

**DEPARTMENT OF THE ARMY SUPPLEMENTAL PERMIT EVALUATION  
AND DECISION DOCUMENT**

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## 1. Introduction

This is a Department of the Army (DA) supplemental permit decision document addressing requests by the applicants to reconsider the conditions and terms of four initial proffered permits and the denial of six permits. This document, with the original permit evaluation and combined decision document (CDD), addresses the requirements contained in the National Environmental Policy Act (NEPA) of 1969 and the Section 404(b)(1) Guidelines (Guidelines) published at 40 CFR Part 230. Where the two documents differ, this supplemental permit decision document prevails over the original CDD.

### 1.1. Authorities

This decision is issued under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344). This review was conducted in accordance with the procedures described at 33 CFR Part 320-331, including Appendices B and C.

### 1.2. Permit Decision

I have reviewed and evaluated the subject DA permit applications, in light of the overall public interest, the environmental, social, engineering, and economic considerations, and in accordance with the laws, regulations and policy cited above. I have decided to issue DA permit authorization for applications numbered 2001-01429, 2001-01430, 2001-01431, and 2001-01434 subject to modifications and special conditions described below subject to the issuance of Section 401 Water Quality Certification by the State of Missouri and the State of Kansas. I have also reaffirmed my previous decision to deny DA permit authorization for applications numbered 2001-01432, 2001-01433, 2001-01435, 2001-01436, 2003-01640, and 2004-00378.

Application Number	Applicant Name and Address	Annual Tons of Dredged Material Currently Requested	Annual Tons of Dredged Material Previously Authorized	Tons of Material Dredged in 2006	River Miles Authorized for Dredging by This Permit	Annual Tons of Material Authorized by This Permit
2001-01429 (Renewal of 1996-01648)	Capital Sand Company, Inc. (Capital Sand) Post Office Box 104990 Jefferson City, Missouri 65110-4990	2,500,000	1,500,000	2,253,862 (Also dredged for Con-Agg)	62.00-75.00 109.00-115.20 115.95-118.40 119.15-119.35 119.85-124.35 124.95-126.05 126.90-127.50 140.00-150.00 158.45-164.00 172.00-176.40	2,255,000
2001-01429	Capital Sand continued				177.85-184.75	

Application Number	Applicant Name and Address	Annual Tons of Dredged Material Currently Requested	Annual Tons of Dredged Material Previously Authorized	Tons of Material Dredged in 2006	River Miles Authorized for Dredging by This Permit	Annual Tons of Material Authorized by This Permit
continued					185.65-186.90 188.20-192.00 193.00-193.40 195.75-202.10 202.75-210.00 220.00-226.95 227.55-230.00 245.00-249.65 250.30-265.00 283.00-297.90 301.05-303.00 314.00-328.00.	
2001-01430 (Renewal of 1996-01654)	Hermann Sand and Gravel, Inc. (Hermann Sand) Route 3, Box 261 Hermann, Missouri 65041	500,000	100,000	301,034	56.00-56.85 61.25-66.00 70.00-80.00 80.50-89.75 93.55-101.70 109.00-115.20 115.95-118.40 146.00-157.00 158.45-164.00	300,000
2001-01431 (Renewal of 1996-01649)	Holliday Sand and Gravel Company (Holliday Sand) 6811 West 63rd Street Overland Park, Kansas 66202	3,800,000			320.00-328.00  328.00-330.90 331.65-336.00 338.00-339.15 350.00-356.30 356.50-358.16 358.36-359.24 359.44-360.17 360.37-361.20 361.44-362.15 362.35-364.25 364.45-364.64 364.84-365.43 365.79-366.02 366.30-367.00 367.90-373.30 374.20-375.10 375.30-377.81 378.90-379.70 380.70-386.00	450,000 in 2008 and 900,000 in 2009  3,400,000 in 2007  2,950,000 in 2008  2,500,000 in 2009  Can compensate for reduction below river mile 328
2001-01431 continued	Holliday Sand continued				445.00-455.50	360,000
			2,450,000	3,395,525		
			Kansas City			
			St. Joseph			

<b>Application Number</b>	<b>Applicant Name and Address</b>	<b>Annual Tons of Dredged Material Currently Requested</b>	<b>Annual Tons of Dredged Material Previously Authorized</b>	<b>Tons of Material Dredged in 2006</b>	<b>River Miles Authorized for Dredging by This Permit</b>	<b>Annual Tons of Material Authorized by This Permit</b>
			Total	364,830 3,760,355		3,760,000
<b>2001-01432</b> (Renewal of 1996-01655)	<b>Washington Sand Company, Inc. (Washington Sand)</b> 528 West Front Street Washington, Missouri 63090	130,000	130,000	0	62.00-75.00	Permit Denied
<b>2001-01433</b> (Renewal of 1996-01680)	<b>St. Charles Sand Company (St. Charles Sand)</b> 14580 Missouri Bottom Road Bridgeton, Missouri 63044	200,000	200,000	0	None Permit Denied	Permit Denied
<b>2001-01434</b> (Renewal of 1996-01652)	<b>Con-Agg of MO, L.L.C. (Con-Agg)</b> 2604 North Stadium Blvd. Columbia, Missouri 65202	250,000	250,000	175,000 (Dredging done by Capital Sand)	177.85-184.75 185.65-186.90 188.20-192.00 193.00-193.40 195.75-196.50 196.70-197.00 198.50-199.15 199.40-201.95	250,000
<b>2001-01435</b> (Renewal of 1996-01656)	<b>Edward N. Rau Contractor Company (Rau)</b> 2809 Highway A, Suite A Washington, Missouri 63090	100,000	100,000	0	None Permit Denied	Permit Denied
<b>2001-01436</b> (Renewal of 1996-01650)	<b>Kaw Valley Sand and Gravel, Inc. (Kaw Valley Sand)</b> 1615 Argentine Blvd. Kansas City, Kansas 66105	1,000,000	300,000	0	None Permit Denied	Permit Denied
<b>2003-01640</b> (New Applicant)	<b>85th Street, Inc. (Lafarge)</b> 3101 East 85th Street Kansas City, Missouri 64132	1,300,000	0	0	None Permit Denied	Permit Denied
<b>2004-00378</b> (New Applicant)	<b>Muenks Bros. Quarries (Muenks Bros.)</b> 3717 Highway 50 West Loose Creek, Missouri 65054	600,000	0	0	None Permit Denied	Permit Denied
<b>TOTAL</b>		<b>10,380,000</b>	<b>980,000</b>	<b>6,490,251</b>		<b>6,490,000</b>

## 2. **Appealed Issues and the Corps' Response**

### 2.1. Disputed Bed Degradation

#### 2.1.1. No Proof

Capital Sand (Enclosure 6.2 and Enclosure 6.7), Con-Agg (Enclosure 6.1 and Enclosure 6.8), Hermann Sand (Enclosure 6.9), Rau (Enclosure 6.4 and Enclosure 6.11), Muenks Bros. (Enclosure 6.3), and Kaw Valley (Enclosure 6.6) argue that there is no adequate demonstration of bed degradation in the area covered by their initial proffered permits.

**Corps' Response:** The Construction Reference Plane (CRP) is a sloping plane, nominally at an elevation that is inundated 75 percent of the time during the normal navigation season, which was established to facilitate the design and maintenance of the structure heights on the Missouri River Bank Stabilization and Navigation Project from Sioux City, IA, to the mouth. The CRP was established by the Missouri River Commission in 1889 with various subsequent revisions. Revisions are necessary to accommodate the changing river bed because of channel degradation and aggradation. The last revision was in 2005.

Comparison of the CRP Water Surface and Commercial Dredging Volume on the Missouri River from Rulo, Nebraska to the mouth from 1990 versus 2002 and 2005 (Enclosure 6.12) indicates that the Construction Reference Plane (CRP) of the Missouri River has changed as much as nearly five feet during that time period in some areas that Capital Sand and Hermann Sand dredged. Change in the CRP appears to be greatest at locations where commercial dredging is the most intensive, especially near St. Charles, Jefferson City, and Kansas City. This information on potential effects of commercial dredging is sufficient to require the completion of an Environmental Impact Statement (EIS) to determine whether commercial dredging is causing significant impacts on the human environment as such impacts are defined under the National Environmental Policy Act (NEPA).

#### 2.1.2. Studies are Speculative

Hermann Sand (Enclosure 6.9) argues that the studies cited in the CDD are draft and clearly speculation or assumption and that the data they provided show there is very little if any degradation at Hermann.

**Corps' Response:** As stated above, the information on potential effects of commercial dredging is sufficient to require the completion of an EIS to determine whether commercial dredging is causing significant impacts on the human environment as such impacts are defined under NEPA. The Corps disagrees that its studies are unsubstantiated or that the data proves that degradation is not occurring. These studies have been peer reviewed for

technical accuracy. The Corps agrees that our understanding of the effects of dredging on bed degradation is incomplete and that a comprehensive study needs to be done. However, the studies done to date sufficiently indicate that degradation is occurring and is potentially affected by current dredging practices. Continued increases in dredging amounts or long term dredging at current rates creates potential for significant impact. The degree of degradation in any given reach correlates well with the amount of material extracted from that reach over the years. Although total extraction at Hermann is less than at Jefferson City or Kansas City, the Corps identified a proportional amount of degradation. We also note that the data provided by Hermann Sand to dispute our findings is inconclusive and were also not subject to peer review.

#### 2.1.3. Results of 2007 Hydrographic Surveys

Holliday Sand (Enclosure 6.5) argues that analysis of hydrographic surveys completed by the Corps before and after dredging at river mile 368 and near Washington in the summer of 2007 indicates that: 1) the dredged holes filled at normal stream flow rates, 2) there were no signs of sloughing or head-cutting, 3) there is no significant degradation above or below the dredge hole, and 4) dredging does not have a short term impact on the Missouri River bed degradation issue.

