5 to 8 operators per shift).
2. Sand pits use fewer unskilled, non-union rural employees (2 to 3 operators per shift)
3. Even with fewer employees, pit sand will cost the customer $4 per ton more due to the added costs of wasted fine sand, land and reclamation costs and increased cement content because of the finer gradation.
4. Delivery costs will be $3 to $4 a ton greater because of the added 10 to 20 mile haul and in the future, pits will not be within the commercial zone so load capacities will be a third less, increasing delivery costs another third.
5. The increase in truck drivers hauling sand back to the City involves nothing but negatives, and the drivers are relatively unskilled and poorly paid compared to urban Operating Engineers.
6. Sand pits are not closer to the end user or market. They are much further from the market. They still must be in the flood plains, but further out of town – 10 to 20 miles further one way.
7. Pit sand hauled on county roads will destroy those roads and require significant expenditures to rebuild them. Rural sand pits are always farther from the main arteries that can handle truck traffic.

ES-15, paragraph 3:

> *"According to the 2010–2014 Missouri Statewide Transportation Improvement Program (MoDOT 2010), highway and bridge expenditures are expected to decline. A continuing decline in*

transportation funding could reduce demand for construction sand and gravel from the LOMR, and could place downward pressure on sand and gravel prices.

This above statement is too myopic - funding is down for everything - but that just postpones the necessary expenditures. Are we not concerned about infrastructure needs beyond 2014? If we aren't, our country might as well post a for-sale sign.

Please remember, the following is stated in the EIS for a reason. It should be part of the decision making.

Page 5-5

5.2.2.2 Bank Stabilization and Navigation Program

"Construction and maintenance of the BSNP have resulted in channelization of the river and straighter and faster flows, leading to a reduced amount of sediment dispersal and reduced accumulation in the channel bottom. ***These factors have contributed to lowering of the river bed and lowering of the average water surface elevations with associated main channel and tributary river bed degradation.***
The river bed degradation results in and contributes to a variety of impacts, such as river bank erosion; tributary headcutting; loss of shoreline habitat; and impacts to infrastructure, such as scouring of bridge abutments and exposure of water withdrawal structures above the water line during low-flow periods."

Page 5-11

5.2.3.1 Missouri River Bed Degradation Feasibility Study

This study should actually be listed under the mitigation section as it will continue to study degradation, determine the root cause and recommend structural corrections. Holliday Sand is committed to participating and supporting the Degradation Study.

In conclusion, without some modification to the EIS Preferred Alternatives, Holliday Sand is being held to a whole different set of standards than all other Dredgers: a 79% reduction in tonnage so there will be no more than a slight impact in KC. In contrast, all other Dredgers are allowed to dredge their status quo and make substantial impacts to the bed and water elevations in their segments. We have requested a 66% reduction in KC and more tons in Waverly to make up for that severe reduction. There is no reason to demand only slight impacts to the Waverly Segment that has zero degradation while allowing substantial impacts to already degraded segments downstream in major metro areas. That is unreasonable and unfair.

We do not like to play this card – we don't normally need to cry foul. We do not want any other dredger's tons to be reduced. We point out this inequity only for the purpose of justifying our very minor requested modifications to the Preferred Alternative necessary

to stay in business, which we have explained once again is the best thing for our environment.

Sincerely yours,

Holliday Sand & Gravel Company
Mike Odell, V.P. Production

Holliday
SAND AND GRAVEL COMPANY
9660 LEGLER ROAD
PH: (913) 492-5920 LENEXA, KS 66219-1291 FAX (913) 438-0200

12/28/10

To: Cody Wheeler, Regulatory Project Manager, USACE

From: Mike Odell, Holliday Sand & Gravel Company

Re: Missouri River Commercial Dredging – Draft Permit Decision

As requested we enclose a written follow-up to our Dredgers' teleconference on 12/21/10, elaborating on our requested modifications to the Draft Permit Decision.

We sincerely thank the Corps Regulatory Staff for the countless hours they have spent overseeing the EIS and then applying it to the upcoming Record of Decision and eventual issuance of a Dredge Permit. We understand that until there is an engineering solution to bed degradation it is prudent to reduce dredging in areas that have not refilled and to not dredge excessively in new reaches.

With this in mind, however, we must ask you to reconsider some of the conditions of the Draft Permit Decision which without some modification would put our Riverside facility out of business and result in the loss of an economical supply of sand and subsequently up to 100 jobs in the central Kansas City district.

In this letter we reiterate some of the reasons that we believe justify moderation and then propose three very modest modifications that will enable us to survive the next five years with the hope that the root causes of the bed degradation will be studied and remedied through the Degradation Study just now beginning and to which we are a contributor.

We ask for modification of the following portions of your Draft Permit Decision (DPD):

Holliday's #1 Preferred Modification: 5 Year Transition

Re: DPD Paragraph a. (2):
In lieu of a 2 year transition period at 1.2MM tons, we request a 5 year transition period at 1.2MM tons per year in the Kansas City Segment.

This would allow Holliday adequate time to obtain permits for alternate sources of sand for the Riverside facility. Because of the sensitive nature of the alternate sources and the huge capital expenditures involved we need more than two years.
Two years would be adequate to obtain additional barges and modify existing towboats and unloading dock necessary to dredge 19 miles upstream from the St. Joseph segment. However, an alternate source would be preferable to 19 mile tows if it can be accomplished.

- Kansas City Segment would then have 850,000 tons, still a 66% reduction from the average, and only 11% of the Normal Flow Bed Load, up 4% from Alternative A which is set at 7% of the average flow bed load.

The greatest bed degradation is in the River Mile 381 to 389 Reach (see Fig. A-40). We believe it would be beneficial to dredge below that reach rather than above it. (Dredge holes fill back in with sediment that would otherwise move downstream.) There has been less than 1' of average degradation from 1998 to 2009 from RM 354 to 375 (again see Fig. A-40) – where we propose to move the additional 310K tons.

SUBSEQUENT REVIEW

Re: Paragraph b. (2) "Renewal of the dredging permits ..."

The Corps' Draft Decision currently states:

> "any additional degradation in the Kansas City segment would require a thorough review of the permit provisions and most likely reductions in authorized dredging reaches, or quantities, or implementation of other mitigation measures." paragraph b. (2)

OUR PROBLEM

Not allowing <u>any</u> degradation, unfairly places the expectation of zero degradation in the KC segment solely on Holliday Sand & Gravel. We dredge in certain reaches because that is where we can find concrete sand and also because there are extensive no-dredge zones. If we lose any five mile reaches because the one survey in five years determines there is "any" degradation we could effectively lose our ability to find coarse sand and to dredge near the plant during non-navigation months. This could put us out of business in Riverside and possibly Randolph too.

Degradation of the riverbed at the KC gage is not new. The bed elevation began dropping in 1940 with completion of the majority of the BSNP structures and has averaged about 0.16 feet per year (refer to Draft EIS page 3.4-75). For that reason we ask that the 0.16 feet/year average rate of degradation be considered an annual baseline, or 0.8 feet per 5 year interval.

OUR REQUEST

We propose the following revision of paragraph b. (2):

> **"additional degradation in the Kansas City segment exceeding the historical baseline amount would require a thorough review of the permit provisions and most likely reductions in authorized dredging reaches, or quantities, or implementation of other mitigation measures."**

The Draft EIS even states that slight degradation can be expected with Alternative A (page 4.2-28, paragraph

> Dredging at the proposed level would reduce dredging-related degradation in the Kansas City segment in the short term and the long term. <u>Slight degradation or aggradation of the river bed would be possible in the short term</u>, and slight aggradation would be possible in the long term.

We request that allowance for slight degradation in the KC segment be included in the DPD.

This is real, verifiable progress. We ask that the current information described above be factored in now just as it would be in five years.
Even though 2009 has been declared the future baseline for comparison, Figure A-41 in the Draft EIS (Appendix page A-89) already documents aggradation in the KC Segment from RM 355 to RM 500. These are positive results that should be factored into the DPD. In effect, the 2007 survey provided an interim baseline and we now have two subsequent surveys to compare it with.

These are all positives regarding KC bed degradation that have occurred at the present levels of dredging (up to 2MM tons annually) and we strongly believe are justification for moderating Alternative A.

Important Additional Considerations:

- It is our understanding that Alternative A & B were arbitrary levels of dredging chosen for study in the EIS – emulating the 10% of bed load level of dredging in a stable reach, St. Joseph, (see Draft EIS page 4.2-8 first paragraph).
  This is a comparative analysis that fails to evaluate all the differences between the St. Joseph and KC reaches (tributaries, velocities, floodway confinement, dike heights, etc.).

  It is not based on a level of accuracy that demands strict adherence.

  Holliday's request for an additional 6% (310K tons) of the worst case bed load (during the drought years) should be allowed considering the methodology used to arrive at the 10% level (540K tons).

- There is no proof that the St. Joseph reach would not still be stable at dredging levels greater than 10% of the worst case bed load.

- Alternative A is extremely conservative – only 6.6 % of the average bed load during a 16 year period of river flows (1994-2009), 8 of which were severe drought years (1999-2007).

- It is only 10% of the bed load during the below-average worst case flows of 200-2009 (see Draft EIS page 4.2-8 first paragraph, last sentence).

Impact Analysis
Re: 4.2.3.5 Assumptions, page 4.2-11:

> **4.2.3.5 Assumptions**
> Key assumptions used in the impact analysis include the following:
> • Flow conditions – The impact analysis assumed that flow conditions were below average and similar to the flows from 2000 to 2009. This is consistent with the bed material load analysis in Section 3.4.5 and provides an estimate of worst-case impacts because potential degradation under normal-flow conditions would be less. Although they can measurably affect river bed elevations, extreme flood or drought scenarios were not considered in the analysis because they cannot be accurately predicted.

We beseech you to recall this Assumption when considering our modest requests: the impact analysis was predicated on the worst case scenario of flows and sediment availability.

The Master's Dredging Company, Inc.

Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

Mr. Cody Wheeler, Regulatory Project Manager
U.S. Army Corps of Engineers
Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, Missouri 64106-2896

Dear Mr. Wheeler,

A letter from Holliday Sand of September 6, 2010 by Mr. Mike Odell recently came to my attention. In this rebuttal letter of some conclusions of the EIS on Missouri River Dredging, Mr. Odell makes several assertions that are probably true about the causes of bed degradation on the Missouri River which the EIS did not consider seriously enough. These are (1) the building of the rock jetty system by the COE along most of the Missouri River, particularly in the restricted Kansas City sector, in lieu of dredging to maintain the river channel and (2) the long term drought effect in the Missouri River watershed. Both of these factors will certainly starve the input bed material, will scour out the central Missouri River channel and will consequently degrade the river bed. River jetties that are too tall and overdredging a given stretch will of course have local effects of bed degradation as well.

On page 9 of Mr. Odell's letter, I believe accurately sums up one of the major causes of Missouri River bed degradation due to the levee construction:

We recommend studying the following issues to determine the cause of degradation rather than studying the effects of degradation. We strongly believe that degradation in dredge areas is an effect from inadequate sediment deposition resulting from overly aggressive BSNP scour. Naturally we have focused on the KC reach.
See Page 3.4-88
"In particular, the Kansas City segment is more constrained than other segments of the LOMR. This is due to the extensive infrastructure in the Kansas City metropolitan area and the location of the Kansas River confluence. As stated in the 2009 USACE Reconnaissance Study Report:
This set of river conditions has resulted in the installation of a very constrictive dike system to maintain a navigation channel. The construction of that dike system has resulted in a reach of river that is very efficient at "cleaning" and maintaining the low-flow channel (USACE 2009a)."
This statement from the DEIS says it all, but somehow gets ignored in the other sections of the report when discussing the impacts of dredging. Entrix wouldn't come out and say it, but they lay it between the lines: Reducing dredging in KC to reduce degradation will not be of benefit unless the very constrictive dike system in KC is modified.

However, Mr. Odell also makes several assertions that are factually untrue, especially about alternative sources of sand in the Missouri River alluvial plain. I would

The Master's Dredging Company, Inc.
Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

like to correct Mr. Odell's assertions and add some new information in comparing sand production by river dredging and by off river sand pit dredging.

First of all, our family has been in the sand and gravel production business in the Kansas City and Lawrence areas off and on since the 1930s. The largest part of our sand and gravel production has been by dredging both in the river and in off river pits. Although Holliday Sand has also operated both types of sand and gravel dredging operations since the 1950s, it is clear that Mr. Odell has not made truthful statements in contrasting river and pit dredging operations and costs.

On page 5 of his letter, Mr. Odell in talking about sand gradations fails to mention that the sand gradations of previously undredged river beds and off river pits are always on the average more coarse than the refill (make in) sand of previously dredged sections of the river. That is because the virgin material of undredged river beds and alluvial sand pits is coarser than the refilling river bed material. Even in strong flood conditions, the refill sand and gravel into a previously dredged section of the river is always finer than the virgin cuts in both the river and pits. Since Holliday Sand almost always dredges previously dredged river sections, then their sand will be finer and contain more of the lighter river bed load material such as organics like leaves, sticks, and lignite than the virgin river and pit deposits.

In his section on Alternative Sources beginning on page 5, Mr. Odell discounts the Kansas River sand as an alternative source. He fails to account for Kansas River alluvial pits, one of which Holliday Sand is developing on 450 acres near Bonner Springs. We also have millions of tons of reserves in DeSoto with zoning and permits which is closer to the southern and much of the western Kansas City markets than any of Missouri River sand dredging plants. Mr. Odell dismisses the Kansas River sand dredging permits at DeSoto and west as not being viable and being too distant from the market in the future. Neither is true. A moratorium on river dredging in the DeSoto stretch due to river bed degradation will likely be lifted according to same terms of the EIS conditions which imposed the moratorium since the river bed has already accreted above the rules of the EIS.

Presently, sand from river dredging at Lawrence from our permits has and continues to be sold competitively across the southern part of Kansas City, being closer to the markets than the Missouri River sand operations. Likewise in the past, we have produced concrete and asphalt sand from the DeSoto area at comparable costs from both pit dredging and river dredging operations. We have supplied high specification sand and gravel competitively to multiple sources as far away as Joplin and Springfield at costs less than Missouri River sand.

Mr. Odell contests the draft EIS as follows:

Page 2-43 Paragraph 1
"With an available capacity of approximately 7.9 million tons, the alternate sources would be able to produce the required amount of replacement sand and gravel supplies under all of the alternatives, including the No Action Alternative

The Master's Dredging Company, Inc.
Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

(where dredging of the LOMR would cease entirely)."
We disagree with the available capacity. Much of the 7.9 M tons available is not even concrete sand. Gravel is not what we are making and is not even the issue. Almost all of the alternate sources are in remote locations. There would be a shortage of trucking and the increased costs would be close to $8.00 a ton. Under these conditions, no one would likely bid any MoDOT work for fear of shortages. We have not seen any proven impacts in this DEIS that justify sand shortages and additional construction costs in excess of $60 million a year. There are not satisfactory alternate sources in existence. Therefore, any significant reduction of MO River dredging below market demand must include a phasein period of five years to provide adequate time to develop sustainable alternatives.

Almost all of the above statements are false. The draft EIS on Page 2-43 Paragraph 1 is correct. *"With an available capacity of approximately 7.9 million tons, the alternate sources would be able to produce the required amount of replacement sand and gravel supplies under all of the alternatives, including the No Action Alternative (where dredging of the LOMR would cease entirely)."*

- **There is more than 8 million tons per year available from alternative sources for the Kansas City market, in fact off river pit operations alone can supply the market for many years into the future.**
- **There would be no "shortage of trucking" nor "increased costs" since the pits are closer to the majority of the Kansas City market than Holliday's Riverside and Randolph Missouri River plants.**
- **There will be no "sand shortages or additional construction costs in excess of $ 60 million a year" for MDOT or other projects with substantial pit supplies.**
- **There are decades of exploitable sand pit reserves in the Kansas City metro to replace Missouri River dredged sand under the No Action Alternative of the DEIS. We alone own reserves for a 50 year supply of the whole market.**
- **Lastly but most importantly, there is <u>no</u> need for a phasein period of any length of time to develop sustainable alternatives. Two pit operations have already started and are offering sand at prices below the Missouri River dredged sand. We also have one zoned sand pit location and anticipate second one.**

Beginning on page 6 of his letter, Mr. Odell falsely denied the validity of the DEIS's conclusions that alternative sand supplies are available to supply the total Kansas City market.

Page 2-55 Chapter 2
"Alternate sources to the LOMR in order to meet regional needs for sand and gravel."
The only realistic and already existing alternate source to supplement LOMR dredging is

The Master's Dredging Company, Inc.
Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

flood plain pits next to the Missouri and other rivers. Our following comments relate only to the Kansas City area and were originally submitted under DR2 PD10 Data Collection. A summary follows:

- Holliday Sand has extensive experience in flood plain mining in the KC area since 1990.
- Costs are significantly higher than river dredging – estimated in our detailed analysis at $4.22/ton higher cost.
- Flood plain mining sites within 20 miles of the market area are rare as they conflict with federal levees, water wells, and other more desired land uses.
- Land not excluded by the above barriers is usually not for sale.
- There are two existing sand pits on the East edge of the KC market already supplying a portion of the market. They would deplete in 10 years if they had to replace all the Missouri River dredged sand in KC. They have struggled to annually produce more than 400K tons of inferior quality sand. Their limit would not exceed 1 million tons (up to 3 million tons would be needed).
- Any additional pit sites in the area could potentially impact drinking water well quality and federal levee protection. All the pits are in the recharge area of the Liberty and Independence municipal drinking water wells. The groundwater in the area already contains TCE solvent from the Lee Chemical Superfund Site nearby.
- The aquifer becomes permanently exposed to evaporation from the remaining lake. This is an ongoing loss of valuable water.
- 56 to 84 acres per year would be needed to replace Missouri River Dredging in the Kansas City area alone.
- Permanent loss of prime farmland – trading pit sand for food is not wise. We estimate an annual increase in loss of crops would be 21,000 bushels of corn (in 20 years that would add up to 4.4 Million bushels lost – that could have fed 15,000 people for those 20 years!)
- The DEIS somehow purports that new pits will be closer to the market. Just the opposite is the case in Kansas City.
- Average truck haul distances would increase 12 miles each way from pit sites versus the two existing KC area Missouri River sites. The impacts of this would be:
    - 20% increase in truck traffic on MO Highway 210
    - 120,000 loads hauled an additional 12 miles each way = 2.88 Million added truck miles on our roads each year.
    - 1.2 Million more gallons of diesel fuel burned every year.
- Stripping pit overburden material is a full time earthmoving operation – over 1.5 Million cubic yards per year would be moved annually to replace all river dredging – burning an additional 260,000 gallons of fuel every year.

The Master's Dredging Company, Inc.

Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

Again, most of these points are false:

- **Although Holliday has worked a sand pit operation in the Missouri alluvium, they have never been able to reach the best part of the sand and gravel reserves (deep, coarse material) because of their inadequate equipment and technology. So their experience and costs in working Missouri alluvial sand deposits are flawed.**
- **Flood plain mining sites within 20 miles of the Kansas City market are not rare and furthermore there are enormous reserves, since they are deep (70-140 feet), without conflict to levees, water wells, or other suitable uses.**
- **Flood plain mining sites are available at the right price.**
- **The two sand operations cited by Mr. Odell can be successfully utilized for full production with the right equipment and technology. We have one zoned sand plant site alone near these two pit operations which alone with our technology could supply all of the present Kansas City sand market for 10 years. Our technology can produce sand freer of lignite and more superior in consistent gradation than Holliday's Missouri River sand operations.**
- **A pit operation with modern dredges poses much less of a potential water contamination event to a water well or river intake system than any river dredging operation. Rivers have a much greater contact with the river aquifer than a pit. Any river contamination has miles of contact for contaminating the ground water and water intakes. Also, pit operations have a series of levees to prevent ground water contamination from storm water events.**
- **Rainfall in the Kansas City area is almost equal to the surface evaporation of a pit. Further, a pit increases the aquifer water capacity by 500 % from the non-dredged alluvium, absorbing large volumes of water from the aquifer during rainy seasons and replenishing the aquifer during droughts, favorably moderating the hydrological cycle.**
- **Proper mining of the deep sand and gravel reserves in the Missouri River alluvium will only require about 40 acres of land per year to supply the whole Kansas City market, not 56-84 acres as Mr. Odell contends.**
- **Many more orders of magnitude of farmland are lost annually to land development than would be lost to sand pit operations if all of the Kansas City sand market came from pit operations. Properly done, these sand pits make excellent residential and commercial sites, as well as more rustic lakes and wetlands.**
- **The new sand pits are nearer to most of the market than the present Missouri River sand plants since they are geographically closer to the majority of the Kansas City market.**
- **Because of their closer geographical location to the Kansas City metro market, trucking costs are less for the off river pit operations than the river sand operations, not more expensive as Mr. Odell states.**

The Master's Dredging Company, Inc.

Dredging Contractors
P.O. Box 9, Lawrence, KS 66044
(913) 583-3335

- **The gravest of errors by Mr. Odell is comparing the costs and environmental impacts of pit operations to river operations. Holliday's high pit costs and environmental impacts are based on its past inferior technology and expertise in pit mining.**
- **Pit operations in the Missouri alluvium are superior to Missouri River operations because:**
  - **(1) Almost no overburden needs to be removed since the fines in the overburden are needed to blend with the deep, coarser sand to produce high specification sand. There is little to no overburden cost difference between Missouri River pit and river operations. Any overburden is generally sold at a profit as topsoil.**
  - **(2) Pit operations consume about 70 % less diesel fuel in their sand production than Holliday's Missouri River operations. Holliday's river operation involves a dredge with over 1300 horsepower on the river with a processing plant powered by a substantial diesel generator behind it, push tugs with 1,000 horsepower each, a 250 horsepower loader to discharge the barges, and another sand processing plant often with 300+ horsepower loaders to blend. The river operation will burn 3 times the amount of diesel per ton of sand as a sand pit operation. The fuel consumption of a river operation creates significantly higher costs and environmental impacts than a pit operation.**
  - **(3) A pit operation needs only three people per shift for production whereas a river operation will need 8-12 people to operate each shift. There is a substantial difference in labor costs between Missouri pit and Holliday's river operations.**
  - **(4) The Missouri sand pit operations are located on major highways, away from residential and commercial properties, and according to traffic studies indicate that they create no more truck traffic, road wear, or congestion than the river sand plants. For instance, traffic studies on highway 210, cited by Mr. Odell, show that traffic would only be increased by 2 % to supply from these pits all of the present sand market on the east half of Kansas City.**
  - **(5) Sand pit operations require less capital investment and maintenance, especially for equipment on the river, than river operations.**
  - **(6) The virgin sand and gravel in sand pits is superior in quality and gradation to the refilled sand river bed material for a river operation like Holliday's. The pit sand is easier and less expensive to process with a lot less waste than the refill river sand.**

Sincerely,

David Penny
President

Missouri Sand Company LLC
4401 N Cobbler Rd
Independence, MO 64058

February 11, 2011

RECEIVED
REGULATORY BRANCH
2011 FEB 15 PM 2:47

Mr. Cody Wheeler, Regulatory Manager Project Manager
U. S. Army Corps of Engineers
Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, Missouri 64106-2896

Re: Mike Odell's letter concerning the Missouri River Commercial Dredging EIS dated September 6, 2010.

Dear Mr. Wheeler:

This letter is a response to the letter that Mr. Mike Odell has submitted for public review concerning the Corps of Engineers Missouri River Dredging EIS (DEIS).

I want to state from the outset that my letter is not concerned with the merits of the DEIS or EIS. I am not an engineer nor do I claim special knowledge which lends itself to debating whether dredging is good or bad on the Missouri River. However, I do have a financial interest in Missouri Sand, one of the Pit Operations that Mr. Odell refers to in his letter to the Corps .

Let's examine some of Mr. Odell's statements in the proper light, "which is to say", let's examine his statements with a balanced view.

On Page 5-6, of his letter Mr Odell states the following:
"There are at least three good reasons why all permitted sand is not being dredged on the Kansas River and would not be available as an alternate source for MO River dredging:
1. The permit is suspended because the degradation limit has been reached and it would not be prudent to attempt to relocate in a degrading reach (such as Topeka and DeSoto).
2. There is insufficient demand in the local market because of the current economy. Once the economy recovers the sand will be needed within its local market and would not be available as a MO river alternative source.
3. The permit is all or partially depleted and the operator is waiting for the river to refill the deposit so the entire permitted tonnage can be dredged someday.

Another reason, is that Kansas River sand west of De Soto is located too far from the MO River market to be a practical alternative for even the KC market.

(Claude's Response)

Mr. Odell states that there are three reasons why all permitted sand is not being dredged on the Kansas River and would not be available as an alternate source for MO River dredging;" He actually lists four reasons.

- There is more than enough sand for the current market and enough sand for the future market even if one includes the 1.4 million tons lost or taken from the Missouri River. That sand tonnage can be supplied by the Flood Pit operations and the new pit that Holliday will be opening soon in Shawnee Kansas.
- When you add in the Penny Family deposits along Highway 10 in Johnson County one can see clearly that Mr. Odell's reasoning is faulty.
- He further states as far as sand being supplied west of Desoto as being " too far from the Mo River market to be a practical alternative". Right now sand is being supplied to a Ready Mix supplier in Olathe with sand from the East side of Topeka. Not to mention that sand is being supplied to the KC Market from Lawrence.
- Because of the recent price increases on sand in the KC Market, the hauling of sand to the market has made it possible.

He goes on to say, continuing on Page 6

"We disagree with the available capacity. Much of the 7.9 M tons available is not even concrete sand. Gravel is not what we are making and is not even the issue. Almost all of the alternate sources are in remote locations. There would be a shortage of trucking and the increased costs would be close to $8.00 a ton. Under these conditions, no one would likely bid any MoDOT work for fear of shortages. We have not seen any proven impacts in this DEIS that justify sand shortages and additional construction costs in excess of $60 million a year. There are not satisfactory alternate sources in existence. Therefore, any significant reduction of MO River dredging below market demand must include a phase in period of five years to provide adequate time to develop sustainable alternatives"

(Claude's Response)

The remote locations that Mr. Odell calls into question are viable: in as much as most of the hauling for many of these remote locations is as the Sand Trucking industry would call "back hauls" wherein a trucker picks a haul at both ends of the truck route. A good deal of the business in sand sales results in "back hauls" both coming to Kansas City and leaving Kansas City.

Mr. Odell's point that there would not be any companies willing to bid on MoDot work for fear of shortages are, at best, wildly imaginative in scope.....or ridiculous. Contractors will always find a way to fulfill contracts and as we already stated above there is ample reserves in the Kansas City market to fulfill any material needs for Modot work.

The increased trucking cost of $8.00 a ton because of using alternative sources.....is a peculiar statement. Where does he come up with $8.00 a ton? Based on the variables the numbers he quotes can't be used as a baseline cost model for trucking or for that matter the increased cost of $60 million.

These numbers, like all numbers used in any Costing Estimate for a Construction Market needs to be backed up with substantive data and as such Mr. Odell does not give any back up data now or in his past arguments to merit real consideration.
The Phase in period that Mr. Odell states as "five years" would again, give Holliday Sand the time and opportunity to construct the pits that they have planned off the Kaw River in the Bonner Springs area or Shawnee, Kansas.

As always and in most cases when one door closes another opens and in this case "when one source ends another will open". The KC market has seen many sources open and close in the last 30-40 years. One example comes to mind with Stewart Sand & Gravel when they stopped producing Missouri River sand in the early 60s. The Kaw River system was then utilized and dredging companies (new companies) sprang up to fill the market with Holliday Sand becoming the dominant player in the sand & gravel market.

So, if one looks out on the KC Market, notwithstanding Mr. Odell's view point, we can see there are ample sand reserves to fulfill the market needs for now and in the future.

Again on Page 6 of his letter he goes on to say:

Page 2-55 Chapter 2
Mr. Odell further states in his letter to the Corp.

"The only realistic and already existing alternate source to supplement LOMR dredging is flood plain pits next to the Missouri and other rivers. Our following comments relate only to the Kansas City area and were originally submitted under DR2 PD10 Data Collection. A summary follows:
• Holliday Sand has extensive experience in flood plain mining in the KC area since 1990."

This is incorrect as Holliday Sand has had several pits in operation both on the Missouri River and on the Kaw River prior to 1990. This is simply inaccurate.

"• Costs are significantly higher than river dredging – estimated in our detailed analysis at $4.22/ton higher cost."

This statement is also incorrect as excavation cost are not near what Mr. Odell has stated and is actually almost half that: of course if a supplier uses outside contracting services then they would have to put profit in the cost for excavation. However even with outside contracting services his costing numbers for excavation is high.

"• There are two existing sand pits on the East edge of the KC market already supplying a portion of the market. They would deplete in 10 years if they had to replace all the Missouri River dredged sand in KC. They have struggled to annually produce more than 400K tons of inferior quality sand. Their limit would not exceed 1 million tons (up to 3 million tons would be needed)."

This statement is incorrect, the existing reserves by both the existing pits and lets call them by their proper names: Missouri Sand and Mid America Sand both have reserves well in excess of what Mr. Odell has stated. More to the point...how does he know what reserves the two existing pits have under their control?
He states that both existing pits have struggled to produce 400K of inferior sand. Again, also incorrect... both in the numbers he uses as to the ability to produce and the quality of sand that we have produced. Both existing sand operations have certified test results to verify the quality of the sand.
Since Mr. Odell is neither a surveyor nor a certified Lab we can only guess how Mr. Odell has come to these conclusions.

"• Any additional pit sites in the area could potentially impact drinking water well quality and federal levee protection. All the pits are in the recharge area of the Liberty and Independence municipal drinking water wells. The groundwater in the area already contains TCE solvent from the Lee Chemical Superfund Site nearby."

Anyone who has petitioned for a permit by any of the regulatory bodies in the KC Metro knows all too well that permits are not given without due consideration for all the elements that Mr. Odell brings up in his statement and thus his comments are not credible. In short they have no merit.

"• The aquifer becomes permanently exposed to evaporation from the remaining lake. This is an ongoing loss of valuable water."

Where is the data to support this claim? To my knowledge Mr. Odell is neither an engineer or a hydrologist and thus we should take the statements as speculation at best.

• 56 to 84 acres per year would be needed to replace Missouri River Dredging in the Kansas City area alone.

Again: where is the data to support this...speculation?

• Permanent loss of prime farmland – trading pit sand for food is not wise. We estimate an annual increase in loss of crops would be 21,000 bushels of corn (in 20 years that would add up to 4.4 Million bushels lost – that could have fed 15,000 people for those 20 years!)

This comment is my favorite and one I go back to and read with a great deal of amusement. I didn't realize that Mr. Odell was so concerned with the loss of prime farmland? First: ask anyone who has farmed in the flood plain in the Missouri River and they will tell you that farming in the Missouri flood plain is dicey business at best. This statement is so ridiculous it rises to high humor.' "Trading pit sand for food is not wise'"...again Mr. Odell wears many hats: surveyor, hydrologist and now Agrarian Economist. I was wondering though, while being impressed with his many talents how he came up with the 21,000 bushels. I have several flood plain friends who farm and they would love to subscribe to Mr. Odell's prophesies since he can predict with such uncanny accuracy the annual returns such as these on the flood plains of Kansas City. Again, where is the data to support these figures?

"• Average truck haul distances would increase 12 miles each way from pit sites versus the two existing KC area Missouri River sites. The impacts of this would be:

o 20% increase in truck traffic on MO Highway 210

o 120,000 loads hauled an additional 12 miles each way = 2.88 Million added truck miles on our roads each year.

o 1.2 Million more gallons of diesel fuel burned every year."