**Corps' Response:** The 2007 hydrographic surveys indicated to us that recovery of a dredged area took longer than the dredgers had indicated in earlier discussions. Regarding the other claims, the fourth is most important. This looked at an area before and after dredging occurred there, so it is a very short term perspective. We didn't expect obviously significant degradation, sloughing, or head-cutting after one dredging event. That is why we have required annual hydrographic surveys of the authorized reaches in the proffered permits. We expect that any significant degradation would be the cumulative effect of dredging throughout a larger area over a longer period of time.

#### 2.1.4. Discounting Other Causes

Kaw Valley (Enclosure 6.6) argues that by reducing or excluding dredging within vulnerable areas the Corps discounts the impact percentages of three other identifiable and significant factors contributing to degradation: 1) dam and other riverside construction, 2) flooding, and 3) drought. All the appeals maintain that the Corps should not focus on limiting dredging as the primary means of solving the degradation problem until a comprehensive study is done.

**Corps' Response:** Under NEPA, the government action (issuing dredging permits) should not proceed unless an Environmental Assessment (EA) determines that the proposed action (dredging) will not cause significant

impacts (Finding of No Significant Impact, FONSI) or those significant impacts are clearly studied and disclosed to the public in an Environmental Impact Statement (EIS). The Corps has determined that dredging to the full extent proposed by all applicants would result in the potential for significant impacts from bed degradation. The Corps has also determined that a FONSI may be reached regarding commercial dredging in the Missouri River only under the general restrictions and conditions we have proposed. One of the key conditions of the FONSI is disallowing extraction increases beyond 2006 levels throughout the river until an EIS is prepared. Because the proposed action under consideration is commercial dredging, the “project purpose” and therefore focus of the EIS will be the impacts of dredging and its alternatives. The Corps has received authorization and funding from Congress to do a separate reconnaissance study of the causes and possible solutions to bed degradation in the Missouri River.

## 2.2. Rau (Enclosure 6.4, Enclosure 6.11)

### 2.2.1. Degradation is Unproven

Rau claims that our decision is based on a “single, speculative ‘draft’ document that has not undergone professional review or evaluation and has not been substantiated”. Rau also claims that this document did not evaluate the eastern Missouri River or conclude that dredging could reasonable be expected to cause site-specific degradation in the areas of their proposed operation. Rau claims that dredgers in the St. Louis District do not experience such dredging restrictions.

**Corps’ Response:** The issues regarding degradation are addressed collectively in Section 2.1 of this document. The Kansas City District has coordinated this decision with the St. Louis District who has agreed to modify their current permits for commercial dredging on the Missouri River to include these restrictions and permit conditions. They will also cooperate in the preparation of a river-wide EIS for commercial dredging.

### 2.2.2. Minimal Impact

Rau is willing to reduce the quantity of material they would extract from the river each year and believe that because that amount is minimal compared to the larger operations, the environmental impact would be minimal and they should be allowed to dredge.

**Corps’ Response:** The Corps agrees that if studied individually, the impacts of their proposed dredging operation might be found to be minimal. However, the cumulative impact of all the proposed activities would be significant and require preparation of an EIS before permits could be issued. The Corps has determined that increased extraction cannot be authorized until an EIS is completed. By imposing special permit conditions and limiting total annual

extraction to 2006 levels through 2009, the potential cumulative impacts will be reduced below the level of significance, and we can authorize dredging to continue while an EIS is prepared. Authorizing Rau to extract any quantity of material would require an equal reduction of some other authorized extraction limit.

### 2.2.3. Financial Fairness

Rau believes that cancelling their permit for less than 75,000 tons while allowing continued dredging of 2,000,000 tons by other single parties is indefensible and inequitable and “‘gives’ the business to our competitors and grants the benefit of this natural resource to a ‘chosen few’...and does nothing to ‘protect the river bed.’”

**Corps’ Response:** The Corps has determined that re-authorizing existing and active dredging operations is the most rational and equitable way to temporarily divide the available material during the EIS process. The active dredgers have consistently demonstrated their ability and intentions and made dredging a large part of their operations. Denying their permits or reducing their authorized tonnage to give it to another applicant would have an immediate and severe impact on those companies. Denying permits of inactive or new applicants only denies them the opportunity to expand their business. This is also addressed in section 2.3.4 of this document.

### 2.2.4. Hydrographic Surveying

In their original appeal letter (Enclosure 6.4), Rau said “We are willing to participate in in-depth studies, by a third party, of degradation of the river bed during dredging on our permit to identify sustainable dredging levels...” In their supplemental letter (Enclosure 6.11) Rau then asserts that hydrographic surveying is the responsibility of the Corps and would be a sizeable burden for small companies like theirs. They advocated making a joint study of the river bed with prorated fees among all the dredgers.

**Corps’ Response:** Periodically the Corps performs hydrographic surveys of the Missouri River for other programs within the Corps. None of these programs require or are authorized or funded to perform hydrographic surveys every year. In 2007 we did do a hydrographic survey of the entire Missouri River between Rulo and the mouth at St. Louis but we won’t be able to do one again in the next several years. The Corps has determined that hydrographic surveys in 2008 and 2009 are necessary to prepare the EIS for 2010. This issue is also addressed in section 2.5.4.1 and section 2.5.4.2 of this document.

### 2.3. Kaw Valley Sand (Enclosure 6.6)

The Law Office of Charles D. Kugler, LLC prepared a lengthy objection of the denial of Kaw Valley Sand's application (Enclosure 6.6). We will address this objection section by section.

#### 2.3.1. "Reasons for Appeal" (section II of appeal)

##### 2.3.1.1. "Four Substantive Evaluation Areas"

The objection incorrectly identifies four substantive evaluation areas (Sections 3.31, 3.32, 3.33, and 3.34 of the original CDD) as the basis of our denial of Kaw Valley Sand's permit application.

**Corps' Response:** Section 3.3 discusses issues raised by various parties in response to our public notice regarding the proposed activities, the rebuttal offered by the applicants to those concerns, and the Corps' resolution of those issues. We agree that the concerns regarding impacts of dredging on water quality, fish and wildlife habitat, and horizontal collector wells by all applicants would be addressed by the proposed permit conditions and would not justify denial of Kaw Valley Sand's permit application. However, the Corps has determined that the dredging proposed by Kaw Valley Sand in addition to the amount extracted by active dredgers in 2006 would result in the potential for significant impacts from increased bed degradation.

##### 2.3.1.2. Comprehensive Study of Degradation

Regarding river bed degradation, the objection argues that until a comprehensive study is done to identify and quantify the effect of the various contributing factors, we cannot focus on limiting dredging as the primary means of solving the degradation problem.

**Corps' Response:** Because the proposed action under consideration is commercial dredging, the "project purpose" and therefore focus of the EIS will be the impacts of dredging and its alternatives. This is consistent with NEPA. In CDD Section 3.33, we did agree with the EPA, FWS, Friends of the Kaw, WaterOne, BPU, and other commentators that bed degradation is a serious issue that needs to be studied further. We agree that dredging was one of several factors potentially contributing to degradation. However, the focus of our review is how the proposed dredging will affect the Missouri River. The Corps has determined that dredging to the full extent proposed by all the applicants would result in the potential for significant impacts by increasing bed degradation above and beyond what would occur if no dredging were authorized. The appeal

misconstrues the NEPA process when it states “The Corps maintains that its desired goal ... is to be able to reach a FONSI (Finding of No Significant Impact) in the preparation of its EIS (Environmental Impact Statement).” NEPA requires an Environmental Assessment (EA) for all federally funded or authorized projects. If that EA **does not** result in a FONSI, then a more extensive evaluation (an EIS) must be completed before the project can be authorized. A FONSI is not the result of an EIS. To be able to reach a FONSI and authorize some dredging to continue while an EIS is prepared, we had to limit and restrict dredging to minimize the potential for dredging to increase bed degradation during that time.

2.3.2. “The Jurisdictional Decision is against the weight of its own analysis.”  
(section III.1 of appeal)

2.3.2.1. Unacceptable Impacts (section III.1 of appeal)

The objection correctly quotes our permit denial cover letter that says that the activity would “result in unacceptable impacts on the aquatic environment of the Missouri River” and “permits for extraction of material in excess of the amount reportedly extracted in 2006 would be contrary to the public interest”. The appeal argues that nothing in the CDD “points out where commercial dredging, as presently regulated, harms aquatic life or would have a negative impact on public interest factors.

**Corps’ Response:** The decision to deny several permits was based mainly on the NEPA analysis. NEPA considers impacts on the “human environment”, not just the aquatic environment. The appeal misquotes or misconstrues various parts of the CDD to argue that dredging does not negatively impact, and in fact, benefits the aquatic environment. Although we do not agree that dredging provides any substantial benefits to special aquatic sites, fish and wildlife, or endangered species, we do agree that under the time and other restrictions and extraction limits we proposed, dredging would not have a significant negative impact on those components of the aquatic environment or the human environment. However, the Corps determined that dredging to the extent proposed by all the applicants could increase bed degradation and have a significant negative impact on dikes, levees, revetments, water intake structures and other components of the human environment. The Corps denied all permit applications that would have increased total extraction because that action would require an EIS. Section 4 of this supplemental decision document will more thoroughly state the basis of our decision.

### 2.3. Kaw Valley Sand (Enclosure 6.6)

The Law Office of Charles D. Kugler, LLC prepared a lengthy objection of the denial of Kaw Valley Sand's application (Enclosure 6.6). We will address this objection section by section.

#### 2.3.1. "Reasons for Appeal" (section II of appeal)

##### 2.3.1.1. "Four Substantive Evaluation Areas"

The objection incorrectly identifies four substantive evaluation areas (Sections 3.31, 3.32, 3.33, and 3.34 of the original CDD) as the basis of our denial of Kaw Valley Sand's permit application.

**Corps' Response:** Section 3.3 discusses issues raised by various parties in response to our public notice regarding the proposed activities, the rebuttal offered by the applicants to those concerns, and the Corps' resolution of those issues. We agree that the concerns regarding impacts of dredging on water quality, fish and wildlife habitat, and horizontal collector wells by all applicants would be addressed by the proposed permit conditions and would not justify denial of Kaw Valley Sand's permit application. However, the Corps has determined that the dredging proposed by Kaw Valley Sand in addition to the amount extracted by active dredgers in 2006 would result in the potential for significant impacts from increased bed degradation.

##### 2.3.1.2. Comprehensive Study of Degradation

Regarding river bed degradation, the objection argues that until a comprehensive study is done to identify and quantify the effect of the various contributing factors, we cannot focus on limiting dredging as the primary means of solving the degradation problem.

**Corps' Response:** Because the proposed action under consideration is commercial dredging, the "project purpose" and therefore focus of the EIS will be the impacts of dredging and its alternatives. This is consistent with NEPA. In CDD Section 3.33, we did agree with the EPA, FWS, Friends of the Kaw, WaterOne, BPU, and other commentators that bed degradation is a serious issue that needs to be studied further. We agree that dredging was one of several factors potentially contributing to degradation. However, the focus of our review is how the proposed dredging will affect the Missouri River. The Corps has determined that dredging to the full extent proposed by all the applicants would result in the potential for significant impacts by increasing bed degradation above and beyond what would occur if no dredging were authorized. The appeal

2.3.2.2. Economic Impacts (section III.1.B.1 of appeal)

The objection argues that in our public interest review required under 33 C.F.R. §320.4(a) “The Corps underestimates the already-quantifiable need for sand and gravel in the private construction industry and public road repair, with its added improvement in employment opportunities, and overstates its unproven allegation that commercial dredging is the major cause in river bed degradation, interference with aquatic, fish and wildlife.”

**Corps’ Response:** The Corps recognizes the important contribution of commercial sand dredging to the regional economy. However, we also recognize the huge potential cost to society if dredging contributes to continued bed degradation and the failure of bridges, dikes, levees, revetments, water intakes, and other river structures. Recent failure of the Interstate 35 Bridge over the Mississippi River in Minneapolis, Minnesota and failure of the New Orleans, Louisiana levees during Hurricane Katrina illustrate the significant potential economic impacts of such a catastrophe. We have attempted to balance the public costs and benefits of commercial sand dredging in our permit decision to the extent we can by allowing dredging to continue at 2006 levels through 2009 with restrictions intended to minimize the potential for significant impacts to river infrastructure and other resources during that time. The Corps denied permits that would have increased the potential for significant impacts. By preparing an EIS, we can reconsider the effects of increasing dredging and authorize it if there are no less damaging practicable alternatives and it is not contrary to the public interest in light of all the foreseeable impacts.

2.3.2.3. Human Use and Recreation Basis for Denial (section III.1.B.2 of appeal)

The objection argues that our denial of a permit to Kaw Valley because their proposed activity would be “contrary to the public interest” with regard to human use and recreation is not supported by the “Jurisdictional Decision” analysis.

**Corps’ Response:** The Corps agrees that the proposed dredging would have minimal impact on recreational and commercial fisheries, recreational boating, or aesthetics. However, we would include the previously mentioned navigation, flood control, utility structures, and the communities they protect and serve as part of the human environment. The potential damage to these structures from bed degradation would reduce the safety and security of various communities from flood, drought, and other natural disasters. The Corps determined that increases in the total annual extraction

above 2006 levels would result in the potential for significant impacts from bed degradation so would require an EIS before it could be authorized.

2.3.2.4. Clean Water Act Basis for Denial (section III.1.B.3 of appeal)

The objection argues that our denial of a permit to Kaw Valley because the proposed activity would be “contrary to the public interest” with regard to the Clean Water Act is not supported by the Jurisdictional Decision analysis.

**Corps’ Response:** The Corps agrees that the proposed dredging will have less than significant impact on water quality, turbidity, water circulation or fluctuation, or biological characteristics. However, we disagree with the appeal’s claims regarding impacts on the physical substrate. Extraction from the Missouri River within the State of Missouri was approximately 7.8 million tons in 2006 (this includes tonnage of three dredgers authorized by the St. Louis District in the lower 49 miles of the Missouri River) while the median annual bed material load for the Kansas City reach was estimated to be approximately 7.4 million tons. The bed material load does not increase much between Kansas City and St. Louis because there are not many sources of additional material in that reach. Estimates of bed material load are not very accurate so there is no clearly sustainable extraction limit but the total annual extraction is approximately equal the median annual bed material load. However, the bed material load is correlated with river flow volumes which have been below normal for the last 8 years. During those 8 years, total extraction from the Missouri River has been higher than any time previously and may have exceeded the lower than average bed material load. More conclusive are the studies which have shown that the river flow volume used to estimate the historical CRP now produces a lower water surface. The river bed has clearly dropped deeper into the floodplain.

According to a report by MDNR entitled “A Geologic Cross Section of the Missouri River Valley at Kansas City, Missouri” (Enclosure 6.13), the upper 10 to 35 feet of the surficial materials of the Missouri River floodplain are alluvial deposits of silt, clayey silt and fine-grained sand deposited during the Holocene period. This layer is underlain by 75 to 100 feet of sand with gravel lenses believed to be deposited during the Wisconsinan (Late Pleistocene) period. The fact that Holliday Sand has had to expand their dredging into new reaches to find the desired coarse sands indicates that they may be mining those Wisconsinan deposits and that the bed material filling in those refilled dredged holes is mainly finer grained sediment not suitable for use in concrete or asphalt.

The Corps determined that authorizing all the proposed dredging operations, including Kaw Valley Sand's, would result in the potential for significant impacts to the physical substrate, including changes to the average bed elevation and composition. However, our permit decision to deny new and inactive applicants and to renew active dredgers with additional restrictions and permit conditions will minimize the potential for significant impacts to the physical substrate during the permit period.

2.3.2.5. River Structures and Degradation (section III.1.B.5.b of appeal)

The objection claims that we identified water intake structures, bridge abutments, boat ramps, and wharves as some of the significant factors impacting river bed degradation. It questions why the Corps has not considered modifying or curtailing the building of these structures to limit river bed degradation.

**Corps' Response:** The objection misunderstood section 6.1.7 of our CDD. We meant that river bed degradation has disabled several water intake structures and contributed to failure of levee slopes, sheet piles, revetments, and river banks and to head-cutting in tributaries to the Missouri River. These are described as effects of bed degradation, not the causes.

2.3.2.6. Dredging and the Navigation Channel (section III.1.B.5.c of appeal)

The objection claims that we said that commercial dredging aided the Corps' maintenance of the Missouri River navigation channel within the Kansas City Reach.

**Corps' Response:** The Corps has not needed to dredge within the Kansas City reach to maintain the navigation channel since its completion in 1981. Navigation dredging has been done a few times in shallower reaches downstream. In those few instances, the dredged material was not the type the commercial dredgers wanted, so the material was returned to the river. Commercial dredging is not necessary or beneficial to maintenance of the navigation channel because the channel was designed with dikes, levees, and revetments to prevent the high bed material load from settling out and causing shoals and sandbars. The Corps determine that authorizing annual extraction limits greater than the amount extracted in 2006 could result in increased bed degradation and significant negative impacts on navigation structures on the Missouri River. The special conditions of the proffered permits and annual extraction limits proposed in our permit decision will limit annual extraction to levels equal to or less than extraction levels of recent years. These permit conditions should minimize the potential for significant negative

impacts on navigation from dredging influenced bed degradation.

2.3.2.7. Dredging and Aquatic Life (section III.1.B.5.c of appeal)

The last paragraph of the objection misconstrues section 6.2.4 of our CDD by claiming that we said that sand and gravel dredging churns up the channel so that aquatic life is not smothered by “turgid” [*sic*] sediment.

**Corps’ Response:** We did say that the increased turbidity around a dredge does not significantly affect native fish species (such as pallid sturgeon and spoonbill) that are adapted to the even more turbid condition historically typical of the “Big Muddy.” However, we also explained that the fine material discharged from these hydraulic cutter-head suction dredges can cover up coarse sand and gravel beds used by spawning fish and can smother crawfish, insects and other benthic invertebrate animals that live in or on these sand and gravel beds and are unable to flee. Dredging definitely does not benefit aquatic organisms. However, because the proposed permit conditions will confine dredging to the fast flowing navigation channel and avoid the slower moving shallow areas preferred by most aquatic fauna in the Missouri River, we did determine that our decision would result in minimal relocation and mortality of aquatic organisms.

2.3.3. “The Jurisdictional Decision is unreasonable, arbitrary and capricious.”  
(section III.2 of appeal)

2.3.3.1. Other Causes of Degradation (section III.2.A of appeal)

The objection claims that the Corps seeks to shift its own responsibility to ameliorate river bed degradation by restricting only one of the four possible causes.

**Corps’ Response:** The Corps agrees that dredging is one of several factors contributing to bed degradation. Because the proposed action under consideration is commercial dredging, the “project purpose” and therefore focus of the EIS will be the impacts of dredging and its alternatives. This is consistent with NEPA. The Corps has determined that we cannot permit extraction increases until an EIS can be completed and that limiting annual extraction to 2006 levels through 2009 with additional restrictions to protect specific critical sites would minimize the potential for significant impacts and allow us to authorize some continued dredging while an EIS is prepared. The Corps does consider degradation when planning, constructing, and managing its own river structures and projects or when regulating river structures and projects of other

entities under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. All Corps actions must comply with NEPA. Additionally, the Corps has received authorization and funding to begin a reconnaissance study of the causes and solutions of bed degradation in the Missouri River.

2.3.3.2. No Basis for Denial (section III.2.B of appeal)

The objection claims that the Corps permit denial contradicts its stated analysis.

**Corps' Response:** Our permit decision addressed most potentially significant impacts of dredging by restricting where and how the activity is conducted. However, the Corps determined that allowing the overall annual extracted tonnage to increase over 2006 levels could result in the potential for significant impacts on the aquatic environment in the Missouri River and the surrounding human environment and would be contrary to the public interest.