Again, where does Mr. Odell get these figures and why doesn't he share with us the backup data to support such claims? I would assume that he is referring to the two existing pit sites: which would be Mid America Sand and us-Missouri Sand and if this is true why not go ahead and state it.

As it is and if one didn't know the limits of the sand market in Kansas City one could easily be alarmed at the additional mileage. However, it would only affect that trucking on the east side of Kansas City and those customers from Main Street on East. Main Street being the approximate dividing line for appropriate distance that we can economically haul the sand we produce unless of course we have the infrequent customer that is outside the usual market zone. On the whole most of our business is within economic distance for our customers and their related trucking. So, when one looks at the "big picture" and not the myopic picture that Mr. Odell would have us believe we can see quite clearly that Mr. Odell's arguments are at best.....weak.

When he says that additional 1.2 million gallons will be burned if MO River Dredging is curtailed- one has to ask themselves, where is the data? Again Mr. Odell plays fast and loose with the facts and the elusive data that he doesn't credit?

"• Stripping pit overburden material is a full time earthmoving operation – over 1.5 Million cubic yards per year would be moved annually to replace all river dredging – burning an additional 260,000 gallons of fuel every year."

This could be another of my favorite arguments that Mr. Odell has made concerning Flood Plain Pits. His statement that "stripping pit overburden material is a full time earthmoving operation" is correct but what he doesn't tell you is that since 1990 Holliday Sand has been continually stripping overburden, either in the Missouri River Flood Plain or off the Kaw River system. This means that Mr. Odell either refuses to accept the fact that Holliday Sand has been the largest mover of overburden, on pit sites, ever in Kansas City or he would like us to accept on face value that he has conveniently forgotten his role in the excavation of overburden in the KC Metro Area. Holliday Sand moved the overburden on the very project we are now operating out of (Missouri Sand) which was originally owned by Clarkson Construction and then operated by Builders Sand and now us-Missouri Sand.

I would like to know when Mr. Odell became so concerned about the diesel used in the earth moving operations: he certainly wasn't when Holliday Sand moved overburden at Liberty Bend operations or Plant 7 (Shawnee location just east of Coleman Implement from KS Highway 7) or the new pit operation planned and zoned next to the existing sand plant Holliday Sand Plant #2. If Mr. Odell wishes to criticize the movement of all this overburden from Pit Operations then I should think he would be canceling Holliday's plans to open up the pit that they have planned and thus save all of us the "260,000 gallons" of fuel that could be used more effectively if not surreptitiously for the Kansas City area farmers. Again and again one has to ask where Mr. Odell gets these figures.

Mr. Odell in all his proclamations has one thing right: stripping pit overburden is a full time operation-he should know he's been doing it for approximately 21 years and doing it inefficiently for 21 years. What is disappointing is that he only wants to generate those facts that favor his view point and those that benefit from those views which are the one and only.... Holliday Sand.

Further on Page 7-8 he writes:
Existing Sand Pits in KC
"We have contacted several of our customers that have tried sand from a local sand pit that is an alternate source for Missouri River sand in KC.
The concrete sand customers remark that there is excessive lignite in the pit sand - resulting in pop-outs and unsightly stains on floors, driveways and pool decks. Others comment that there are excessive fines in the sand that make it difficult to pump and to finish – because it is too sticky. Extra fines also require more cement to obtain the same compressive strength, a significant increase in cost."

Let's review the facts in this last statement: Where are these customers that he cites above? Are they from the same "cherry picked" customers that he has handpicked. I have no knowledge of excessive lignite. Our tests certainly don't show any of this and by the way the tests I'm referring to are certified tests. What is disturbing are his allegations, shaded as they are and trying not to call out the respective companies such as it is.....Mid America Sand and Missouri Sand, respectively. To my knowledge both of our companies have equipment and expertise in removing lignite. Our company for one has not one single occurrence where our sand has been recognized as causing "pop-outs" or "unsightly stains" on any concrete that resulted from our sand being sold for residential or commercial.

If one didn't know better one would go "Oh my goodness gracious that Pit sand from those two existing Pit Operations is bad. "Bad...bad". Well for one as I have mentioned earlier our sand and that of Mid America sand has been accepted by both the State of Missouri and the State of Kansas. In addition our respective sand products have gone into major infrastructure projects both in Kansas and Missouri such as the new Paseo Bridge project and state and commercial projects.
What he doesn't tell you is that Holliday Sand has had the same issues with lignite and "excessive fines" as we all do and that he doesn't state the many concrete projects that Holliday Sand has had to pay for in the course of doing business and selling sand from the Missouri River System.
Anyone producing sand either from a Pit operation from an alluvial deposit or the Missouri River system will have occasions when sand will be out of spec and lignite in the sand is an ever present concern.
Mr. Odell needs to cite his sources to make a credible argument that our sand is not of the quality suitable for quality compressive strength concrete. We have the certified tests to attest to the viability of our sand processing and will be happy to supply any credible and interested customer the documentation to back up my statements.

"A second sand pit has started up. They are only able to market their sand by hauling it to the other competing sand pit and mixing it with their product, evidently due to excessive lignite."

What second sand plant".... I guess he thinks the readers of his letter, like himself are clairvoyant and can easily understand what he's talking about. Again (and again) Mr. Odell has cherry picked the facts that he wants to us believe and again his statements are not only inaccurate but false.

The incident that he's referring to did happen but the facts surrounding the incident of hauling sand to the "other sand plant" are not even close to being accurate.

His statements concerning us (veiled as they are) are almost libelous and more to the point false. This would be laughable if it weren't for the potential harm these statements could do the employees and business of Missouri Sand and Mid America Sand.

The facts are, again "cherry picked" to impugn and could destroy the reputation of businesses that are in direct competition with his Missouri River Dredging operation(s).

The facts concerning the "hauling of sand to the competing sand plant" are as follows:
We (Missouri Sand) were in the process of "tuning in" our plant and as Mr. Odell knows we had just completed the construction of our plant. We had set out several hundred tons of MODOT sand and specified for the same. Our neighbor, competitor and friends down the street (Mid America Sand) were in need of our sand and thus we sold it and not because it was out of spec. They in turn did "rerun" the sand for their purposes. Mr. Odell would have everyone believe that our sand is inferior so as to make his point. He picks out the one incident, grasping at whatever facts are available so he can make his point even if those facts are fallacious.

The reasonable person should ask: how would Mr. Odell know there was excessive lignite in the sand? Did he have access to the reports? Point in fact there was no excessive lignite in the sand sold to Mid America Sand and he knows it. The fact that he would make such an egregious statement is testament alone to the desperation he must go to make his point.

"The asphalt sand customers remark that pit sand is much finer and sucks up more asphaltic cement oil, increasing their costs up to $5.00 per ton of asphalt. Another asphalt contractor reportedly had a problem with the paver's belt stopping because the mix was too sticky."

Again: to quote a favorite saying" where's the beef". No facts are stated and no data given.

"These problems are indicative of most pit sand from the Missouri River bottoms. We used to operate a pit in the same locale and we had the same problems, especially with excessive fines and silt in the sand."

True enough...Holliday Sand did operate (as stated earlier) the same pit that we are operating in. What Mr. Odell doesn't state is that they, unlike us, used a different processing model. Our process, unlike that of Holliday's is based on an entirely different process and thus comparisons can't be made. Holliday indeed had problems with excessive fines...we do too but we process differently and in my opinion more economically. What Mr. Odell doesn't tell you is that they gave up on our site (Liberty Bend) because the Asphalt Spec in the Kansas City Market for MODOT changed and they started hauling out of their Randolph Plant. Again Mr. Odell likes to cherry pick his facts and again we must consider the source and his lack of substantive facts for a true and realistic review of his argument or in this case- the lack there of.

"No one prefers to buy pit sand. It is not the same quality as river sand and would result in a marked decrease in the quality and increase in the costs of construction in KC. Pit sand production at this time is limited by the slowed construction market. However, even at today's limited demand we hear that the sand pits have had difficulties keeping a stockpile of concrete sand on hand. One customer commented that even if changes in quality were made they would not want to return because of concerns of inadequate capacity and stockpiles."

At this point most people reading this article get the fact that I don't agree with Mr. Odell. Also one wonders where he gets his facts. Although humorous Mr. Odell's repeated lack of facts makes me smile. He's counting on the readers of his letter to actually embrace some of his "nonsense and lack of facts". He assumes the average person, certainly someone outside the industry, would be unable to discern the validity of his statements-no matter how farfetched they are.

Mr. Odell is counting on the average person and for that matter the Corps of Engineers not critiquing his statements. The sand and gravel business is what I like to call an arcane business. In other words it's a business that most people don't know about or for that matter really care to know about. It is a commodity business and most of the consumers don't know or really care where the products come from.
When he says that people "don't prefer pit sand", again he's stretching or grasping for acceptance of his point of view.
There was a time when a contractor who was knowledgeable, would specify Kaw River sand over sand supplied from the Missouri River Sand regardless of who produced it. The Concrete Industry and Producers set very tight specifications for the quality of the materials that go into making concrete. So by the very nature of the present industry standards one cannot sell sand that doesn't meet the specifications that the industry sets out: making moot Mr. Odell's ridiculous statements about the pit sand being "too fine". If this were the case why is it that anyone would be purchasing our sand? The KC market is not large and word of an inferior product would spread very quickly and thus we would have no customers purchasing our product.
Mr. Odell, in my opinion has made some very outlandish claims concerning the viability of our sand as being viable for the construction market.

Impacts

The impacts of the alternate supplies have not been adequately evaluated. Any negative impact of Alternative C is met or exceeded by the negative impacts of the Alternate Sources, such as flood plain or mining in stream beds. Both of these alternate sources necessitate trucking sand further to end users. This is contrary to our local, regional and national goals and would be an irresponsible solution.
River dredging is sustainable at the correct level (below bed material load levels).
Flood plain mining is not sustainable. It forever uses up priceless agricultural land and developing wetlands.
The River delivers sand directly into the cities near major highways. Flood plain pits are out of town so the sand must be hauled tens of miles on county roads that were not designed for heavy truck traffic.
The River has already removed all soil and overburden and classified the sand. The flood plain pit requires a full time earthmoving operation to strip the overburden and even then

there is 15 feet or more unusable fine sand that is not found in the River. The cost of land, stripping, wasted fines and reclamation add another $4 per ton cost.
The added emissions from pit mining were not adequately investigated. The added sand trucking and dirt stripping, hauling and piling result in a tremendous increase in fuel consumption and the subsequent emissions. Pit mining should be a last resort.
Contrary to the DEIS's reduction in the cost of sand ($-68M net), we estimate the annual increased cost of replacing river dredging with pit mining at $28 Million ($4/ton) a year increasing as the pit mines are depleted and move farther out of town. This is significant money and it will not solve degradation, and may not even reduce it where existing MO River channel scour is too great to allow any sand to settle out and recover the bed.

(Claude's Response)

The salient message in all the above is this: the pit operations (such as ours) are in complete competition with the River Dredging as an alternative source for sand. This whole business that transportation costs will skyrocket because of the distances that will need to be traveled is in a word nonsense. When did his organization have any consideration for their customer's transportation costs? He does sound good for his argument if no one with an understanding of the market didn't know his companies motives. More to the point his argument is downright silly and inaccurate.

As far as the emissions go, the river operations that Holliday runs are 2-3 times more "fuel intensive" as the pit operations. If you don't believe me go out and look and count the number of pieces of equipment operating on the Missouri River both at the Randolph Plant and the Riverside Operation and I'll let the public decide who is burning more fuel. If Mr. Odell is indeed concerned with diesel emissions, why not shut down both dredging operations on the Missouri River and save us all some fuel.

Again where does Mr. Odell substantiate his use of $28 million as an increase in cost to the Market? If he would site his sources on this then we might give these numbers some credence but he can't and so he does what most imaginative folks do "they make up the numbers" to fit their particular argument.

What is most disconcerting is that the numbers, the facts and the illustrations that he paints should be viewed with a great deal of skepticism as he represents a company that has a lot at stake with the reduction and perhaps interruption of Kansas City Metro River dredging as we know it.

I can't say whether the claims made by the Corps of Engineers are correct in their studies. I'm not qualified to comment as I have stated earlier that neither Mr. Odell nor I are engineers.

What I do know is this: there has been a great many companies make their money off the Missouri River going all the way back to the steamboats offloading people and products. Most of those companies are no longer with us. The Missouri River does not belong to any one entity it belongs to the people on both sides of the Stateline and to the people upstream and downstream with issues. Holliday Sand has made a great deal of money on the Missouri River and for that matter the Kaw River its tributary. I can understand Mr. Odell criticizing the Corps for the potential loss of commerce on the Missouri River but what I don't agree with is the statements made to disqualify those other entities trying to make a go of business off the River. If his statements were correct then this critical response would not be necessary. His comments about our operation (though he didn't call out our company by name) are totally without

foundation in truth or fact. In short, he has cherry picked his facts to make his argument. Mr. Odell should stick with his principal criticism of the Corps' current DEIS study and let us run our business(es), leave the current Pit Operations alone and let us forge our business success or failure to our own destiny and fortunes.

Since Mr. Odell felt like he needed to draw Missouri Sand and Mid America Sand into his argument with the Corps then he will have to bear up under the scrutiny of his false and disingenuous statements. Such as: Holliday Sand has moved more topsoil than any other producer in Kansas City and furthermore they continually move topsoil and have plans to move topsoil in their future pit operation in Shawnee. His whole argument regarding the problems relating to Pit Operations in the light of Holliday Sands current pit operations in the KC Metro are hypocritical and to those who know the market all the more laughable.

One point Mr. Odell did make that is true and that is the loss of jobs because of the reduction or elimination of dredging in the KC Stretch. This indeed would be unfortunate and no one especially in this present market and KC in particular cannot be moved by the prospect of a loss of jobs and that is a viable concern. Here again if Mr. Odell is concerned with the loss of jobs why isn't he concerned with his company's efforts to eliminate the many jobs in trucking. How many independent truckers and company truckers have been put out of work because of Holliday's Material Transport Co taking or eliminating in many cases the many jobs in transporting sand in the Kansas City Area. If Mr.Odell is in need of a compassionate cause why is there a need for Holliday Sand to haul their own sand and other commodities and place many of these individual drivers and company drivers out of work? How many workers and independent companies, not to mention families are out of work because of Holliday's domination of the market? The cost of the elimination of competitive trucking is immeasurable and many people in the industry are asking, "How much is enough". Holliday has the dominant market share for sand sales. Now it has the dominant position in transporting sand and other aggregates, so isn't it fair to ask.... How much is enough?

Thank you, Mr. Wheeler, for allowing us to present our point of view and provide a response to Mr. Odell's concerns.

Sincerely,

Claude Attebury
Missouri Sand Company LLC
4401 N. Cobbler Rd
Independence, Mo.64058

KSR&C No. 10-08-044

6425 SW 6th Avenue
Topeka, KS 66615

Kansas

phone: 785-272-8681
fax: 785-272-8682
email@kshs.org

Kansas Historical Society

Sam Brownback, Governor
Jennie Chinn, Executive Director

March 2, 2011

Cody Wheeler
Regulatory Project Manager
U.S. Army Corps of Engineers
601 E. 12th Street, Room 402
Kansas City, Missouri 64106-2896

RECEIVED
REGULATORY BRANCH
2011 MAR -8 PM 3:17

RE: Final Environmental Impact Statement (EIS)
Missouri River Sand and Gravel Dredging
Atchison, Doniphan, Leavenworth, and Wyandotte Counties

Dear Mr. Wheeler:

In accordance with 36 CFR 800, the Kansas State Historic Preservation Office has reviewed the final EIS, prepared to assess the effects of sand and gravel dredging from the Missouri River in Kansas. As indicated in our comments on the Draft EIS, channel degradation and its associated impacts to cultural resources (primarily through tributary head cutting) remains our main concern. Given the information presented in the Final EIS, we agree that adopting the Environmentally Preferred Alternative within each segment of the Missouri River where dredging is proposed will prevent or minimize direct and/or indirect impacts to cultural resources associated with tributary head cutting. Our office concurs with the determination of no adverse effect for this undertaking.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214) or Kim Gant at 785-272-8681 (ext. 225).