2.3.4. "The Corps perpetuates Holliday Sand & Gravel's illegal monopoly in the commercial dredging business, depriving Kaw Valley of property without due process of law. (section III.3 of appeal)

2.3.4.1. Illegal Monopoly (section III.3.A of appeal)

The objection claims that the Corps' denial of all other dredging permits creates a de facto illegal monopoly in the dredging business for Holliday Sand within the Kansas City reach. The appeal also said "The Corps' Jurisdictional Decision states that the Kaw Valley permit denial fulfills the Corps' primary purpose of protecting the integrity of the river bed against further degradation while the analysis itself does not support the permit denial. It thereby disguises its aim to limit the extraction of sand and gravel to only Holliday Sand."

**Corps' Response:** Substantial evidence has been presented in this document and the original decision document that demonstrates that bed degradation is occurring in the Missouri River throughout Kansas and Missouri. Degradation is most severe where dredging has been concentrated, and particularly severe in the Kansas City reach. The Corps has determined that we could only make a FONSI if total annual extraction was limited to 2006 levels through 2009. The Corps has no bias for or against any of the applicants but has determined that it would be most equitable to cap annual extraction by denying new applicants and previously authorized but currently inactive operations during this abbreviated permit period while an EIS is being completed and impacts assessed. We also believe that

this will minimize the effect on the supply of sand and therefore on the regional economy while an EIS is completed. Between 1997 and October 2007, Kaw Valley Sand was authorized to dredge up to 300,000 tons from the Missouri River in the Kansas City area but they chose not to do so. During that time the other authorized dredgers also could have requested additional dredging reaches in the Kansas City area but did not. If a monopoly exists, it is because authorized dredgers chose not to compete with Holliday Sand. The Corps can't authorize increased dredging and potential significant impacts without an EIS just to accommodate all dredging applications.

2.3.4.2. Property and Due Process (section III.3.B of appeal)

The appeal claims that the Corps' decision to deny Kaw Valley an active dredging permit deprived it of property without due process of law.

**Corps' Response:** The Corps has the responsibility and authority to regulate various activities, including dredging, under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Department of the Army permits do not confer any property ownership. As required by Section 404(b)(1) of the Clean Water Act (33 USC 1344), the decision to deny Kaw Valley's permit application was reached after a public interest and environmental impact review process in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The Corps denied Kaw Valley's permit application because we determined that any increase in overall annual extraction (over 2006 levels) from the Missouri River could increase bed degradation and result in the potential for significant impacts to the aquatic and human environment. NEPA requires preparation of an EIS for all government actions that would result in significant impacts. After an EIS is prepared we could authorize increased dredging if we determine that it is not contrary to the public interest and there are no less damaging practicable alternatives. It is dubious whether the claim that Kaw Valley's inactive permit constituted a property interest. We note that in addition to the above permit framework and Kaw Valley's inactivity on the river, it owns no portion of the Missouri River or the sediment it was previously authorized to dredge. The Missouri River is a navigable waterway owned by the state and "held in trust" for the public.

## 2.4. Muenks Bros. (Enclosure 6.3)

### 2.4.1. Practicable Alternatives

Muenks Bros. contends that “any purported alternatives as described in Section 10.2 (of the original combined decision document) that are supposedly available to Muenks Bros. are also available to the successful applicants.”

**Corps’ Response:** The Corps denied six permit applications including that of Muenks Bros. primarily because we determined that any increase in overall annual extraction (over 2006 levels) from the Missouri River could increase bed degradation and the potential for significant impacts to the aquatic and human environment. As described in various responses above, NEPA requires preparation of an EIS for all government actions that would result in the potential for significant impacts. Because the region has become dependent on sand from the Missouri River, and has not extensively sought or developed alternative sources, we determined that a less environmental damaging practicable alternative does not exist, for the dredging industry as a whole, to immediately provide the large amounts of required material. Upland or floodplain sources may be practicable in the long run but it will take some time to time to develop. The Corps determined that restricting annual extraction to 2006 levels through 2009 and restricting dredging in or near critical areas would minimize the potential for significant environmental impacts and allow dredging to continue while an EIS is prepared. The EIS will discuss the environmental impacts and practicability of various alternatives. After an EIS is prepared we could authorize increased dredging if we determine that it is not contrary to the public interest and there are no less damaging practicable alternatives.

### 2.4.2. Contract with Hermann Sand

Muenks Bros. indicates that they have a contractual arrangement for Hermann Sand and Gravel to dredge sand for them similar to the arrangement between Con-Agg and Capital Sand. They assert that “the impacts of the respective contractual dredging activities will be the same” and “any ‘alternatives’ that are supposedly available to Muenks Brothers would also be available to Con-Agg”.

**Corps’ Response:** The Corps agrees that the contractual arrangements and the potential environmental impacts of each individual agreement are essentially the same. The Corps determined that a less environmental damaging practicable alternative does not exist at this time, for the dredging industry as a whole, to provide the large amounts of required material. We allocated the available material in the most equitable manner we could, based on the tonnage reported by each company in 2006. We do not believe it is equitable during the interim period while the EIS is being completed to take authorized tonnage from a previously authorized and active dredger to give to

a new applicant. Authorizing Muenks Bros. or Lafarge to dredge some amount in excess of that dredged in 2006 would result in a greater cumulative impact. Con-Agg and Capital Sand did report separately the material dredged by Capital Sand and agreed to have separate permits dividing the available tonnage. If Hermann Sand agreed to give up part of their previous allotment to Muenks Bros. we would be willing to issue Muenks Bros. a permit for that amount.

## 2.5. Appealed Permit Conditions

### 2.5.1. Extraction Limits

#### 2.5.1.1. Objections

Capital Sand (Enclosure 6.2 and Enclosure 6.7), Con-Agg (Enclosure 6.1 and Enclosure 6.8), and Hermann Sand (Enclosure 6.9) object to the tonnage limits and Hermann Sand (Enclosure 6.9) requests that they be allowed to extract up to 300,000 tons above Jefferson City and 700,000 below.

**Corps' Response:** The Corps has determined that limiting overall annual extraction to 2006 levels and limiting annual extraction in any 10 mile reach to 1,200,000 tons are two conditions vital for our FONSI and we are unable to change or eliminate them.

#### 2.5.1.2. Proposed Alternative

Capital Sand (Enclosure 6.7) and Con-Agg (Enclosure 6.8) argue that the “mine and relax” strategy they had proposed earlier would sufficiently protect against bed degradation.

**Corps' Response:** The “mine and relax” strategy would limit the time during which an area is dredged and require sufficient time for its recovery before it is dredged again. The strategy includes expanding reaches to be mined, preferably upstream of currently dredged reaches, limiting dredging in a one mile reach to one week, then resting that mile reach for at least four weeks before dredging again. To accomplish this, there would have to be greater coordination where multiple dredgers operate in the same reaches. We agree that this strategy could reduce the potential for localized impacts. However, degradation results when material extraction exceeds the bed material load. Comparison of the CRP water surfaces from 1990 with those of 2002 and 2005 indicates that over ninety percent of the Missouri River below Rulo, Nebraska, is degrading to some degree (Enclosure 6.12). Any increase in the total extraction rate would potentially increase the average rate of degradation over the entire river and would create the potential for

significant negative impacts. For these reasons the Corps has determined that using the “mine and relax” strategy to justify increasing or eliminating annual extraction limits before potentially sustainable thresholds are analyzed by the EIS, could result in the potential for significant impacts from bed degradation.

#### 2.5.1.3. Kansas City Reach Reduction

Holliday Sand (Enclosure 6.5) asks that they be allowed to extract the full 3,400,000 tons within the Kansas City reaches between Missouri River miles 350.0 and 386.0 for the duration of the permit rather than be reduced in years 2008 and 2009. The main reason for this request is because the reduction will have a substantial economic impact on their operation and the local community. They have been pursuing alternatives for several years but will need at least two years to finish acquiring floodplain mining areas, developing a new downstream terminal and, and constructing the additional marine equipment needed for the longer tow distances.

**Corps’ Response:** Our studies (Enclosure 6.12) and reports by various organizations with intake structures on the river indicate the Kansas City reach is the most severely degrading reach of the Missouri River below Rulo, Nebraska. We understand that reducing annual extraction by 25% in 2 years may not be practicable for Holliday Sand. However, the Corps must comply with NEPA and only issue a DA permit after reaching a FONSI or completing an EIS. The 25% reduction in annual extraction by 2009 is a vital condition of our FONSI. The Corps has determined that eliminating the 25% reduction over the next three years in the Kansas City reach would result in the potential for significant impacts from bed degradation. However, the Corps has also determined that authorizing Holliday Sand to dredge between Missouri River miles (RM) 382.7 and 386.0 subject to the tonnage limit and incremental 25% reduction would not result in the potential for significant impacts from bed degradation.

#### 2.5.1.4. Return of Unwanted Material

Capital Sand (Enclosure 6.7), Con-Agg (Enclosure 6.8) and Holliday Sand (Enclosure 6.5) request that unwanted material returned to the Missouri River not be counted against their annual extraction limit. This would include material spilled off the conveyer belts and unusable fill sand and lignite separated out in the on-shore sand washing operation.

**Corps’ Response:** The Corps has determined that this should not have any significant impacts if it does not cause the net extraction level to exceed those reported in 2006. Therefore we will authorize the applicants to discharge

unwanted dredged material back into the Missouri River and subtract it from their annual extraction limit once the applicants submit for our approval, and follow, a plan showing where and how the material will be discharged and how they will measure and report to the Corps the amount of dredged material discharged back into the river. The total extraction tonnage will equal the tonnage extracted and barged to shore minus that amount intentionally returned to the Missouri River. The Corps has determined that this will not result in the potential for significant impacts.

#### 2.5.1.5. Carryover of Unused Tonnage

Capital Sand (Enclosure 6.7), Con-Agg (Enclosure 6.8) and Holliday Sand (Enclosure 6.5) request that they be allowed to dredge all or a portion of the authorized tonnage not dredged in a year during the following year.

**Corps' Response:** The Corps recognizes that this would allow the dredgers more flexibility to dredge according to the demand for material. However, the rate of environmentally sustainable dredging does not correlate with the demand for dredged material. A sustainable rate of extraction would be based on the available bed load which varies widely from year to year based on regional climate and weather patterns. However, estimates of bed load are not very accurate and vary widely. If not supported by an accurate estimate of the bed load under the current conditions, we cannot assure that allowing the annual extraction to exceed 2006 levels would not increase the potential for significant environmental impacts from bed degradation. At this time we will not allow any portion of the authorized tonnage not dredged in a year to be dredged in the following year.

#### 2.5.1.6. Transfer of Tonnage

Holliday Sand (Enclosure 6.5) requests that they be allowed to transfer up to 250,000 tons of unused tonnage annually to another permitted reach and/or permit holder with the prior approval of the Kansas City District.

**Corps' Response:** Capital Sand dredges for Con-Agg and St. Charles Sand has dredged for Capital Sand when their dredges couldn't get to a reach during low water conditions. The Corps is not concerned with who does the dredging as long as they comply with all the permit conditions and report and credit that tonnage to the authorized company, not the contracted company. We recognize that it may be more economically advantageous for Holliday Sand to have Capital Sand dredge for them from Capital Sand's Lexington base of operation than it would be for Holliday Sand to acquire land in Lexington and additional equipment to be able to operate there. The Corps has determined that it will not result in the potential for significant impacts if we allow Holliday Sand to transfer any unused tonnage (of the reduce tonnage) from their Randolph and Riverside dredges (RM 329 to 400) to their St. Joseph dredge (RM 400 and above) but not vice versa. Holliday Sand must still

request additional dredging reaches, but we will allow them to dredge up to 3,400,000 tons between RM 329 to 400 and 3,760,000 tons between RM 329 and 490 in 2007, up to 2,950,000 tons between RM 329 to 400 and 3,310,000 tons between RM 329 and 490 in 2008, and up to 2,500,000 tons between RM 329 to 400 and 2,860,000 tons between RM 329 and 490 in 2009. The incremental 900,000 ton reduction between RM 329 and 400 may be made up below RM 329 as we had stipulated in the initial proffered permit. Holliday Sand may dredge (or have dredged by another company) that reduction tonnage or other unused quota in the reaches below RM 329 that we have already authorized them to dredge or they may request additional reaches under their permit. All the authorized dredgers may contract with any other company properly equipped to comply with the permit conditions to dredge for them and may transfer their dredging permit to another entity but to keep regulation from becoming complex and difficult to manage accurately, they may not transfer just a portion of their authorized reaches or tonnage to another entity.

#### 2.5.1.7. Moisture Content of Reported Tonnage

Holliday Sand (Enclosure 6.5) requests that the last sentence of the Project Description relating to sand moisture content be changed from 10% to 4%. They explain that the cap is based on the reported sales quantities from 2006 that reflect material tonnages weighed on accurate truck scales with moisture content between three and 5 percent by weight.

**Corps' Response:** The Corps has reviewed the reports submitted by Holliday Sand and believes that this claim is inaccurate. In 2006, they reported dredging 3,154,926 tons of material based on yearend sales and a final stockpile estimate (about 4% moisture). Our proposed annual tonnage is based on the barge load estimates (3,400,000 tons, 7.8% more than the sales estimate at 4% moisture) reported by Holliday Sand for 2006 because we are regulating the extraction rather than sale of sand. The difference between the year-end sales/final stockpile estimates and barge load estimates has ranged between 0 and 10 percent. We understand that the moisture content of material off-loaded from the barges will vary based on the time it has sat and the weather. We also recognize that because of this variation, the extraction tonnages previously reported by the various dredgers were not very accurate. We will modify the sentence to clarify that the tonnage will be that measured by the offloading belt scales minus any amount returned to the river also measured by a belt scale. We still believe and will state that this tonnage is with a moisture content of approximately 10% ( $7.8\%+4\%=12\%$ ).

#### 2.5.2. Exclusion Zones

Holliday Sand (Enclosure 6.10) requested that we consider an exception or modification to the permit conditions that would allow them to dredge 50 to 100 feet closer to the dikes. They would be willing to limit the depth near

the dikes and repair or pay for repair of any resulting damage to the dikes. Holliday Sand made this request after they started full time GPS monitoring of their dredges as required in their modified and extended 1996 permit. The GPS revealed that they had been dredging too close to the dikes because coarse sand settles out in the top 30 feet of the river bottom off of the dike tips. To find coarse material more than 200 feet away from the dikes, they will have to dredge much deeper.

**Corps' Response:** Dike structures are critical for maintaining the navigation channel as required by law. We are uncertain of the absolute buffer zone required to protect their integrity and determined that is imprudent to push the limit in this case. The areas below the dikes also provide habitat for aquatic and terrestrial wildlife including the endangered pallid sturgeon. The concurrence by the FWS that the proposed dredging would not affect the pallid sturgeon was contingent on avoidance of these habitat areas around the dikes. For these reasons, we will not modify this restriction as requested at this time.

### 2.5.3. Monitoring

#### 2.5.3.1. Full-Time Monitoring

Capital Sand (Enclosure 6.7) and Con-Agg (Enclosure 6.8) request that we modify Special Condition "b" to allow them to record the dredge position only when the suction pump is operating.

**Corps' Response:** The Corps discussed this issue with Capital Sand and Con-Agg on September 7, 2007 when they were preparing the dredge monitoring plan required by their modified 1996 permits. They said that full time monitoring of the dredge was impracticable and unnecessary. At that time we verbally agreed that they could monitor the dredge position only when sensors show that the pump shaft is turning. After further consideration of this issue, we have determined that the alternative proposed by Capital Sand would not adequately ensure permit compliance and that full-time monitoring of the dredge position and operating status is necessary. If the dredge position is monitored only when sensors show that the pump shaft is turning, a malfunctioning sensor might be interpreted as an inactive dredge. Constant tracking of the dredge position and functional status would also indicate if the dredge is operating or not if it is reported to be dredging near or in an exclusion zone or structure. We believe that full-time monitoring of the dredge position and operating status is practicable with the dredge monitoring system that Capital Sand described in their dredge monitoring plan submitted in October 2007. The dredge monitoring plan indicates that the system will include a fully autonomous, self-powered back-up system including a GPS, an integrated

microcomputer, sealed cell battery and solar panel. The microcomputer will receive signals indicating the operating status and position of the cutter-head. Because the system has a battery and solar panel back-up power supply, we assume that it could log data continuously even when the dredge plant is not operating or manned. The system proposed by Holliday Sand has a similar battery back-up and continuous data logging capabilities. We would not require Capital Sand to add a back-up power supply to their dredge monitoring system since we had previously agreed that their system they had proposed would be sufficient, but since the back-up system is installed and constant data logging of dredge operating status and position is possible, practicable and beneficial, we will require continuous monitoring.

#### 2.5.3.2. Measuring Tonnage and Location

Capital Sand (Enclosure 6.7) and Con-Agg (Enclosure 6.8) request that we modify special conditions “b” and “c” of the initial proffered permit to allow extraction by river mile to be estimated and recorded by the dredge operator on per barge load basis and actual tonnage to be recorded by belt scales at offload sites. Holliday Sand (Enclosure 6.5) requested that we modify those conditions to require the separate recording of the amount of material when the dredge is moved 800 feet rather than only 100 feet. They explain that this is because their 1000 feet of anchor chain allows them to move about 800 feet within an anchor setting.

**Corps’ Response:** The Corps agrees to modify special conditions “b” and “c” to require that the time, date, river mile, coordinates and estimated tonnage be recorded when a barge is fully loaded or when a partially loaded barge is moved to a new anchor setting.

#### 2.5.4. Hydrographic Survey

##### 2.5.4.1. Modification

Capital Sand and Con-Agg requested that Special Condition “d” be modified because they believe that as required by the Initial Proffered Permit, it is unduly burdensome and not reasonably related to the prevention of bed degradation. Specifically they request the following clarifications: 1) the survey can be conducted in a four-month period between June and September, 2) the survey would be done annually beginning in 2008, 3) the survey can be conducted on 250-foot baselines, 4) the Corps will conduct the first year’s (2007) survey to provide benchmarks and baseline information, 5) the Corps will provide the benchmarks and baseline information to Capital Sand in order to achieve comparable results and reduce costs

and 6) the Corps will continue to provide assistance with regard to the survey plan.

**Corps' Response:** The Corps agrees that these modifications are more reasonable and will still provide sufficient information to study the effects of dredging on degradation. Therefore Special Condition "d" has been changed accordingly.

#### 2.5.4.2. Financial Burden

Hermann Sand objects to Special Condition "d" because they believe it will place a disproportionate and unfair financial hardship on their small business. They want the condition removed from their permit.

**Corps' Response:** The Corps recognizes the substantial cost of conducting a hydrographic survey and has recommended actions that Hermann Sand could take to reduce their expense such as reducing the extent of their authorized dredging reaches and cooperating with the other dredgers to get one surveyor to survey all authorized reaches without redundancy between dredgers. However, the hydrographic surveys are a vital condition of our FONSI because they will alert us if significant degradation occurs during the next permit cycle despite all the permit conditions designed to minimize the degradation and will provide information for the future EIS. We will not remove Special Condition "d" from Hermann Sand's proffered permit.

### 3. Revised Special Conditions

#### 3.1. Mandatory by Regulation/Policy

The following special conditions, with any exceptions noted after the condition, will be included in all individual DA permit authorizations as required by national policy guidance and/or regulations.