Sincerely,

Jennie Chinn, Executive Director and
State Historic Preservation Officer

Patrick Zollner

Patrick Zollner
Deputy SHPO

Holliday
SAND AND GRAVEL COMPANY
9660 LEGLER ROAD
PH: (913) 492-5920 LENEXA, KS 66219-1291 FAX (913) 438-0200

3/8/11

RECEIVED
REGULATORY BRANCH
2011 MAR 10 PM 1:56

Mark D. Frazier
U.S. Army Corps of Engineers, Kansas City District
Regulatory Branch
601 E. 12th Street, Room 402
Kansas City, Missouri 64106

Dear Mark:

We thank you and the other staff members who met with us and graciously listened to our requested modifications to the EIS Preferred Alternatives.
Please consider the following as a written confirmation of the points we presented at that meeting on March 3, 2011. You advised us at that meeting that there must be real data supporting requests that deviate from the EIS Preferred Alternatives. The following comments either quote or are based on the EIS itself.

I. We have requested that 310K tons be moved from St. Joe to the KC Segment. This would be similar to Alternative 'B' bed load during drought years.
We ask this because we believe the EIS does not mandate strict adherence to Alternative 'A' or 'B' tonnage because:

- Alternatives 'A' and 'B' were developed from approximations.

From EIS page 2-48, 1st paragraph:

> *"In segments that are stable or only slightly degraded, St. Joseph and Waverly, dredging removed **approximately** 10 percent of the bed material load. These results are shown in Table 3.4-19 in Section 3.4. Using this information as guidance, dredging levels for Alternatives A and B were developed."*

- There is no evidence presented that dredging at a different percentage of the bed load, such as a 12% or 17%, in St. Joseph or Waverly would result in objectionable degradation in KC. (After all, St. Charles has been allotted 46%.)
- Alternative 'A' is a worst case scenario based on record low flows (drought years) (drought was 2000-2007, Alt 'A' flows based on 2000-2009)

From EIS 3.4.4.5 on page 3.4-41:

> *"During the recent drought (2000–2007), similar water conservation actions were implemented, with **record low river levels** from October*

through December and a 30-day shorter navigation season (USACE 2006)."

- New reach limits (300,000 tons per 5 miles reach) are being adopted and are the stated justification of maintaining status quo dredging in the degrading Jeff City and St. Charles Segments. Not only is the reach limit being used in KC, but is required even after moving most of the KC quota 19 miles upstream.

II. Holliday has asked for at least 800K tons in Waverly and if we are restricted further in the future any reduction should also be allotted Holliday in Waverly. We ask this because there is justification within the EIS to increase tonnage in the Waverly Segment:

- The EIS granted the maximum tonnage in Waverly as it is an aggrading segment.
- However, since there has been little demand for dredging there to date, the status quo (Alternative 'C') turns out to actually be less than Alternative 'B'.
- Waverly's Alternative 'B' of 1.14MM tons (770K for Holliday and 370K for Capital) is not sufficient to replace Holliday's reduction in the KC Segment.
- Alternative 'B' in Waverly is significantly less of the bed load percentage-wise than what is being allowed in other segments that have significant degradation.
- **If we could dredge the same percentage of bed load in Waverly, an aggrading segment, as has been proposed by the Corps with Alternative 'C' in St. Charles, a degrading segment, Waverly's Alternative 'C' would be 2.32MM tons annually (1.71MM / 840K x 1.14MM).**

Conclusion:

Holliday should not be required to dredge at Alternative B levels (15% of the bed load) in the stable and aggrading reaches such as St. Joe and Waverly, when Alternative C, at twice the annual rate, is being allowed to all the other dredgers in their degrading reaches.

We believe that there are concrete environmental reasons for slight deviations from the worst case EIS Alternative 'A'. They are:

- The EIS states with each Alternative that actual improvements in degradation from dredging reductions may or may not happen due to the inherent scouring design of the BSNP (see page 4.2.6 Alternative A).
- Rates of degradation have slowed and dramatically reversed in portions of the KC Segment (see page 3.4-76, 3rd paragraph and Figure 3.4-24). Contributing to this is:
    - The 2007 lowering of dikes in the KC segment closer to the original 1980 BSNP height criteria.
    - End of the System drought (2000-2007)
    - 50% tonnage reduction in commercial dredging in the KC Segment

- Severe economic impacts to Holliday Sand's operation. The investment and operation costs to produce and tow sand at distances greater than 20 miles renders our Riverside facility unprofitable.
- Significant economic impacts to the Kansas City metro due to:
    - Loss of 20 or more union sand plant jobs from the closure of the Holliday Sand & Gravel Riverside Facility
    - Loss of up to 100 union jobs due to the loss of a competitive source of sand for the concrete and asphalt plants located near the Riverside facility.
    - The absence of an economical alternate sand source for the downtown area.
- Remote sources of alternate sand needed to replace Riverside (one of, if not the largest sand plants in the state of Missouri) will result in:
    - Increased construction costs
    - Accelerated depletion of sand sources needed for other areas
    - Increased truck hauling distances and reduced commercial zone truck payloads resulting in an INCREASE of approximately 1.8 Million truck miles per year (1.6M tons/22 tons per load x 25 mile round trip) and the inherent congestion, road deterioration, fuel consumption, diesel fuel emissions.

We ask that the Kansas City District grant us the requested minor revisions to the Preferred Alternative in our Segments:

1. **Move 310K tons from St. Joe to KC – no one can profitably tow sand 19 to 24 miles on the swift Missouri River.**
2. **Increase tonnage in the Waverly Segment to 800K tons – only an increase of 30K tons.**

Please consider the following:

- Our requested volume totals 2.20 MM tons per year.
- Your offered Preferred Alternative averaged 2.434 MM tons per year (included two transition years at 1.2MM in KC).
- Holliday Sand has averaged 3.3MM tons per year from 2000 to 2009.
- Our requested KC Segment tonnage would be 850K tons per year.
- Holliday Sand has averaged 2.65 MM tons per year in the KC Segment from 2000 to 2009.
- Our request reduces us **66% reduction** in Kansas City
- NO OTHER DREDGER IS BEING REDUCED AT ALL!

At all times, Holliday Sand has been reasonable and cooperative in the mission to improve degradation. Please confirm that we have taken the right posture by approving our very reasonable and justifiable requested modification to the Preferred Alternative.

LATHROP & GAGE LLP

DAVID A. SHORR
DIRECT LINE: 573.761.5005
EMAIL: DSHORR@LATHROPGAGE.COM
WWW.LATHROPGAGE.COM

314 E. HIGH STREET
JEFFERSON CITY, MISSOURI 65101
PHONE: 573.893.4336
FAX: 573.893.5398

March 24, 2011

VIA E-MAIL TRANSMISSION
cody.s.wheeler@usace.army.mil
AND FEDERAL EXPRESS

Mr. Cody Wheeler
Regulatory Project Manager
USACE, Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, MO 64106-2896

Re: Comments on the Missouri River Commercial Dredging Final Environmental Impact Statement

Dear Mr. Wheeler:

The undersigned represents the existing dredgers on the Missouri River, including Holliday Sand & Gravel Company, LLC; Capital Sand Company, Inc.; Con-Agg of MO, L.L.C.; Hermann Sand & Gravel, Inc.; Limited Leasing Company (St. Charles Sand Company); and J. T. R., Inc. (Jotori Dredging); hereafter referred to as "dredgers."

On September 7, 2010, the undersigned submitted an extensive comment letter on the Draft EIS (DEIS) on behalf of the dredgers. The letter included 80 pages of comments, both general and specific, and extensive appendices. Upon review of the Final EIS (FEIS) and Chapter 10 with regard to the reconciliation of public comments, we have determined that the majority of our comments remain unanswered and not addressed in the context of the FEIS. As such, we resubmit the comments dated September 7, 2010, by reference, in response to the FEIS.

We specifically readdress concerns regarding the FEIS sections on economics and hydrology and geomorphology. These sections constitute the underpinnings in which the Record of Decision and permits will be based. We continue to object to the rationale provided in these sections as we find them deficient, with flawed presumptions and, in some cases, with flawed statistical analysis. Attached to this letter are comments relating to the economic evaluation (see Appendix A) and the hydrology and geomorphology analysis (see Appendix B) presented in the FEIS. We note that some documents that

represent background are available for the first time in the FEIS and were not available in the DEIS review period. Resumes of the two technical reviewers were provided in the appendix to the DEIS comment letter.

For the reasons so stated, we believe that the FEIS inappropriately narrows the availability of Missouri River sand due to inaccurate economic presumptions and analysis, and inappropriate hydrologic and geomorphologic presumptions and analysis, thereby restricting the decision-making capacities of the Corps. In addition, legal questions presented to the Corps as part of the DEIS process have not been addressed. These include the issue of denying the States of Missouri and Kansas their natural resource assets. Finally, the Corps fails in this FEIS to address or reconcile the overwhelming loss of sediment that has resulted from the construction of the main stem dams and reservoirs and the Bank Stabilization and Navigation Project and what efforts will be taken to enhance the amount of sediment provided to the Lower River as a result of their construction.

For the reasons so stated, and incorporated by reference from our previous comment letter, we once again request the Corps revise the FEIS to address our concerns.

These concerns may also be weighed in reaching the Record of Decision on this action. We strongly encourage their consideration within the discretion afforded the Corps in this process.

On behalf of the existing dredgers on the Missouri River, I am

Very truly yours,

LATHROP & GAGE LLP

By: David A. Shorr

DAS/jf
Enclosures

APPENDIX A – ECONOMICS

Review of the
Missouri River Commercial Dredging
Final Environmental Impact Statement

by Edward Howard Robb
Professor Emeritus, University of Missouri, Columbia

Economics Review of the
Missouri River Commercial Dredging
Final Environmental Impact Statement

My original comments on the Draft EIS for commercial dredging on the Missouri River consisted of the following seven issues.

1. The choice of the primary market area to be analyzed by the EIS is not consistent with actual markets now served by dredging operations on the LOMR. As a consequence, the EIS underestimates the importance of this source of construction sand and gravel production in Missouri.

2. The EIS fails to accurately distinguish between the supply and demand for sand versus the supply and the demand for gravel. The shortcomings of this oversight are most pronounced in the discussion of alternative sources of sand if the No Action alternative was adopted. To the contrary of the results in the EIS, there is no reasonable certainty that there are alternative sources of sand available in Missouri and the surrounding states to replace the estimated 6.4 million tons currently produced from the LOMR. As a result, sand would have to be shipped from even more distant sites than those listed in the EIS resulting in even higher delivered prices.

3. Because individual mine output and capacity are unknown, the EIS estimates these data using a series of debatable assumptions, particularly with regard to the availability of alternative sources of sand.

4. Distances between mines and demand centers are estimated using great circle distances - or as the bird flies. This technique probably underestimates true travel distances and costs by 20 to 25 percent for most mines. The true travel distances for some mines could be considerably longer due to the limited number of bridges across the Missouri outside of the St. Louis and Kansas City metro areas.

5. The possibility of new sources of sand in Missouri being established near existing urban centers is extremely small. As a result, the long-run cost of sand may be even higher that the short term estimates contained in the EIS. Further, even if such new sources could be developed, off-river mining is subject to land reclamation expenses (the EIS estimates these at over $4.00 per ton) resulting in even higher long-run costs for sand, concrete and asphalt.

6. The economic impact analysis contained in the EIS fails to quantify the effects upon the two industries (concrete manufacturing and construction) that would be most seriously impacted by the meteoric price increases that would result from the adoption of the No Action alternative. The resultant short-term increase in the cost of sand, and as a consequence, both concrete and asphalt prices, would be devastating to the Missouri economy - gross state product would decline by over $300 million with concomitant losses in earning and jobs of $86 million and 2,830.

This is in stark contrast to the economic bonanza purported in the EIS which only directly analyses the effects on the mining and truck transportation industries.

7. The loss of the LOMR as a significant source of sand would also have very detrimental effects on the environment and other externalities. Average shipping distances would increase from 16.3 miles to103.9 miles, based upon the $0.20 per ton mile shipping cost estimate included in the EIS. Total shipping distances for sand would increase by 558 million miles causing a significant increase in green-house emissions, not to mention additional traffic and road wear.

The following are my comments to the responses for issues one through five. The references in parentheses refer to the Comment ID contained in Chapter 10 of the Final EIS prepared by Entrix, Inc.

1. Definition of "primary market area" (43B-001, 41-001, 43-112, 43B-008, 43B-009, 43B-010 43B-011, 43-045)

The original comments on this topic were intended to underline the fact that primary market areas are much broader in rural areas than in major metropolitan ones, and the choice of a single measure of market area is inappropriate. While the choice of the 25 mile buffer may well be appropriate for the St. Louis and Kansas City areas, which have high population densities, a broader geographic definition would provide a more realistic view for the less populated regions in Mid-Missouri.

Contrary to the contention of the authors, the commentary on improved economic efficiency if LOMR supplies were reduced, thereby lowering transportation costs, is intuitive if one accepts the premise that this would naturally force buyers of sand to purchase supplies from closer sources. The obvious question is why they do not already utilize this option.

This commentary concludes with the statement "the fact that some dredging operations ship their products outside the primary market area indicates that LOMR supplies are demanded for certain uses irrespective of cost ... nor the preferences of individual points of demand." This response defies all logic. If one accepts the premise that the users of sand operate in a competitive market and attempt to maximize profit then there cannot be any non-economic rationale for users utilizing a more costly source of sand. The obvious reason that users of sand choose the more costly alternative is intuitive - there is no alternative sources of sand.

2. Supply of sand versus supply of gravel (43B-002, 43B-016, 43B-021)

Perhaps the most critical assumption of the EIS is that the mix of sand and gravel at alternative sites is similar that produced from the LOMR. While data limitations may have necessitated this assumption for the analysis prepared by Entrix, there is an abundance of evidence (see the previous comment) that it is not true. Gravel is a

plentiful commodity in Missouri, sand is not. In the absence of this assumption the entire section of the EIS on alternative sources of supply and capacity is irrelevant.

3. Calculation of mine capacity (43B-022, 43B-0236, 43B-024, 43B-025)

This section of the draft and final EIS underscores the nearly total lack of factual information utilized in analyzing the No Action or other alternatives. The following is an inventory of known and unknown facts.

Know information:

a. Statewide production of sand and gravel for 2006 and 2007.
b. Production of sand and gravel from the LOMR for 2006 through 2009.
c. Location, acreage and permit levels at individual mines.

Unknown information:

a. Statewide production of sand and gravel for 2008 and 2009.
b. Production of sand and gravel at individual mines.
c. Production of sand at individual mines excluding dredging operations on the LOMR.

Aggregate capacity was estimated by assuming that aggregate output equal to the 2006 peak level is attainable by either increasing the output per acre or increasing the number of acres in production. The potential output of individual mines was then estimated by allocating the aggregate capacity based upon the relative size (acreage) of individual mines.

Although this approach is certainly inventive, allowing the creation of a complete matrix of alternative production sites and potential output out of nothing more than mere surmise, it is surely inadequate to be the basis for such far-reaching decisions as those proposed in the No Action or other alternatives.

4. Distances between supply points and demand centers (43B-004)

While the authors acknowledge that using straight-line distances underestimate the potential increases in transportation costs, there was no attempt to quantify this important component of their analysis. Given the ready availability of sophisticated GIS programs this is a shortcoming that should have been addressed since it is critical to the calculation of the delivered cost of sand and other environmental impacts not discussed in the EIS.

5. Development of new supply sources near demand centers

There are many references in the EIS in regard to this issue. Under the No Action or other alternatives that restrict dredging operations on the LOMR, it is assumed that in the longer run new sources of sand would be developed in or near major demand centers so as to minimize transportation costs. The probability that such supply sources could be developed is given scant attention and is implicitly assumed to be one.