- a. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

### 3.2. Project Specific

- b. Before the permittee may exercise this permit, he must have and follow a Dredge Monitoring Plan (DMP) approved by the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District for each individual dredge plant whether permittee owned or contracted. The DMP must show how the permittee will monitor, record, and report the cutter-head position, cutter-head operating status, extraction tonnage, and the presence of any hard substrates, mussel shells, or unusual concentration of gravel in an impartial, unbiased, reliable, and accurate manner. The DMP must include the specifications of the process and the Dredge Monitoring System (DMS) including sensors, hardware, software, communications devices the permittee will use to: gather data; perform quality control on those data; calibrate, test, and repair sensors when they fail; and transfer the data to the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District. The DMS must include automated differential Global Positioning System (DGPS) equipment (or other comparable system) operating with a minimum accuracy level of 1-3 meters horizontal Circular Error Probable with horizontal positions tied into the UTM Zone 15 NAD 83 (feet) coordinate system recorded to the nearest foot. The DMS must always be on, recording cutter-head position and operating status every 5 minutes, 24-hours a day, 365 days a year, even when the dredge is not operating. The data logged each month must be submitted by email to [cody.s.wheeler@usace.army.mil](mailto:cody.s.wheeler@usace.army.mil) at the Kansas City District Regulatory Branch by the 7th day of the following month. If the permittee does not receive an email confirmation that the report was received, the permittee must contact the Regulatory Branch at 816-389-3990 for revised instructions for filing the monthly report. The extracted material must be measured by one of the methods described in the attached Standard Operating Procedure for Hydrographic Surveying and Dredge Monitoring. If the tonnage is measured by scale at the off-loading facility, the DMP should also describe how the operation will record the date, time, river mile, coordinates, and approximate tonnage of each barge loaded in one location. If a barge is partially filled at one anchor setting then completed at a new anchor setting, the tonnage should be estimated separately for each location. This information must be provided monthly by email on the attached Missouri River Commercial Dredging Location/Volume Report spreadsheet to [cody.s.wheeler@usace.army.mil](mailto:cody.s.wheeler@usace.army.mil) at the Kansas City District Regulatory Branch by the 7th day of the following month. If the permittee does not receive an email confirmation that the report was received, the permittee must contact the Regulatory Branch at 816-389-3990 for revised instructions for filing the monthly report. Faulty sensors or other components identified in the DMP must be repaired within 96 hours. The DMS must not be inoperable more than 5 percent of the time.

This condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, water intake structures, and endangered

species and their habitat are minimized. It has been modified from the version in the initial proffered permit to clarify the intent and incorporate the original special condition “e”. A phase in period is not included because this was a requirement of the 1996 permits extended on August 19, 2007 so the DMP and DMS should already be approved and installed.

- c. The permittee may discharge back into the Missouri River material spilled off the conveyer belts and unusable material separated out in the on-shore sand washing and handling facility. The permittee may subtract that tonnage from his annual extraction limit once he has obtained our approval in writing and followed a plan showing where and how the material will be discharged and how the amount of dredged material discharged back into the river will be measured and reported to the Corps. The total extraction tonnage will equal the tonnage extracted and barged to shore minus that amount intentionally returned to the Missouri River.

This is a new condition developed to ensure that if the dredger wants to subtract unusable material from his extraction total, it will not increase overall extraction or cause significant impacts from increased degradation.

- d. The permittee must survey each authorized dredging reach on an annual basis beginning in 2008 in accordance with the attached Standard Operating Procedures for Hydrographic Surveying and Dredge Monitoring. The Corps will provide to the dredgers the benchmarks and baseline information from the Corps’ 2007 hydrographic survey of the river. Surveys shall extend 2 miles upstream and 2 miles downstream of each dredged reach with transects every 250 feet. Surveys shall be completed between June and September at as close to a 12-month interval as possible. Where the permitted dredged reach of one dredger overlaps that of one or more other authorized dredging companies, the companies may choose to cooperate and provide just one survey report for that reach signed by all cooperating companies. The Corps will continue to provide assistance as needed with regard to the survey plan.

This was condition “c” in the initial proffered permit and has been modified to clarify the intent as determined in meetings with the appellants. This condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, water intake structures, and endangered species and their habitat are minimized.

- e. If any part of the authorized work is performed by a contractor, before starting work the permittee must discuss the terms and conditions of this permit with the contractor and must give a copy of this entire permit to the contractor. Any contracted dredges or barges must also be equipped with and operate in accordance with an approved DMP as required in special condition “b”. The DMP and DMS must be approved by the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District prior to starting work.

This was condition “d” in the initial proffered permit and has been modified to eliminate the 120-day phase in period because the condition was implemented with the 1996 permit modified and extended on August 20, 2007. For this reason, condition “e” of the initial proffered permit has been removed.

This condition is necessary to insure compliance with the terms and conditions of the subject permit. Past experience has shown that full compliance with the permit is more likely when all parties conducting the authorized work are familiar with the permit.

- f.** No more than 1,200,000 tons of material shall be extracted within one year from any 10-mile reach of the Missouri River between river miles 49.8 and 490.0. When the dredge plant monitoring system indicates that total extraction of all dredgers in a 10-mile reach has reached 1,200,000 tons, all dredgers authorized to operate within that reach will be notified that it is closed to further dredging for the remainder of the calendar year unless the permittee request and receive a waiver in writing from the Chief of the Regulatory Branch, Kansas City District, U.S. Army Corps of Engineers.

This condition remains unchanged from the initial proffered permit. This condition is necessary to minimize the contribution of dredging to bed degradation and to minimize adverse affects on navigation, flood control, water intake structures, and endangered species and their habitat.

- g.** In permit conditions that specify a linear distance exclusion zone adjacent to a river feature, “dredging” refers to the operation of hydraulic cutter head suction dredging. The exclusion zone distances will apply to and be measured from the end of the cutter head rather than from a general point on the dredge.

This condition remains unchanged from the initial proffered permit. This condition is necessary because the special conditions designed to minimize adverse impacts to water quality and endangered species and other wildlife and their habitat are concerned with the affect of the dredging and discharge.

- h.** The permittee must confine dredging between the Rectified Channel Lines (RCL) with the following restrictions. Dredging must be conducted in such a manner to preserve the structural integrity of the landmass landward of the RCL. This must be accomplished by maintaining an adequate "no dredging or discharging" zone riverward of the RCL so that material will stabilize into the dredging area at its natural angle of repose. This slope will vary depending upon river location and the type of material being dredged, but it is the dredger’s responsibility to ensure that this shallow water interface landward of the RCL is maintained.

This condition remains unchanged from the initial proffered permit. The condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, and water intake structures and endangered species and their habitat are minimized.

- i. The permittee must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bank line or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that the permittee can conduct dredging and does not relieve the permittee from liability for damage arising from dredging. The permittee must be satisfied that dredging to these limits will not cause damage to public and private property.

This condition remains unchanged from the initial proffered permit. The condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, and water intake structures and endangered species and their habitat are minimized.

- j. The permittee must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless the permittee obtains an exemption to this condition in writing from the Chief of the Regulatory Branch, Kansas City District, Corps of Engineers.

This condition remains unchanged from the initial proffered permit. The condition is necessary to avoid adverse impacts to municipal drinking water intake structures and provide a mixing zone sufficient to reestablish water quality to background conditions on the Missouri River.

- k. The permittee must not conduct dredging operations in a zone extending 1,000 feet upstream and 1,000 feet downstream from any horizontal collector wells located along either bank of the river unless the permittee obtain an exemption to this condition in writing from the Chief of the Regulatory Branch, Kansas City District, Corps of Engineers.

This condition has been modified from the initial proffered permit to expand protection to horizontal collector wells used for any purpose, not just for municipal drinking water. The condition is necessary to preserve the existing permeable aquifer material and avoid adverse impacts to the quality and quantity of this water source.

- i. The permittee must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "d" above.

This condition remains unchanged from the initial proffered permit. The condition is necessary to avoid adverse impacts to water intake structures and water quality of water users other than municipal drinking water providers.

- m. The permittee must confine dredging to the specified reaches listed on page 1 of the permit document. Requests for expansion and/or relocation of the specified reaches must identify the proposed new limits, in river miles, and the location of the unloading facility to be employed. Approval of the requests, if granted, will be provided in writing with modified reaches identified on the Missouri River Hydrographic Survey. Copies of the relocation requests must be furnished to the following agencies:

1. U.S. Fish and Wildlife Service, Columbia Field Office
2. Missouri Department of Natural Resources, Water Pollution Control Program
3. Missouri Department of Natural Resources, State Historic Preservation Office
4. Kansas Department of Health and Environment, Bureau of Water (for operations extending upstream of river mile 367)
5. Kansas State Historical Society, State Historic Preservation Office (for operations extending upstream of river mile 367)
6. Corps of Engineers, Kansas City District, Hydrologic Engineering Branch

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that adverse impacts of the authorized activity on water quality, cultural resources, and river bed degradation are minimized.

- n. The permittee must not conduct dredging operations within the reaches identified in the following table as pallid sturgeon habitat features.

Missouri River Miles (including 0.25 mile buffer)		Pallid Sturgeon Habitat Feature
Downstream	Upstream	
49.15	50.05	RDB Centaur Chute
56.85	59.05	LDB Chute/Island
58.55	61.25	RDB Chute/Island
89.75	91.10	RDB Island
89.90	91.45	LDB Loutre Slough
91.20	93.55	LDB Lunch Island
103.00	104.95	Both Gasconade Confluence and Dike Field
105.20	106.25	RDB Dike Field

<b>Missouri River Miles (including 0.25 mile buffer)</b>		<b>Pallid Sturgeon Habitat Feature</b>
<b>Downstream</b>	<b>Upstream</b>	
115.20	115.95	RDB Island
118.40	119.15	RDB Dike Field
119.35	119.85	RDB St. Albert Chute
124.35	124.95	RDB St. Albert Chute
126.05	126.90	LDB Dike Field
127.50	130.20	Both Osage River Confluence and Dike Field
157.00	158.45	LDB Island
176.40	177.85	LDB Island
184.75	185.65	RDB Chute
186.90	188.20	RDB Chute and Dike Field
193.40	195.75	RDB Dike Field/Island
202.10	202.75	RDB Lamine River Confluence
212.95	214.05	RDB Dike Field
214.25	215.00	LDB Chute
217.75	218.55	LDB Chute
218.40	219.65	RDB Island
226.95	227.55	LDB Little Chariton Confluence
238.40	239.10	LDB Chariton River Confluence
249.65	250.30	LDB Grand River Confluence
269.85	271.35	RDB Shallow/Island
280.40	282.05	RDB Island
297.90	299.05	RDB Island
300.00	301.05	LDB Island
367.00	367.75	RDB Kansas River Confluence
390.85	391.45	LDB Platte River Confluence
462.65	463.25	LDB Nodaway River Confluence
478.55	479.15	RDB Wolf Creek Confluence
494.55	495.20	RDB Big Nemaha River Confluence

This condition has been modified from the initial proffered permit to include the column headings on each page. This condition is necessary to minimize impact to the pallid sturgeon and its habitat. The FWS determination that the dredging activities are not likely to adversely endanger species and their activities is conditional on including this condition.

- o. The permittee must discharge only suitable material that is free from toxic pollutants in other than trace quantities.

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that adverse impacts of the authorized activity on water quality are minimized.

- p. The permittee must investigate for water supply intakes or other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality. The permittee must furnish the Kansas City District with a copy of any written notification provided in accordance with this condition.

This condition remains unchanged from the initial proffered permit. The condition is necessary to avoid adverse impacts to water intake structures and water quality of water users other than municipal drinking water providers.

- q. The permittee must employ measures to prevent dredged materials stored or disposed of on shore from running off or eroding into wetlands or tributaries to the Missouri River.

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- r. The permittee must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States.

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- s. The permittee must store all construction materials, equipment, and/or petroleum products that are part of the on-shore operation, when not in use, above anticipated high water levels.

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- t. The permittee may return unwanted dredged material and river water extracted from the Missouri River back to the Missouri River. The permittee must not dispose of waste materials, water, or garbage below the ordinary high water mark of any other water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

This condition remains unchanged from the initial proffered permit. This condition is a practicable measure that is necessary to ensure that impacts to aquatic habitats are confined to the authorized area.

- u. The permittee must comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States.

This condition remains unchanged from the initial proffered permit. This condition is necessary to minimize adverse impacts to navigation.

- v. The permittee must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

This condition remains unchanged from the initial proffered permit. This condition is necessary to minimize adverse impacts to navigation.

#### 4. Determinations

##### 4.1. Findings of No Significant Impact

After evaluating the anticipated economic, social, and environmental effects of the currently extended dredging permits and proposed activities, it is my determination that issuance of DA permits to Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and Gravel Company; and Con-Agg of MO, LLC to extract sand and gravel from the Missouri River subject to the quantity, time and other limitations and special conditions described above will not have a significant adverse effect on the quality of the human environment; therefore, they may be permitted to dredge at these levels for the limited permit period without the completion of an EIS. However, I have determined that any dredging in excess of these quantities, time periods, and other limits could have a significant adverse effect on the quality of the human environment, and will require the filing of an EIS.

I have also determined that issuance of DA permits to Washington Sand Company, Inc.; St. Charles Sand Company; Edward N. Rau Contractor Company; Kaw Valley Sand and Gravel, Inc.; 85th Street, Inc. (Lafarge), and Muenks Bros. Quarries to dredge as proposed in addition to the currently operating dredgers could have a significant adverse effect on the quality of the human environment and therefore will require the completion of an EIS.

##### 4.2. Section 404(b)(1) Guidelines Compliance

As required by Section 404(b)(1) of the Clean Water Act (33 USC 1344), the proposed activities have been evaluated in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The 404(b)(1) evaluation has resulted in a conclusion that the dredging of sand and gravel from the Missouri River and the discharge of unwanted excess dredged material back into the Missouri River by Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and

Gravel Company; and Con-Agg of MO, LLC is not prohibited by 40 CFR 230. There are no less environmentally damaging practicable alternatives for these applicants to obtain the needed quantity of material at this time. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem. With these permit conditions and restrictions, their activities do not appear to (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of CWA; (2) jeopardize the existence of federally listed endangered or threatened species or their habitat; or (3) violate requirements of any federally designated marine sanctuary.

4.3. Clean Air Act Conformity (Section 176(c) of the Clean Air Act)

The proposed activity has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activity proposed under this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this project.

4.4. Public Interest Review

I find that issuance of DA permits to Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and Gravel Company; and Con-Agg of MO, LLC to extract sand and gravel from the Missouri River subject to the limitations and special conditions described above, as prescribed by regulations published in 33 CFR 320-331, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are no reasonable alternatives available to these applicants at this time that will achieve the purposes for which the work is being conducted; that the work is in accordance with the overall desires of the public as reflected in the comments of state and local agencies and the general public; that the work is deemed to comply with established state and local laws, regulations, and codes; that there have been no identified, significant, adverse environmental effects related to the work; that the issuance of these permits is consonant with national policy, statutes, and administrative directives; and that on balance the total public interest should best be served by the issuance of Department of the Army permits to these applicants.

I also find that denial of DA permits to Washington Sand Company, Inc.; St. Charles Sand Company; Edward N. Rau Contractor Company; Kaw Valley Sand and Gravel, Inc.; 85th Street, Inc. (Lafarge), and Muenks Bros. Quarries to extract sand and gravel from the Missouri River as proposed, as prescribed by regulations published in 33 CFR 320-331, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are significant, adverse environmental effects related to the work; that the issuance of these permits is contrary to national policy, statutes, and administrative directives; and that on balance the total public interest

should best be served by the denial of Department of the Army permits to these applicants at this time.

**5. Signatures/Approvals**

Prepared by: Cody S. Wheeler

Title: Regulatory Project Manager

Reviewed by: Mark D. Frazier

Title: Regulatory Program Manager

Encls (see attached list)

Roger A. Wilson, Jr.  
Colonel, Corps of Engineers  
District Commander

24 May 08  
Date

  
Signature

**6. List of Enclosures**

6.1. Con-Agg objections of August 27, 2007 to the modification of its existing permit.....35

6.2. Capital Sand objections of August 27, 2007 to the modification of its existing permit.....37

6.3. Muenks Brothers appeal of permit denial from August 20, 2007. ....39

6.4. Edward N. Rau appeal of permit denial from October 5, 2007.....42

6.5. Holliday Sand appeal of initial proffered permit from October 11, 2007. ....43

6.6. Kaw Valley Sand appeal of permit denial from October 12, 2007.....49

6.7. Capital Sand appeal of the initial proffered permit from October 17, 2007 and copy of letter accepting modification of existing permit.....64

6.8. Con-Agg appeal of the initial proffered permit from October 17, 2007 and copy of letter accepting modification of existing permit.....69

6.9. Hermann Sand appeal of initial proffered permit from October 18, 2007.....75

6.10. December 3, 2007 Holliday Sand request to allow dredging closer to dikes. ....79

6.11. Additional information submitted by Edward N. Rau on December 17, 2007. ....80

6.12. Draft Study: Results of Ongoing study of Missouri River Bed Degradation. ....82

6.13. MDNR Technical Report: A Geologic Cross Section of the Missouri River Valley at Kansas City, Missouri. ....93

Enclosure 6.1 Con-Agg objections of August 27, 2007 to the modification of its existing permit.



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JEFFERSON CITY, MISSOURI 65101  
(573) 893-4336, FAX (573) 893-5398

August 27, 2007

***VIA FAX TRANSMISSION***  
**(816) 389-2032**  
***AND U.S. MAIL***

Mr. Mark Frazier  
Mr. Cody Wheeler  
U.S. Army Corps of Engineers  
Kansas City District  
700 Federal Building  
601 East 12th Street  
Kansas City, MO 64106

Re: Proposed Modification of DA Permit No. 1996-01652  
Objection and Request for Meeting

Dear Mr. Frazier and Mr. Wheeler:

This letter serves as the response and objection of Con-Agg of Missouri, L.L.C. ("Con-Agg") to the proposed modification of its permit, DA Permit No. 1996-01652. This objection and request for meeting is being provided on August 27, 2007, as requested by your letter of August 20, 2007. Con-Agg would note that it is providing this response by the date requested in your letter, even though Con-Agg received your August 20, 2007, letter on August 22, 2007, less than ten days before today, August 27, 2007.

Con-Agg requests a meeting to discuss the appropriate modification to its DA Permit No. 1996-01652. As a preliminary matter, Con-Agg objects to the Corps' proposed retroactive application of the tonnage limits of the permit modification to the start of 2007, as such a retroactive application is not consistent with the regulatory requirements for modification of a permit. Any modification deemed necessary by the district engineer shall become effective on the date set by the district engineer, which date "shall be at least ten days after receipt of the notice by the permittee." 33 CFR § 325.7(b).

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Mr. Mark Frazier  
Mr. Cody Wheeler  
August 27, 2007  
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However, despite its objection to the proposed retroactive modification of its permit, Con-Agg will not exceed the 175,000 ton restriction on its total extraction for 2007. Because compliance with this extraction limit addresses any river bed degradation concerns for the applicable river sections, the special conditions proposed for DA Permit 2001-01434, which are incorporated into the modification of DA Permit 1996-01652, are not necessary to protect the public interest, and are therefore an inappropriate modification to the existing permit. 33 CFR § 325.7. As such, Con-Agg requests a meeting with the Corps to discuss the additional proposed modifications.

I look forward to talking with you at your earliest convenience to set a meeting to discuss the permit modification. Thank you for your attention to this matter.

Very truly yours,

LATHROP & GAGE L.C.

By:



David A. Shorr

DAS/jf

cc: Larry W. Moore, Con-Agg of Missouri, L.L.C.