Even if this contention was true, which it is not, the capacity of these new sources would be finite. Unlike the LOMR which provides a replenish able source of sand, new pit mine operations would not. Thus in addition to being able to discover and develop new, magical sources of sand, it would become a continuous quest. The probability that such new supply sources exist, let alone be developed in the major metro areas of Missouri, is much closer to zero than the blithe contention that it is a certainty as presented in the EIS.

APPENDIX B – HYDROLOGY AND GEOMORPHOLOGY

Review of the
Missouri River Commercial Dredging
Final Environmental Impact Statement

by Charles E. Patterson, Ph.D., P.E., CFM
Allgeier, Martin and Associates, Inc., Hydro Division

HYDRO DIVISION

HYDROLOGY AND HYDRAULICS EXPERTS

ALLGEIER, MARTIN and ASSOCIATES, INC.

Consulting Engineers • Hydrologists • Surveyors

ROLLA OFFICE

112 West 8th Street
Rolla, Missouri 65401

Phone: (573) 341-9487
FAX: (573) 341-9486

March 22, 2011

Lathrop & Gage
Mr. David Shorr
314 E. High Street
Jefferson City, MO 65101

RE: Missouri River Commercial Dredging
Final Environmental Impact Statement (Final EIS)

Dear Mr. Shorr:

The initial review of the *Final EIS*, with emphasis on *Chapter 10 - Response to Comments on the Draft EIS*, has been completed. A comparison of the text of the *Final EIS* to the text of the *Draft EIS* has been prepared and a digital copy of the comparison will be transmitted electronically to you. Comparisons were also made to data used in selected tables in the *Final EIS*, the *Draft EIS*, and to the underlying reference material (some of which were unpublished and unavailable at the time of the *Draft EIS* review).

Numerous and significant changes were found between the *Draft EIS* and the *Final EIS*, specifically, data from reference sources that were unavailable during the review of the *Draft EIS*. Data errors were also identified in the *Final EIS* relating to calculations made using the referenced material. These changes and errors raise questions as to the validity of the conclusions presented in both the *Final EIS* and *Draft EIS*.

The *Final EIS* did not show changes based on the comments in my letter to you, dated August 31, 2010. An overview of my comments to *Chapter 10 Responses to Comments on the Draft EIS* is shown below. The Detailed Explanation to Responses is enclosed.

Overview of Detailed Explanation to Responses

Change Neutral: 43-A001

No Change: 43-A002, 43-A006, 43-A007, 43-A008, 43-A009, 43-A010, 43-A014, 43-A015, 43-A016, 43-A017, 43-A021, 43-A022, and 43-A023

Not Listed: A024

Change Irrelevant: 43-A003, 43-A004, 43-A019, and 43-A020

Response Irrelevant: 43-A005

Response Irrelevant - No Change: 43-A011, 43-A012, 43-A013, and 43-A018

Analysis of Environmentally Preferred Alternative

The final conclusions as presented in Section *2.7 Environmentally Preferred Alternative* of the *Final EIS* centers around an option that recommends setting the maximum dredging intensity to 60,000 tons/mile/year. This number was developed from *Figure A-45* in the *Final EIS* Appendix A section *A.9 Linear Regression Analyses of Local Bed Degradation*. The recommended 60,000 tons/mile/year was determined from data and computations that were not in the *Draft EIS*. Thus rendering *Chapter 10 Responses to Comments on the Draft EIS*, my Detailed Explanation to Responses, and the majority of the *Final EIS*, irrelevant.

The methodology for determining the 60,000 tons/mile/year is not standard practice. The independent and dependent variables appear to exhibit circular logic. Selection of the upper limit of the Confidence Interval (CI) for the recommended dredging intensity limit is unusual. It is my opinion the statistical procedure used is flawed and arbitrary.

The following 8 items identify why I have concerns:

1. The choice of using 2007 (a period of below average flowrates) instead of using 2009 data (average to above average flowrates) as stated on page A-101 and used to determine the 60,000 tons/mile/year limit, appears arbitrary. My review of USGS gage data shows the mean annual flowrate data for 2009 at Kansas City was below the average annual flowrate for the period 1958-2010 and the Hermann gage shows above average annual flowrate for the same time frame. The logic presented for using only the 2007 data is flawed and is not consistent with the USGS data.

2. From what can be determined (documentation is not clear) from the *Final EIS*, the HBED data was taken during the active dredging season. This indicates the active dredge holes were included in the survey and will show up in the HBED survey as a hole, or using the definition applied in the *Final EIS*, "local bed degradation."

3. The data used on the vertical axis in Figure 3.4-34 (Figure A-43) and Figure 3.4-35 (Figure A-44) is determined for two separate points in time, HBED from 2007 and HBED from 2009. An arbitrary average elevation on either side of the active dredge locations equal to the length of the active dredge reach was used as a baseline to compare bed elevation changes at the active dredge locations. Why was one dredging reach length chosen instead of ½ a reach length up and ½ downstream or maybe two times upstream and two times downstream, or any other arbitrary number or distance? It has not been calculated or verified to determine if a change in results would occur based on the length of the upstream and downstream comparison reach.

4. The horizontal axis is the tonnage dredged per segment per mile averaged over time (1998-2007) as used in Figure 3.4-35 (Figure A-44) and Figure A-45. The amount dredged could be directly related to the dredge holes that were surveyed in the HBED survey depending upon timing of the dredge holes and the survey. This would be circular logic and would nullify the graph. For example, the overall summary of Figure 3.4-35 indicates that if there was an active dredge hole during the survey, then the graph shows the greatest differential between the dredging reach and the upstream and downstream reaches and thereby shows a high statistical probability that the dredgers dug a hole, also know as "localized bed degradation."

5. Using an average annual volume of sediment removed for the dredging reach for the years 1998 to 2007 and comparing it to one point in time (2007 HBED) is troubling. Bed elevation data from each year (1998-2007) would be needed to create a coherent relationship.

6. Using the 95% Confidence Interval (CI) to determine the allowable potential average annual dredging for a reach using Figure A-45 is not possible. As part of this review, an attempt was made to duplicate Figure A-45, but the plotted data on Figure A-45 of the *Final EIS* does not match the data shown in tables A-21 and A-22. Our recreation of Figure A-45, plotted using the data from Table A-21 and A-22, is enclosed.

7. The independent and dependent variables of Figure A-45 of the *Final EIS* need to be reversed. A graph using the values from tables A-21 and A-22 using the reversed variables was created by AM Hydro (see enclosed). This graph, *Dredging Intensity vs. Local Bed Elevation Change*, shows the 0 degradation value of 43,100 tons/mile/year with an upper 95% CI of 62,800 tons/mile/year and the lower CI at 23,100 tons/mile/year. However, as stated above in item 4, I do not believe this is a proper argument because it represents circular logic.

8. With 10 data points on Figure A-45, each point has a significant impact on the resulting linear regression. Any of the 10 data points may be in an area that has not been dredged in 9 years or may have been an active dredge hole at the time of the 2007 HBED survey. This puts into question drawing conclusions from a sample of these 10 data points.

Conclusion

The Environmentally Preferred Alternative presented in Section 2.7 and as stated in Section 6.2.1 is, "The regression results suggest that dredging up to approximately 60,000 tons/mile/year is a level of local dredging intensity that is reasonably unlikely to result in local bed degradation."

For the reasons previously stated, the conclusions of the Environmentally Preferred Alternative are erroneous and are not supported by data analysis.

Please call if you have any questions.

Sincerely,
Allgeier, Martin and Associates, Inc.
Hydro Division

CHARLES EDWARD PATTERSON NUMBER E-27241 3/22/2010

Charles E. Patterson, Ph.D., P.E., CFM

Enclosures: Detail Explanation to Responses
Figure A-45 (as revised by AM Hydro)
Dredging Intensity vs. Local Bed Elevation Change (by AM Hydro)
Fig 3.4-16, comparison Draft EIS to Final EIS
Fig 3.4-17, mark-up

Detailed Explanation to Responses
Page 1
March 22, 2011

Definitions and abbreviations:

CRAE - Comment Response Authors/Editors (Those who wrote the Response to the Comments to the *Draft EIS* as shown in Chapter 10 of the *Final EIS*)
NOT LISTED - The comment number was not listed in the Response section.
NO CHANGE - No change has been identified between the Draft EIS and the Final EIS as a result of this comment.
RESPONSE IRRELEVANT - The Response to the comment was irrelevant, changes may have occurred in the EIS, but the changes did not relate to the comment.
CHANGE IRRELEVANT - The comment was acknowledged and a change(s) was made to the *Final EIS*, but the change(s) did not address the true meaning of the comment.
COMMENT NEUTRAL - The comment was acknowledged and a change did occur in the *Final EIS*, however, the change may or may not have been a result of our comment.

Comment 43-A001: COMMENT NEUTRAL

The *Final EIS* was changed to indicate previously unpublished report by Heimann et al. 2010. The CRAE's explanation however, did not address the comment "... use of unpublished data and reports as sources precludes effective review ...". For example, the aforementioned unpublished report has been published and identified in the *Final EIS* as a report by Heimann et al. 2010.

Production of the *Final EIS* without allowing a review of the supporting data is inappropriate. The comment by the CRAE that "The USACE has cited personal communications or unpublished data only as sources of information for its analysis, not as support for conclusions regarding impacts or their significance." is contradictory. If the analysis was not used to develop conclusions, upon what are the conclusions based?

The supporting data (e.g. Table 3.4-16, and Table 3.4-17) changed significantly between the unpublished data in the *Draft EIS* and the *Final EIS*. This indicates the data used for the *Draft EIS* was preliminary in nature and inappropriate for use in drawing and supporting conclusions.

Data shown in Table 3.4-17 for the "mainstem" are wrong and some numbers are off by a factor of two from the *Draft EIS* to the *Final EIS*. These values were not checked for the *Draft EIS* because the data was not available. Any conclusions drawn using information from Table 3.4-16 and Table 3.4-17 could be wrong. Enclosed is a comparison of Table 3.4-16 and a mark-up of Table 3.4-17.

Comment 43-A002: NO CHANGE

Using the CRP for identifying overall river bed changes relevant to commercial dredging alone in puzzling. If the CRP is a tool to determine flowrates for barge traffic, converting data in to the CRP and then using the CRP to describe the data is circular logic.

From the Corp's Response "... and the 1998 to 2007–2009 data show degradation over that period..." This statement does not match the data provided in Figure in the *Final EIS*. The data presented in the *Draft EIS* as Figure 3.4-21 and in the *Final EIS* as Figure 3.4-22 show otherwise. Digitize the graph and it clearly shows aggradation of the 500 mile reach for the time period of 1998 to 2007 and 1998 to 2009. The data from 2008 was not complete and an overall aggradation/degradation was not determined.

The area between the 1998 to 2007 curve above the "0 Average Bed Elevation Line" is greater than the area between the 1998 to 2007 curve below the "0 Average Bed Elevation Change Line." (334 yr-feet above vs. 199 yr-feet below. This clearly shows aggradation of the sailing line between the years of 1998 and 2007.

Likewise the area between the 1998 to 2009 curve above the "0 Average Bed Elevation Line" is greater than the area between the 1998 to 2009 curve below the "0 Average Bed Elevation Change Line."(486 yr-feet vs. 135 yr-feet) , indicating obvious aggrading of the sailing line between the years of 1998 and 2009. This also indicates aggradation of the sailing line between the years of 2007 and 2009.

Basic data analysis shows that conclusions based on the premise that the sailing line is degrading are erroneous.

Comment 43-A003: RESPONSE IRRELEVANT

The comment citing reference material stating 14 feet of degradation at KC as a result of cut-offs, was ignored.

Comment 43-A004: CHANGE IRRELEVANT

The Response did acknowledge that other factors may potentially causes river bed degradation and additions were made to the *Final EIS*, HOWEVER, the additions were limited to the effects of commercial dredging. The meaning and intent of the comment was to consider the effects of the variation of the flowrates. The material added to the *Final EIS* "...the effects of commercial dredging activities..." and did not address the comment.

Comment 43-A005: RESPONSE IRRELEVANT

Comment 43-A006: NO CHANGE

Generalized term of "flow" was not changed and is used in the *Final EIS* to describe more than "discharge." Discharge in itself also has various meaning of either volumetric flowrate or volume.

Comment 43-A007: NO CHANGE

Generalized term of "sediment" was not changed and is used in the *Final EIS* to describe suspended sediment, total sediment and material bed load.

Comment 43-A008: NO CHANGE

The statistical probabilities of flood events on the Missouri River are readily available and can also be calculated.

Comment 43-A009: NO CHANGE

Yes data is available directly from the USGS and is where we acquired the data to check the data reported in the *Draft EIS*. The data was reported incorrectly in both the *Draft EIS* and the *Final EIS*.

The CRAE are either not technically qualified to review the comments or they are deceitful. The lack of understanding of basic science or egregious disregard for correcting errors, are both equally troubling. The graph needs to be changed to normalize Stage or adjusted Stage because the USGS did not measure stage for the entire period of record shown in the graph nor was the same datum used. The scale on STAGE is in feet and scale on ELEVATION is also in feet therefore, a 28 ft differential on the Stage axis must be a 28 differential on the Elevation axis this is an error that should have been corrected in the *Final EIS*. Their response to this comment is intellectually indolent.

Original comment did refer incorrectly to Figure 3.4-20 the Response correctly identified the graph as 3.4-24.

The plotted "data cited or plotted flow rates" was a plot of the data from the reference material, as cited in the *Draft EIS*, so the CRAE Response that the data was not reviewed because it was not presented in the comment letter is an intellectually indolent response.

Comment 43-A010: NO CHANGE

The Comment states the data presented in the graph could not be duplicated using the cited reference material. The Response indicates the trend is what is important whether or not it has errors or is reproducible. The Response is erroneous at best.

Comment 43-A011: RESPONSE IRRELEVANT - NO CHANGE

Comment 43-A012: RESPONSE IRRELEVANT - NO CHANGE

Comment 43-A013: RESPONSE IRRELEVANT - NO CHANGE

Comment 43-A014: NO CHANGE

The Response indicates a discussion of the conditions prior to completion of the Missouri River Mainstem Reservoir System was included HOWEVER data from the time period prior to completion of the Mainstem Reservoir System appears to have been used and our comment that this data should not be used was ignored.

Comment 43-A015: NO CHANGE

Comment 43-A016: NO CHANGE

Comment 43-A017: NO CHANGE

The Response tends to agree that many factors effect the LOMR however, the theme of the *Final EIS* and the responses to comments remains constant - ignore anything that is not COMMERCIAL dredging.

> "The EIS analysis focuses on the portion of degradation caused by commercial dredging rather than analyzing the effects of all potential sources of degradation."

Without analyzing all potential significant sources of degradation it is impossible to draw a meaningful conclusion. The sources of degradation and their individual contributions to degradation must be considered if a general conclusion regarding volumes of material to be removed from the river, if overall bed degradation is occurring.

Comment 43-A018: RESPONSE IRRELEVANT - NO CHANGE

Comment 43-A019: CHANGE IRRELEVANT

Comment 43-A020: CHANGE IRRELEVANT

"Because measured sediment load is a function of flows and flows vary over time, comparisons of these data sets must consider the effects of flow variations from year to year." The statement did read "variations over time." was changed to "variations from year to year." This does not provide additional data for analysis, volumetric flowrates can vary from day to day or in some cases, hour to hour.

Nothing was added to the text to address the comment about evaluating the frequency and magnitude of stream discharges associated with sediment transport.

Comment 43-A021: NO CHANGE

Comment 43-A022: NO CHANGE

Apparently the data around bridge piers was used even though the Response indicates these values may not be appropriate.

Comment 43-A023: NO CHANGE

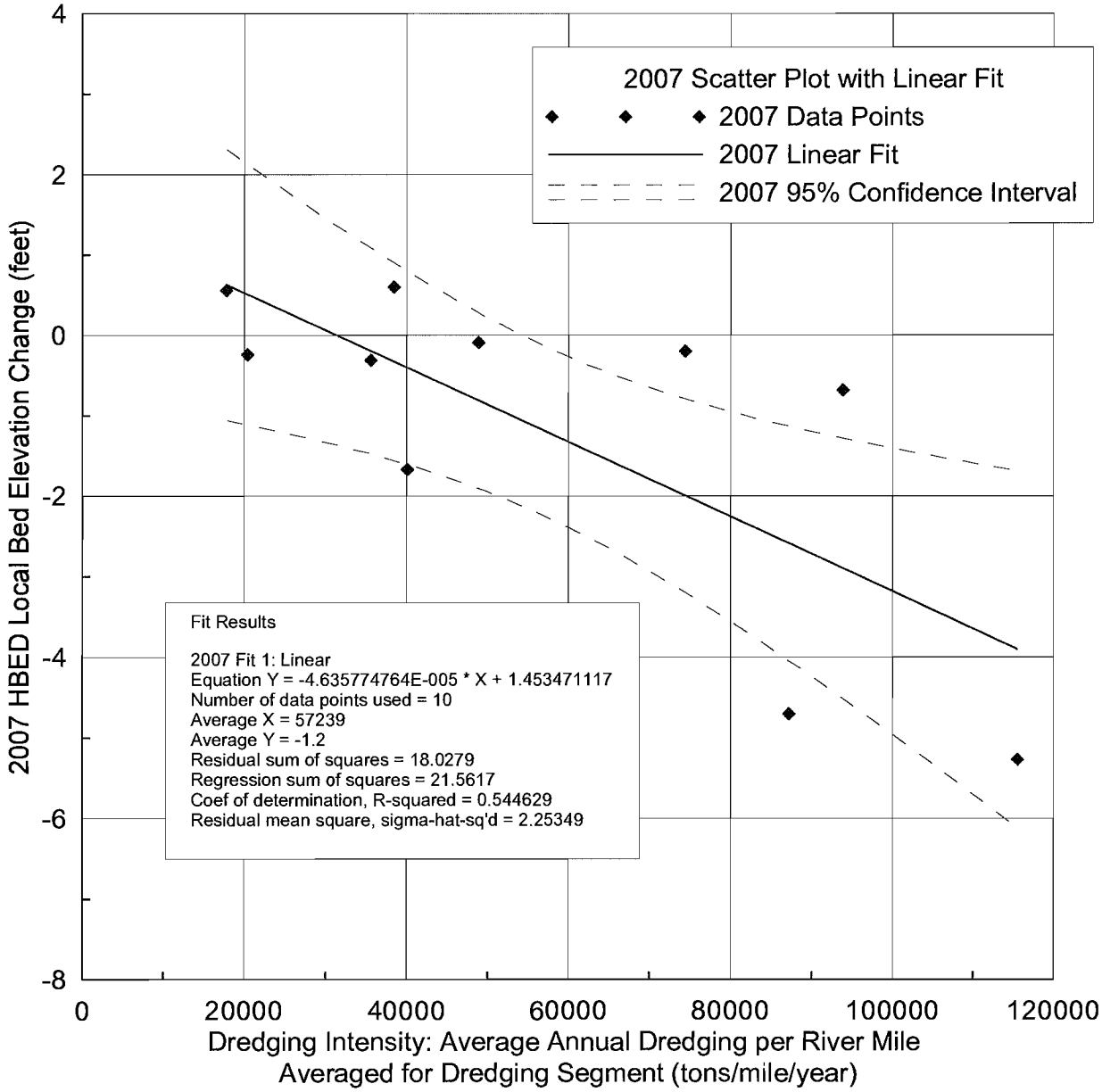
Comment ignored. See Comment 43-A002 above for the Explanation to the Response.

Comment 43-A024: NOT LISTED

No response found for this comment.

Section 3.4.6.3 had a number of changes some may have been the results of comments but more than likely they are changes as response to other commenters such as those made by Jacobson.

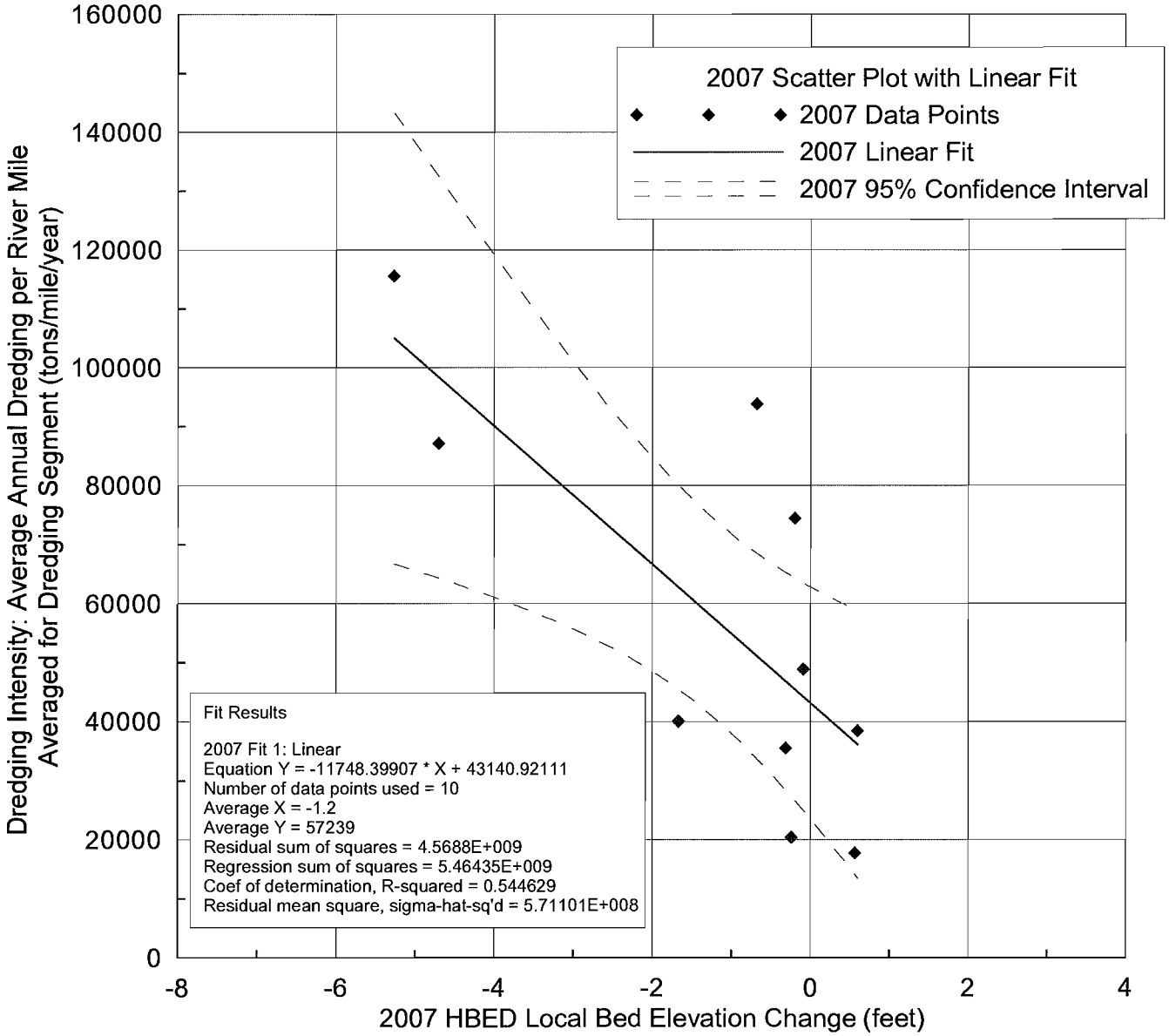
Figure A-45 (as revised)



Hydro Division
Rolla, MO

Data Sources: Table A-21 and Table A-22, Missouri Rive Commercial Dredging EIS, Final EIS, February 2011

Dredging Intensity vs. Local Bed Elevation Change (HBED Local Bed Elevation as Independent Variable)



Hydro Division
Rolla, MO

Data Sources: Table A-21 and Table A-22, Missouri Rive Commercial Dredging EIS, Final EIS, February 2011

Table 3.4-16 Preliminary Estimates of Annual Total Suspended Sediment and Total Suspended Sand Loads (1994–2008)
Comparison of values, Draft EIS and Final EIS

xx,xxx,xxx As presented in the Draft EIS
xx,xxx,xxx As Presented in the Final EIS

	Nebraska City Gage			St. Joseph Gage			Kansas City Gage			Hermann Gage		
Water Year	Total Suspended Sediment Load (tons)	Total Suspended Sand Load (tons)	Percent of Total Sediment Load as Sand	Total Suspended Sediment Load (tons)	Total Suspended Sand Load (tons)	Percent of Total Sediment Load as Sand	Total Suspended Sediment Load (tons)	Total Suspended Sand Load (tons)	Percent of Total Sedimer Load as Sand	Total Suspended Sediment Load (tons)	Total Suspended Sand Load (tons)	Percent of Total Sediment Load as Sand
1994	*26,211,430*	--	--	*23,690,291*	*9,538,417*	*40%*	*30,071,383*	*7,562,101*	*25%*	*52,906,783*	*22,815,078*	*43%*
1994	18,900,000	--	--	26,900,000	8,880,000	33%	35,600,000	11,900,000	33%	58,300,000	20,900,000	36%
1995	*29,085,000*	--	--	*41,501,678*	*11,635,319*	*28%*	*60,883,646*	*9,204,014*	*15%*	*108,788,187*	*27,800,344*	*26%*
1995	46,100,000	--	--	31,900,000	10,600,000	33%	59,000,000	14,200,000	24%	103,000,000	25,600,000	25%
1996	*51,447,590*	--	--	*42,722,155*	*16,176,130*	*38%*	*51,833,151*	*11,496,452*	*22%*	*71,316,053*	*16,648,097*	*23%*
1996	26,200,000	--	--	38,800,000	14,800,000	38%	40,200,000	20,700,000	51%	63,500,000	14,400,000	23%
1997	*41,179,300*	--	--	*62,776,097*	*23,959,685*	*38%*	*89,916,705*	*15,586,251*	*17%*	*100,818,569*	*30,546,649*	*30%*
1997	29,100,000	--	--	60,600,000	22,800,000	38%	94,000,000	31,200,000	33%	96,000,000	27,600,000	29%
1998	*38,692,400*	--	--	*50,433,838*	*16,697,396*	*33%*	*64,962,777*	*11,182,991*	*17%*	*77,723,362*	*22,896,373*	*29%*
1998	51,400,000	--	--	47,700,000	14,700,000	31%	68,500,000	18,000,000	26%	75,200,000	21,000,000	28%
1999	*31,539,700*	--	--	*74,486,708*	*16,006,959*	*21%*	*158,825,288*	*11,311,009*	*7%*	*110,341,112*	*29,901,720*	*27%*
1999	41,200,000	--	--	61,500,000	13,300,000	22%	114,000,000	16,500,000	14%	110,600,000	30,400,000	27%
2000	*14,220,600*	--	--	*16,607,801*	*7,709,083*	*46%*	*18,582,887*	*4,234,603*	*23%*	*14,698,826*	*4,380,979*	*30%*
2000	38,700,000	--	--	15,600,000	6,120,000	39%	16,800,000	5,380,000	32%	14,100,000	4,700,000	33%
2001	*22,966,140*	--	--	*39,802,233*	*9,051,823*	*23%*	*47,313,068*	*6,941,695*	*15%*	*72,344,565*	*15,456,483*	*21%*
2001	31,500,000	--	--	37,400,000	7,400,000	20%	43,200,000	6,000,000	14%	69,200,000	13,900,000	20%
2002	*11,192,140*	--	--	*14,293,862*	*4,607,988*	*32%*	*14,382,525*	*3,482,254*	*24%*	*45,960,346*	*8,007,942*	*17%*
2002	14,200,000	--	--	13,600,000	3,790,000	28%	15,600,000	3,480,000	22%	44,700,000	8,290,000	19%
2003	*14,685,110*	--	--	*20,472,436*	*4,768,702*	*23%*	*18,059,993*	*3,545,394*	*20%*	*10,677,631*	*2,885,998*	*27%*
2003	23,000,000	--	--	20,700,000	3,910,000	19%	17,300,000	3,550,000	21%	11,500,000	3,070,000	27%
2004	*16,315,440*	--	--	*37,872,119*	*5,198,606*	*14%*	*30,676,860*	*5,396,230*	*18%*	*42,544,685*	*9,704,181*	*23%*
2004	11,200,000	--	--	26,200,000	4,840,000	18%	30,700,000	5,400,000	18%	40,500,000	8,920,000	22%
2005	*14,343,880*	--	--	*19,666,152*	*2,847,506*	*14%*	*27,488,343*	*4,301,219*	*16%*	*58,036,214*	*11,506,182*	*20%*
2005	14,700,000	--	--	16,100,000	2,860,000	18%	30,200,000	4,300,000	14%	51,900,000	13,900,000	27%
2006	*9,329,500*	--	--	*11,453,830*	--	--	*15,044,932*	--	--	*8,175,245*	*2,408,194*	*29%*
2006	16,300,000	--	--	11,500,000	--	--	15,000,000	--	--	8,880,000	2,770,000	31%
2007	*22,087,110*	--	--	*26,905,009*	--	--	*56,276,239*	--	--	*36,822,836*	*13,975,437*	*38%*
2007	14,300,000	--	--	29,200,000	--	--	56,300,000	--	--	36,200,000	10,200,000	28%
2008	*33,751,800*	--	--	*35,652,160*	--	--	*46,550,446*	--	--	*55,505,753*	*26,694,551*	*48%*
2008	9,330,000	--	--	39,300,000	--	--	59,200,000	--	--	88,600,000	20,400,000	23%
Average	*25,135,000*			*31,800,000*	*9,500,000*	*30%*	*46,373,000*	*11,717,500*	*25%*	*58,145,000*	*15,070,000*	*26%*
Average	25,136,476			34,555,758	10,683,135	29%	48,724,550	7,853,684	18%	57,777,344	16,879,169	27%

[25,742,000] corrected calculated average, reported incorrectly in the Final EIS

Values in red are the corrected values as calculated from the reference document (Heimann et al. 2010). Hermann shows the greatest error and may change the premise of the EIS argument. The source document was unpublished for the DRAFT EIS.

Table 3.4-17 Estimated Average Annual Suspended Sediment Loads and Suspended Sand Loads for Tributaries to the Lower Missouri River with Comparisons to the Nearest Gage on the Mainstem (Mainstem Gages are Shaded)

Location	Missouri River Mile	Location of Gage on Tributary[a]	Period of Record	Average Annual Suspended Sediment Load (tons)	Average Annual Suspended Sand Load	Suspended Sand / Suspended Load (%)	Nearest Gage on the Mainstem	Tributary Percentage of Suspended Sediment Load of Nearest Gage on the Mainstem[b]	Tributary Percentage of Suspended Sand Load of Nearest Gage on the Mainstem[b]
Missouri River at St. Joseph	448	N/A	1981–1993	85,539,358 57,992,000	18,298,368 17,952,000	21% 31%	N/A	N/A	N/A
Platte River at Sharp Station	391	24	1980–1992	4,813,000	248,000	5%	Kansas City 25 miles downstream	8%	1%
Kansas River at Desoto	367	31	1976–1981	9,102,000	1,321,000	15%	Kansas City 1 mile downstream	16%	7%
Missouri River at Kansas City	366	N/A	1981–1993	58,422,500 49,857,000	18,408,599 11,746,000	32% 24%	N/A	N/A	N/A
Grand River at Sumner	250	36	1976–1992[c]	11,991,000	1,419,000	12%	Kansas City 116 miles upstream	21%	8%
Chariton River at Prairie Hill	239	20	1979–1986	3,675,000	1,244,000	34%	Kansas City 127 miles upstream	6%	7%
Osage River at St. Thomas	130	34	1976–1994	702,000 752,000	313,000 351,000	45% 47%	Hermann 32 miles downstream	0.9%	0.6%
Gasconade River at Jerome	104	104[d]	1978–1992	201,000	51,000	25%	Hermann 6 miles downstream	0.3%	0.1%
Missouri River at Hermann	98	N/A	1981–1993	80,358,495 90,854,000	47,178,924 23,652,000	59% 26%	N/A	N/A	N/A

Notes:

N/A = Not available.

[a] River miles on the tributary from confluence with the Missouri River.

[b] Calculated by dividing the tributary suspended load or suspended sand load by corresponding values at the nearest U.S. Geological Survey gage on the lower Missouri River.

[c] Data from 1993 were excluded from the average due to the extreme values reported from the 1993 flood, which were as much as 200 times the annual average for other years in the series.

[d] This gage is much farther upriver than the other gages and does not represent the majority of the watershed.

Sources: Heimann et al. 2010 for tributary data and Jacobson, Blevins, and Bitner 2009 for mainstem data (shaded).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

MAR 24 2011

OFFICE OF
THE REGIONAL ADMINISTRATOR

Colonel Anthony J. Hofmann
District Commander
U.S. Army Corps of Engineers, Kansas City District
635 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2824

RE: Final Environmental Impact Statement (DEIS) on Missouri River Commercial Dredging, Proposal to Extract Sand and Gravel from the Missouri River, U.S. Corps of Engineer's Section 10 and 404 Permits, Kansas City, Central Missouri and Greater St. Louis , Missouri, CEQ # 20110050

Dear Colonel Hofmann:

The U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Army Corps of Engineers' (Corps) Final Environmental Impact Statement (EIS) pursuant to our authorities under the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act. The Final EIS was assigned the CEQ number 20110050.

The Corps has identified an Environmentally Preferred Alternative (Corps Alternative) in the Final EIS which was not presented as a discrete alternative in the Draft EIS. The impacts of this 'hybrid' alternative are evaluated through analyses specific to the five separate reaches. An assessment of systemic impacts was not presented in the Final EIS. EPA's comments therefore track the reach analyses, but also restate and emphasize this Agency's view that a comprehensive sediment budget, supported by robust research and careful monitoring, is highly desirable for informed future decision-making about Missouri River dredging. In its review of the Final EIS, EPA recommends a conservative approach to regulating the dredging of sand and gravel in the lower Missouri River. Specifically, we recommend the Corps raise the dredging volumes in the St. Joseph segment by much less than is proposed in the Corps' Alternative; reduce the dredging volumes in the Kansas City segment as is described in the Corps' Alternative; apply dredging intensity limits across the entirety of each reach; prohibit cutter heads in the entire lower river;

RECYCLED

limit permits to five years with no extensions; re-evaluate dredging quantities and intensity limits based on bed surveys and infrastructure surveys at the end of each permit cycle; initiate monitoring of tributaries for potential impacts related to dredging pressure in mainstem; and secure priority funding for a sediment budget for the Missouri River.

EPA provided ratings for all five alternatives identified in the Draft EIS, including the proposed action and a no action alternative, as the Corps did not identify a preferred alternative. EPA's ratings for each alternative and our recommendations regarding the need for a conservative approach to permitting dredging in the lower river are included in our September 7, 2010, letter on the Draft EIS. Those comments stressed that additional information is necessary to develop a sediment budget which would account for sediment transport, erosion and deposition in the lower Missouri River. EPA still believes that without a sediment budget, the Corps' development of a sustainable approach to sediment management in the river will remain elusive. Given the lack of precise information regarding what constitutes a sustainable load both throughout the lower Missouri River and within each segment, EPA recommended in our comments on the Draft EIS the issuance of permits based on the most conservative harvest of sand and gravel combined with a moratorium on dredging within the Kansas City reach and requirements to more evenly distribute dredging across all other reaches.

According to data presented in both the Draft and the Final EIS, the lower Missouri River has experienced significant bed degradation (i.e., lowering of the river bed) over the past ten years, with bed loss accelerating in the reach near Kansas City (which has lost approximately four feet since 1995). In addition, the great majority of the sand and gravel extracted from the lower Missouri River comes from three reaches near St. Charles, Jefferson City and Kansas City, which also coincides with the locations of sand plants and the greatest amount of river bed degradation. The Draft and the Final EIS indicate that, as a result of the stabilization of effects associated with operation of the dam system and the channel maintenance project, dredging is the primary <u>continuing</u> cause of bed degradation in areas of the lower river where bed loss is occurring.

The Corps Alternative as described in the Final EIS is a combination of dredging volumes selected from among Alternatives A, B and C specific to each of the five reaches and, if permitted as described, will allow for a combined 16% reduction in the total amount of dredging for the lower river from the current annual average. The Corps Alternative would allow for a 163% increase in the sand and gravel dredged from the St. Joseph segment (Alternative B), a 79% decrease in that dredged from the Kansas City segment (Alternative A) and a 40% increase in material removed from the Waverly segment (Alternative B) compared to existing dredging action. Permitted amounts within the Jefferson City and St. Charles segments would remain

largely the same as currently permitted (Alternative C). The Corps Alternative would permit the dredging of approximately 25% of the river's estimated Bed Load Material (BLM) within the St. Joseph segment, 10% of the BLM through Kansas City segment, 21% of the BLM through the Waverly segment, 44% of the BLM through the Jefferson City segment and 46% of the BLM through the St. Charles segment. The Final EIS identifies that dredging no more than approximately 10% of a segment's BLM should result in zero bed loss and otherwise support a sustainable level of dredging activity. In addition to the designation of a total dredging amount for each segment, the Corps Alternative also includes reach-scale target levels for dredging intensity in tons per mile per year which is intended to address acute bed loss historically measured near sand plant locations and provide more uniform dredging throughout each segment.

EPA still has concerns with some aspects of the Corps Alternative, and, by extension, these concerns would likely carry into the final selected alternative. The Final EIS does not assess the impacts to the entire lower river system, but instead focuses on the impacts of each alternative on each segment. A comprehensive system-wide assessment of the impacts associated with dredging almost 6 million tons of sand and gravel per year from the entire 500 mile reach was not conducted. Lacking a comprehensive sediment budget for the lower river , dredging of sand and gravel volumes significantly greater than 10% of the estimated BLM in segments the Corps believes are largely stable should be carefully evaluated. Absent that evaluation, permitted dredging could merely shift bed degradation from one segment to another. Provisions within the Corps Alternative which would implement limits on dredging intensity within each segment should be applied throughout each segment and not limited to reaches near existing sand plants to prevent creation of new 'hot spots' of bed loss elsewhere.

A sediment budget for the lower river must inform a broader understanding of both the dynamics of sediment transport and the response of river resources to reductions in available sediment bed load material. EPA continues to advocate for a conservative amount of dredging, particularly within those reaches with significant bed loss, while implementing a proper monitoring and assessment plan which would provide the basis for permitting more or less dredging for the next permit cycle. The proposed 163% increase in dredging quantity within the St. Joseph segment should be evaluated with respect to maintaining current segment bed stability and potential downstream effects, with particular emphasis on the Kansas City segment. With regard to the Kansas City segment, EPA believes that the amount of material proposed for dredging under the Corps Alternative is appropriate if combined with measures intended to minimize the potential bed loss in this significantly degraded segment, including: 1) the prohibition of the use of cutter heads in all three upstream segments which could compromise the integrity of consolidated sediment and 2) limiting dredging to less than 300,000 tons per five

mile reach per year throughout the segment, but particularly within River Miles 340 to 400. Further, restrictions in dredging volumes and intensity throughout all five segments support the creation of alternatives that are tempered with respect to the level of information available to quantify the risk in the entire lower river.

I appreciate the time and resources invested by the Corps, in general, and your staff, specifically, in developing a regulatory strategy to permitting sand and gravel dredging in a highly complex river environment under data-limited conditions. I urge you to consider these recommendations in your decision. If you have any questions regarding this letter or our recommendations, please contact me at (913) 551-7006, Dr. Ron Hammerschmidt, Director, Environmental Services Division, at (913) 551-7566, or Joe Cothern, NEPA Team Leader, at (913) 551-7148.

Sincerely,

Karl Brooks
Regional Administrator

cc: Cynthia Giles, EPA Headquarters, OECA
David Hibbs, U.S. Army Corps of Engineers, NWK
Cody Wheeler, U.S. Army Corps of Engineers, NWK
Henry Maddux, U.S. Fish and Wildlife Service, Lakewood, Colorado

March 25, 2011

Re: **NOTICE OF AVAILABILITY OF FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED MISSOURI RIVER COMMERCIAL DREDGING PERMITS**

Mr. Cody Wheeler
Regulatory Project Manager
U.S. Army Corps of Engineers
601 East 12th Street, Room 706
Kansas City, MO 64106

Dear Mr. Wheeler,

Friends of the Kaw, Inc. is a Kansas non-profit, grass roots environmental organization whose mission is to protect and preserve the Kansas (Kaw) River for present and future generations. For over fifteen years our organization has been actively monitoring the sand dredging industry on the Kansas River because of the irreparable damage caused in the lower 52 miles of the Kansas River by in-river dredging as documented in the U.S. Army Corps on Engineers ("COE") Environmental Impact Statement ("EIS") prepared in the 1980s.

Friends of the Kaw opposes in-river sand and gravel dredging on the Kansas River because of the following reasons:

- Damages bridges, pipelines, jetties, dams, weirs and other manmade structures due to bank destabilization;
- Degrades habitat, diminish fish diversity and fish population due to siltation;
- Impairs recreation, navigation and water quality;
- Degrades the riverbed and the shoreline; and

May cause re-suspension and concentrate chlordane, PCB's and other persistent bio-accumulative toxins downstream.

Friends of the Kaw has always encouraged the Kansas River in-river sand and gravel mining industry to move to appropriately located pit locations in the Kansas River Valley and believes this is a viable alternative for the Missouri River sand and gravel industry. We understand that it can be difficult and costly to find suitable locations for pit mining but we believe appropriately located pit mines in the Kansas and Missouri flood plains are the long term answer for the over all health of these river systems and the habitats they support.

We believe that commercial in-river mining of sand and gravel are harmful to any river's ecosystem. River hydraulics, riverbed degradation, river bank stability, threatened and endangered species, infrastructure, local and regional economics and cumulative impacts are all important aspects to consider.

Friends of the Kaw has concerns about the deleterious effects of down cutting on the Missouri River in the Kansas City Reach but we do not want to see restrictions on tonnage caps and locations of dredging reaches that will ultimately lead to increased in-river dredging on the Kansas River. In Chapter 2 "Proposed Actions and Alternatives" of the Missouri River Commercial Dredging EIS, Final EIS page 2-29 it suggests: "Because the quality and material specifications of sand and gravel extracted from the Mississippi and Kansas Rivers are comparable to sand and gravel extracted from the Missouri River, these sources represent a clear option to offset changes in Missouri River supplies, particularly in the urban areas located in the eastern (Kansas City) and western (St. Louis) regions of Missouri." Increased dredging on the Kansas River should not be suggested as a "proposed action or alternative" even in the short term as the Kansas River is just beginning to recover especially in the Kansas City region as that section of the river has been dredged for more than 100 years. Friends of the Kaw understands that balancing the environmental needs of river systems like the Missouri and Kansas Rivers with the economics of sustainable commercial operations for the mining of sand and gravel is very delicate and we appreciate the research and consideration taken by the USACE in this matter.

Sincerely,

Laura Calwell, Kansas Riverkeeper
Friends of the Kaw, Inc.
P.O. Box 1612
Lawrence, Kansas 66044
785 312 7200 or 913 963 3460
riverkeeper@kansasriver.org

Holliday
SAND AND GRAVEL COMPANY
9660 LEGLER ROAD
PH: (913) 492-5920 LENEXA, KS 66219-1291 FAX (913) 438-0200

March 25, 2011

Mr. Cody Wheeler, Regulatory Project Manager
U.S. Army Corps of Engineers
Kansas City Regulatory Office
601 East 12th Street, Room 402
Kansas City, Missouri 64106-2896

Re: Missouri River Commercial Dredging EIS

Dear Mr. Wheeler:

First off, we are very disappointed that our extensive comments provided for the DEIS were dismissed and had no impact on the Preferred Alternatives. We believe our knowledge and experience with dredging sand and of Missouri River conditions were not adequately valued.

Here are just some of our DEIS comments that were evidently ignored:

- KC and most other reaches have been steadily degrading long before any significant amount of dredging occurred.
- More than twice the amount of sand is being scoured from the river bed by the Corps' BSNP dikes structures – as they were designed to do.
- The Corps' own Dredge Hole Study demonstrated that dredge holes do not headcut upstream. This was actual data the Corps gathered and then dismissed.

Until recently we believed that the EIS and/or the Corps would surely modify the Preferred Alternative for the KC Segment. We believed that they would respect our knowledge of our own industry and realize the severe impacts to Holliday Sand, their customers and the construction industry in Kansas City. We believed that they would more than just acknowledge other factors contributing to degradation, such as the BSNP, but would make significant reductions, but would not put us out of business. We have never felt we needed to be concerned about an agenda. But we have realized all along that the same authority that supplied all the un-reviewed data for the EIS, that determined the EIS scope and alternatives, that would cling to the EIS like a preacher to a Bible and

determine the fate of dredging is the same entity that created and completely controls the river channel and the system of dikes that scour the river bottom. The same entity that had not until 2007 maintained BSNP dikes elevations to the design criteria which we contend has exacerbated any degradation caused by the 1993 flood and by river dredging. The same entity that determined that their own dredging of millions of tons in one spot near Line Creek would be OK because it would fill in within months (L385 Levee).

Yes we are very much like a pallid sturgeon – running out of sandy spots to produce, struggling with the excessive river velocity and soon to be extinct.

This ends our editorial comment.

From here on, as opposed to our DEIS comments, we will address those portions of the FEIS (Final EIS) that are of utmost importance to the survival of our business.

Exact quotations from the FEIS appear indented, in quotes and in italics. We have bolded key words for emphasis and easier identification.

Only Holliday is being held to the "minor or slight" impact level.

From FEIS Page ES-6
ES.5.7 Environmentally Preferred Alternative

> *"…The Environmentally Preferred Alternative was identified from among these alternatives by selecting the alternative for each segment that allowed the* ***largest amount of dredging in each segment while keeping the risk of future bed degradation to a minor or slight level.*** *The Environmentally Preferred Alternative is a composite alternative that includes:*
> *• St. Joseph Segment – Alternative B*
>
> *• Kansas City Segment – Alternative A*
>
> *• Waverly Segment – Alternative B*
>
> *• Jefferson City Segment – Alternative C*
>
> *• St. Charles Segment – Alternative C"*

Holliday Sand & Gravel Company is the only Missouri River commercial dredger that is being required to reduce their tonnage.

One would think that is because these reductions, per Alternatives 'A' and 'B', are needed to reduce impacts below the impact level of the other Segments of the Missouri River.

However, a review of <u>Table 4.2-7 Summary of Potential Impacts on Geology and Geomorphology</u>, in regard to the deciding issue stated above from EIS page ES-6: "*keeping the risk of future bed degradation to a minor or slight level",* indicates no such thing!
Holliday is being held to a standard of "slight" (less than 2 feet) impact to bed and water surface elevations, but all other dredgers are being allowed "moderate" (2 – 4 feet) to <u>"substantial" (>4 feet</u>) impacts to bed and water surface elevations. <u>Only Holliday is being held to the "minor or slight" impact level.</u>

Yes, all other dredgers are being allocated sand tonnages that will result in substantial impacts in river Segments that already have significant degradation.

True, degradation is the greatest in KC, but not that much greater (3 feet greater than Boonville and 4 feet greater than Jeff City and Hermann).

One might say, well, we just can't allow any additional degradation in KC. OK, then what about Waverly and St. Joseph where there is zero degradation?

ES6.1 (page ES-7):

> *"The Waverly segment has been stable or aggrading based on river bed elevation and water surface profiles."*

Holliday (and Capital Sand) is being limited to "slight" (0-2 feet) degradation in Waverly. Why? There is zero degradation and zero risk in the Waverly Segment Why can't Holliday dredge as much in Waverly as other Dredgers are being allowed to in Segments that already have 5 to 6 feet of degradation?

This makes no sense to us and we must conclude that Holliday has been discriminated against.

Measured from EIS Figures 3.4-24 – 28 (pages 3.4-75 to 83):

Location of Gage	Total Bed Degradation through 2009
St. Joseph	0 feet
Kansas City	9 feet
Waverly	0 feet
Jefferson City	5 feet
Boonville	6 feet
Hermann	5 feet

Page ES-2, Paragraph2:

> *Recent observations near Kansas City indicate that the rate of degradation is accelerating (USACE 2010b).*

The above statement is not supported by either Figure A-41 or 3.4-25 in the EIS. Both figures depict not only a reduction in the rate, but reversals of the degradation at the KC gage (Fig. 3.4-25, page 3.4-77) and the entire KC Segment upstream of the Gage at 366.1 (Fig. A-41, pg. A-89) since 2007.

ES6.1 (page ES-7)

> *In the Kansas City segment, the river bed and low-flow water surface elevations have dropped 10–15 feet over the past 50 years, with one-half of the degradation occurring in the past 15 years.*

The 10 to 15 feet of degradation described above was actually 14 feet at the KC Gage and that would be from highest ever bed elevation in 1935 to the lowest ever in 2007. The current net degradation in KC is 9 feet (1928 to 2009). (See Figure 3.4-25 on EIS page 3.4-77.)

The worst degradation in the KC Segment is in the reach of RM 385 to 388 where no one has ever dredged! RM 383 is as far as we have dredged (from Riverside) and we have dredged very little above RM 380.

This is how the degradation is described for the other River Segments:

> *The Jefferson City segment has experienced **moderate** degradation over the past 40 years and exhibits the only instance of increase in low-flow water surface elevation among the Project area segments. The St. Charles segment also **has experienced** river bed degradation near the urban area.* . ES6.1 (page ES-7)

OK, "moderate" and "has experienced" describes degradation elsewhere. But in fact by the same measure used in KC, the maximum degradation at both Hermann and Boonville is 8 feet. Why is degradation being overstated in KC and understated in other segments? (See Figures 3.4-27 and 28 on EIS pages 3.4-81 and 83.)

<u>What happens when construction returns to the 2006 level, which it likely will by 2015?</u>

2.3.2.2 Available Capacity of Existing Alternate Sources

From Page 2-40:

> *"Using this approach, an estimated 4.5 million tons of sand and gravel were produced from 2,483 acres of existing open-pit mines permitted by MDNR (without limits on production). An additional 18,000 tons were estimated to be produced by open-pit mines with production limits (less than 5,000 tons per year). Historical production data were used to estimate the available capacity of MDNR-permitted operations. Specifically, an expansion factor was calculated using 2009 production levels (approximately 5.5 million tons) relative to 2006 levels, when production peaked at approximately 10.8 million tons annually. The assumption is that existing operations can produce at least as much sand and gravel as was produced in 2006. The capacity expansion factor is calculated to be 1.94. This factor was applied to open-pit mines*

permitted by MDNR, except those limited to 5,000 tons per year. A comparable expansion factor was calculated for Meramec River operations. For mines with permit caps, available capacity was based on the different between estimated production and permitted levels. ***Based on these assumptions, an estimated 4.4 million tons of available capacity are present in open-pit mines throughout Missouri."***

The proposed reduction of dredging from the Missouri River as stated in the Preferred Alternative will result in the loss of 1.13MM tons of sand per year. This is all from Holliday Sand and is a **minimum reduction** as it is based on the years 2004-2008 that were a recent "average" and not by any means the peak demand years for sand such as 2000 – 2006.

Here is our point: The EIS analysis of Alternate Sources (see the paragraph excerpted above) is based on the premise that since Alternate sources produced more in 2006 than they are now (in 2009) there is 4.4MM tons of production available. That is only a temporary situation!

Back in 2006 everyone was producing everything they could, including the MO River dredgers and all the Alternate sources or pit miners. There is no excess capacity once the economy recovers and pent-up construction demand starts up.

Question:

What happens when construction returns to the 2006 level, which it likely will by 2015?

Answer:

There will be shortages of available sand in Missouri, especially in the KC Metro.

We guess the authors assume we are stuck at present levels of construction permanently. We have been in a severely depressed construction market since 2007. Loss of Missouri River dredging tons will not be available from Alternate sources once they return to 2006 production levels, which they will in the next five or so years – it will happen. The EIS' assumption that excess production from pits is available is irresponsible and cavalier. The "recent and current" 4.4MM tons of surplus production will not be there when it is actually needed.

The first projects to not get sand will be the Missouri State paving projects. This will dramatically drive up paving prices on State projects. Our regular retail customers will be priority. This has been explained to the Corps several times.

Tonnage Shortfalls - even with Alternative 'C' or "Status Quo"
Page 2-42:

"Under the Proposed Action and Alternative C, permitted dredging from the LOMR would meet ***current and recent*** *levels of demand for commercial sand and gravel; therefore, no increase in the use of alternate supplies likely would be needed. With an available capacity of approximately 7.9 million tons, the alternate sources would be able to produce the required amount of replacement sand and gravel supplies under all of the alternatives, including the No Action Alternative (where dredging of the LOMR would cease entirely)."*

Remember: Alternative 'C' is a "current and recent" average (2004-2008) chosen by the EIS as a status quo for the MO River Dredgers. Allowing 2004-2008 tonnages will not meet the 2000-2006 levels of demand that taxed both dredging in the River and existing Alternate sources. 2007 and 2008 were depressed years (and 2009 was in the toilet).
There has been no allocation for long term growth or even a return to long-term average levels of construction. That is irresponsible. Our population is still growing and our infrastructure is in a deteriorated condition! The authors of the EIS evidently are not concerned about the future.

Page 2-43, paragraph 3:

> *"Accordingly, this likely would result in the need for new mining operations to restore long-term equilibrium in the sand and gravel market in Missouri."*

That is all that is said. The EIS authors assume there will be more sand coming from somewhere, somehow. Who knows where it will be and how much the price will increase?

Holliday provided extensive comments and data on the feasibility and cost increases associated with pit sites as we have extensive experience with pit operation. These specific comments seem to have been ignored:

- There are significant difficulties in purchasing and zoning pits anywhere near the metro. All that is addressed in the EIS are permitting issues.
- There are significant siting difficulties in regard to operation near water wells and federal flood control levees.
- There are significant operation cost increases with pits.
- There is significant reduction in pit sand quality resulting in increased cement (and asphalt oil) for concrete which alone increase the cost of using pit sand $5 per ton.
- There will be significant transport cost increases because of the more remote location of pits - $2-4 per ton.
- There will be significant increased traffic congestion, pavement deterioration and exhaust emissions from the increased trucks haul distances. (The authors of the EIS think that the increase in trucking will be a boon for Missouri employment!)

Ignoring these significant impacts is contrary to our Local, State and National transportation and energy goals – it is irresponsible!

<u>Alternative A is not practicable.</u>

2.4 DEVELOPMENT OF ALTERNATIVE ACTIONS

Page 2-46"

> *"In accordance with 33 CFR 325, Appendix B and 40 CFR 1500–1508,* ***this EIS evaluates a range of practicable alternatives to meet the basic and overall purpose of the Proposed Action.*** *Alternatives to the Proposed Action were identified through review of the record of previous*

dredging authorizations; analysis of bed material load of the LOMR and recent and historical degradation; discussions with USACE staff from the Regulatory, Engineering, and other divisions; and an understanding of the broader aggregate market."

The Dredgers were not consulted regarding whether Alternatives A or B were practicable or would meet the overall purpose of the Proposed Action. Alternative 'A' is in fact not practicable and therefore does not meet the overall purpose of the commercial dredgers.

The EIS authors and Corps may have assumed that "something is better than nothing". True, but that is not the purpose and need stated in the EIS.

Alternative 'A' in Kansas City reduces Holliday's annual tonnage from 2.52 Million down to 540,000 tons – a 78.5% reduction (1.98 MM tons). Although tonnage in the neighboring segments is available, it is too little (only 850,000 tons of the 1.98MM) and the 530,000 tons allocated in the St. Joseph Segment under Alternative 'B' is too far from Kansas City. A round trip beyond 19 miles cannot be completed in the 12 hour maximum shift time. This would require towboats with quarters and resident crews. Approximately $6MM capital expenditure would have to be made for only 530,000 tons and increased costs of $3.00 per ton. Again this is not a practicable alternative and will result in the closing of our Riverside Facility requiring even more tonnage to be made up by pits. (We cannot move our dock upstream 19 miles because there is not highway access and it is too far from customers.)

A practicable Alternative would be 850,000 tons in the KC Segment instead of only 540,000 tons (still a 66% reduction in the KC Segment).

Note:

- **The River bed level at KC (and most other river segments) has been aggrading since 2007 at dredge levels in excess of 2MM tons.** (See Figure 3.4-25 on page 3.4-77)
- **For this reason it is not too much to ask for 850K tons in the KC Segment if degradation is currently improving at 2MM tons.**

<u>BSNP</u>
Page 2-47

"While dredging may not be the only cause of bed degradation, data collected over the last 15 years suggest that increased dredging, combined with the BSNP and changes in flow regime, are likely the dominant causes of degradation (USACE 2009b)."

Although the EIS authors and the Corps were gracious enough to admit that the BSNP structures are meant to scour the river bottom and prevent deposition of sand in the navigation channel and are also therefore a dominant cause of degradation, somehow dredging in KC must endure the most severe Alternative that allows any dredging at all.

For this and a multitude of reasons, the EIS needs to state that the Preferred Alternatives were selected and developed with limited data. The interpolation and inherent inaccuracies should certainly allow for some deviation in tonnage with respect to

theoretical impacts. This would be a reasonable and prudent statement since there was no attempt to determine the impact from the BSNP.

In the absence of this in the EIS, it would certainly be reasonable and prudent for the Corps to slightly modify the Preferred Alternative tonnages in order to provide truly practicable alternatives (versus the Proposed Action).

<u>The economic evaluation of alternate sand sources is probably the weakest part of the EIS.</u>

ES.8.2.4 Regional Economic Effects (page ES-15)

> *"The loss of jobs, income, and economic output in the dredging industry would be offset in some cases by increased employment in the trucking industry, as additional supplies would be hauled longer distances from the alternate sources of supply. In response to reduced supplies from the LOMR, new sand and gravel operations likely would be developed in the Missouri River floodplain in the long term. The long-term cumulative impacts associated with new floodplain operations could be a decline in the cost of sand and gravel in the region relative to the use of existing sources because, at least in some areas, new floodplain sources likely would be located in proximity to the areas with the greatest demand. A reduction in the delivered cost of sand and gravel would benefit the construction industry with lower-cost inputs to production."*

This statement is incorrect for the following reasons:

1. Existing River Dredging operations use larger crews of skilled, union operators (5 to 8 operators per shift).
2. Sand pits use fewer unskilled, non-union rural employees (2 to 3 operators per shift)
3. Even with fewer employees, pit sand will cost the customer $4 per ton more due to the added costs of wasted fine sand, land and reclamation costs and increased cement content because of the finer gradation.
4. Delivery costs will be $3 to $4 a ton greater because of the added 10 to 20 mile haul and in the future, pits will not be within the commercial zone so load capacities will be a third less, increasing delivery costs another third.
5. The increase in truck drivers hauling sand back to the City involves nothing but negatives, and the drivers are relatively unskilled and poorly paid compared to urban Operating Engineers.
6. Sand pits are not closer to the end user or market. They are much further from the market. They still must be in the flood plains, but further out of town – 10 to 20 miles further one way.
7. Pit sand hauled on county roads will destroy those roads and require significant expenditures to rebuild them. Rural sand pits are always farther from the main arteries that can handle truck traffic.

ES-15, paragraph 3:

> *"According to the 2010–2014 Missouri Statewide Transportation Improvement Program (MoDOT 2010), highway and bridge expenditures are expected to decline. A continuing decline in*

transportation funding could reduce demand for construction sand and gravel from the LOMR, and could place downward pressure on sand and gravel prices.

This above statement is too myopic - funding is down for everything - but that just postpones the necessary expenditures. Are we not concerned about infrastructure needs beyond 2014? If we aren't, our country might as well post a for-sale sign.

Please remember, the following is stated in the EIS for a reason. It should be part of the decision making.

Page 5-5

5.2.2.2 Bank Stabilization and Navigation Program

"Construction and maintenance of the BSNP have resulted in channelization of the river and straighter and faster flows, leading to a reduced amount of sediment dispersal and reduced accumulation in the channel bottom. ***These factors have contributed to lowering of the river bed and lowering of the average water surface elevations with associated main channel and tributary river bed degradation.***
The river bed degradation results in and contributes to a variety of impacts, such as river bank erosion; tributary headcutting; loss of shoreline habitat; and impacts to infrastructure, such as scouring of bridge abutments and exposure of water withdrawal structures above the water line during low-flow periods."

Page 5-11

5.2.3.1 Missouri River Bed Degradation Feasibility Study

This study should actually be listed under the mitigation section as it will continue to study degradation, determine the root cause and recommend structural corrections. Holliday Sand is committed to participating and supporting the Degradation Study.

In conclusion, without some modification to the EIS Preferred Alternatives, Holliday Sand is being held to a whole different set of standards than all other Dredgers: a 79% reduction in tonnage so there will be no more than a slight impact in KC. In contrast, all other Dredgers are allowed to dredge their status quo and make substantial impacts to the bed and water elevations in their segments. We have requested a 66% reduction in KC and more tons in Waverly to make up for that severe reduction. There is no reason to demand only slight impacts to the Waverly Segment that has zero degradation while allowing substantial impacts to already degraded segments downstream in major metro areas. That is unreasonable and unfair.

We do not like to play this card – we don't normally need to cry foul. We do not want any other dredger's tons to be reduced. We point out this inequity only for the purpose of justifying our very minor requested modifications to the Preferred Alternative necessary

to stay in business, which we have explained once again is the best thing for our environment.

Sincerely yours,

Holliday Sand & Gravel Company
Mike Odell, V.P. Production

From:	Jane_Ledwin@fws.gov
To:	Wheeler, Cody S NWK
Cc:	Hibbs, David R NWK; Jeppson, Matthew P NWK; Charlie_Scott@fws.gov
Subject:	Fw: Missouri River Commercial Dredging Final Biological Assessement
Date:	Wednesday, March 30, 2011 5:20:01 PM

Cody -

Please refer to the March 2011 Biological Assessment for Commercial Sand and Gravel Dredging on the Lower Missouri River, that covers proposed dredging permits in the Kansas City District reach of the Missouri River in Kansas and Missouri. The U.S. Fish and Wildlife Service has reviewed that document and the Final EIS and submits the following comments pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1533 et seq.).

As we understand the Corps preferred alternative, dredging amounts in Kansas City would be lowered and permitted levels in the St. Joseph reached would be increased. The reduction in dredging in the Kansas City reach would be phased over multiple years to allow the operator to adjust infrastructure and operations. We assume that the increase in the St. Joseph reach would be similarly phased in to ensure the total permitted levels are consistent with the information presented in the preferred alternative.

Adherence to the monitoring protocols and annual meetings with the dredgers and resource agencies are critical in ensuring river conditions are accurately assessed and addressed accordingly. We look forward to reviewing the initial year of monitoring results.

Based on the information in the BA, including the permit conditions, the monitoring plan, and the annual coordination, the Service concurs with the Corps' determination that the preferred alternative is not likely to adversely affected federally listed species. If the nature or scope of the activities change, please contact this office.

Thank you for your coordination on the permit renewals. If you have any questions regarding these comments, please contact me.

Best Regards -

Jane Ledwin
****
Jane Ledwin
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
101 Park DeVille Drive
Columbia, Missouri 65203
Phone 573/234-2132, extension 109
email jane_ledwin@fws.gov
****