Enclosure 6.2 Capital Sand objections of August 27, 2007 to the modification of its existing permit.



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August 27, 2007

**VIA FAX TRANSMISSION**  
**(816) 389-2032**  
**AND U.S. MAIL**

Mr. Mark Frazier  
Mr. Cody Wheeler  
U.S. Army Corps of Engineers  
Kansas City District  
700 Federal Building  
601 East 12th Street  
Kansas City, MO 64106

Re: Proposed Modification of DA Permit No. 1996-01648  
Objection and Request for Meeting

Dear Mr. Frazier and Mr. Wheeler:

This letter serves as the response and objection of Capital Sand Company, Inc. ("Capital Sand") to the proposed modification of its permit, DA Permit No. 1996-01648. This objection and request for meeting is being provided on August 27, 2007, as requested by your letter of August 20, 2007. Capital Sand would note that it is providing this response by the date requested in your letter, even though Capital Sand received your August 20, 2007, letter on August 22, 2007, less than ten days before today, August 27, 2007.

Capital Sand requests a meeting to discuss the appropriate modification to its DA Permit No. 1996-01648. As a preliminary matter, Capital Sand objects to the Corps' proposed retroactive application of the tonnage limits of the permit modification to the start of 2007, as such a retroactive application is not consistent with the regulatory requirements for modification of a permit. Any modification deemed necessary by the district engineer shall become effective on the date set by the district engineer, which date "shall be at least ten days after receipt of the notice by the permittee." 33 CFR § 325.7(b).

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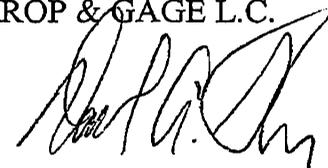
However, despite its objection to the proposed retroactive modification of its permit, Capital Sand will not exceed the 2,225,000 ton restriction on its total extraction for 2007. Because compliance with this extraction limit addresses any river bed degradation concerns for the applicable river sections, the special conditions proposed for DA Permit 2001-01429, which are incorporated into the modification of DA Permit 1996-01648, are not necessary to protect the public interest, and are therefore an inappropriate modification to the existing permit. 33 CFR § 325.7. As such, Capital Sand requests a meeting with the Corps to discuss the additional proposed modifications.

I look forward to talking with you at your earliest convenience to set a meeting to discuss the permit modification. Thank you for your attention to this matter.

Very truly yours,

LATHROP & GAGE L.C.

By:



David A. Shorr

DAS/jf

cc: Ray Bohlken, Capital Sand Company, Inc.

Applicant: Muenks Brothers Quarries		File Number: 200400378	Date: AUG 20 2007
Attached is:		See Section below	
	A. INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A	
	B. PROFFERED PERMIT (Standard Permit or Letter of Permission)	B	
XX	C. PERMIT DENIAL	C	
	D. APPROVED JURISDICTIONAL DETERMINATION	D	
	E. PRELIMINARY JURISDICTIONAL DETERMINATION	E	

**A: INITIAL PROFFERED PERMIT: You may accept or request modification of the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **REQUEST MODIFICATION:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT: You may accept or appeal the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.**

**D: APPROVED JURISDICTIONAL DETERMINATION: You may accept the approved JD, appeal the approved JD, or submit new information and request reconsideration of the approved JD.**

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**RECONSIDERATION BASED ON NEW INFORMATION:** You may submit new information to the District Engineer for reconsideration of an approved JD. You must submit the information within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**Decision Document**

**10.2 Section 404(b) (1) Guidelines Compliance**

this section states; "The 404 (b) (1) evaluation has resulted in a conclusion that dredging of sand and gravel from the Missouri River and the Discharge of unwanted excess dredged material back into the Missouri River by Capital

Sand Company; Hermann Sand and Gravel, Inc; Holiday Sand and Gravel Company; and Con-Agg of MO. LLC is not prohibited by 40 CFR 230. There are no less environmentally damaging practicable alternatives for those applicants.'

'The 404 (b) (1) evaluation has also resulted in a conclusion that there are less environmentally damaging practicable alternatives for Washington Sand Company, Inc.; St. Charles Sand company;..... And Muenks Bros. Quarries than the proposed dredging.

**SUBMITTAL OF NEW OR ADDITIONAL INFORMATION:** The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

If you have questions regarding this decision and/or the appeal process you may contact:  
U.S. Army Engineer District, Kansas City  
**DISTRICT ENGINEER**  
Attn: Mark D. Frazier  
Acting Chief, Regulatory Branch  
601 East 12<sup>th</sup> Street, Room 706  
Kansas City, MO 64106-2896  
Telephone: 816-389-3990  
(Use this address for submittals to the District Engineer)

If you wish to submit an appeal or have questions regarding the appeal process you may contact:  
U.S. Army Engineer, Northwestern Division  
**DIVISION ENGINEER**  
ATTN: Karen Kochenbach  
Regulatory Program Manager  
Post Office Box 2870  
Portland, Oregon 97208-2870  
Telephone: 503-808-3888

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

  
\_\_\_\_\_  
Signature of appellant or agent.

Date:  
10/16/07

Telephone number:  
573-887-4141

Enclosure 12.1: Public Notice for Re-authorization for Current Dredgers  
Activity Subsection: Details that hydraulic dredges will perform dredging operations.

Enclosure 12.2: Public Notice for Authorization for Proposed Muenks Brothers  
Dredging:  
Activity Subsection: Details that hydraulic dredges will perform proposed dredging operations.

Enclosure 12.80: Discloses working relationship between Con-Agg and Capital Sand Company

Enclosure 12.62: Discloses working relationship between Muenks Bros. Quarries and Hermann Sand And Gravel Co.

#### REASONS FOR APPEAL:

1. According to Section 10.2 the 404 (b)(1) evaluation indicates that 'there are less environmentally damaging practicable alternatives for .....Muenks Bros. Quarries'. Additionally, Section 10.2 also states that there are 'no less environmentally damaging practicable alternatives' available for the applicants with approved permits.

It is the contention of Muenks Bros. Quarries (MBQ) that any purported 'alternatives as described in Section 10.2 that are supposedly available to MBQ are also available to the successful applicants. It is inconsistent, erroneous and illogical to conclude that the available alternatives for the respective entities are different. This is further supported by enclosures 12.1 and 12.2 that indicate that the method of the proposed dredging of sand and gravel by MBQ is the same as proposed by the successful applicants. Thus the available alternatives and environmental impact would also be the same.

2. Enclosures 12.62 and 12.80 disclose the contract arrangements for MBQ and Hermann Sand and Gravel, as well as, Con-Agg and Capital Sand Company, respectively. MBQ emphasizes that the environmental impact of the dredging activity performed under the contractual arrangement for MBQ by Hermann Sand and Gravel will be identical to the impact of the dredging activity performed by Capital Sand Company for Con-Agg. Likewise, the impact of the respective contractual dredging activities will be same as the impact for Hermann Sand and Gravel and Capital Sand Co. dredging to meet their respective needs. Therefore, any 'alternatives' that are supposedly available to MBQ would also be available to Con-Agg and any potential impacts of contractual dredging will be consistent with all dredging activities performed utilizing the same process and/or equipment.

MBQ respectfully request that the alleged 'less environmentally damaging practicable alternatives' that are available to MBQ but not the successful applicants be disclosed. The respective enclosures cited above clearly illustrate that the conclusions of the Decision Document and their repercussions are inconsistent, illogical, and unsubstantiated. Please justify these obvious inconsistencies and enumerate the alternatives purported in Section 10.2.

## EDWARD N. RAU CONTRACTOR COMPANY

2809 State Road A, Suite A  
Washington, MO 63090  
PH: (636) 239-4748 (Washington) or (636) 227-2500 (St. Louis)  
FAX: (636) 239-9020

*NWR  
Reg rec'd  
10/12/07*

October 5, 2007

Division Engineer  
ATTN: Karen Kochenbach  
Regulatory Program Manager  
U.S. Army Corps of Engineers  
P.O. Box 2870  
Portland, OR 97208-2870  
Telephone: 503-808-3888

Re: RFA, Sand Dredging Permit

Ms. Kochenbach:

We request an appeal of your decision to deny our permit under 33 C.F.R. Part 331.5.

As we have written previously, we held this permit for years and within the past two years have mobilized to begin dredging sand through contracts with others on the Missouri river only to have renewal of the permit denied. The December 2006 Corp. meeting was our first indication that our long-standing permit was in jeopardy. We ask that you reconsider your denial based on the following:

1. It is widely anticipated that pending, and unsubstantiated, environmental studies in the Kansas City area may not be able to show significant impact of dredging on degradation of the lower-Missouri river bed.
2. We propose delaying start of our dredging until 2008, in an effort to obtain approval of the permit without changing the permit terminus date.
3. We propose reducing requested/permitted quantities per year and phasing in production by reducing the permitted quantities to 15,000 T for the 2008 year, 25,000T/year two and 75,000 T /year three. These very small quantities from our river mileage will mitigate concerns of environmental damage while allowing a method to balance the benefit of the natural resource between large applicants allowed to dredge 2,255,000 tons and small operations such as our 15-75,000 tons/year while maintaining environmental protections.
4. Cancelling our permit for dredging less than 75,000 tons while allowing continued dredging of 2,000,000 tons by other single parties while you express a concern about degradation of the river bed is troublesome. It appears that the permit approval process being followed guarantees access to this natural resource only to the current dredging operations while it eliminates any new enterprise

Enclosure 6.5 Holliday Sand appeal of initial proffered permit from October 11, 2007.



*Holliday*

**SAND AND GRAVEL COMPANY**

PH: (913) 492-5920      9660 LEGLER ROAD      LEXENA, KS 66219-1291      FAX (913) 438-0200

October 11, 2007

Re: File Number: 200101431 - Section II – REASONS FOR APPEAL OR OBJECTIONS

District Engineer  
ATTN: Mark D. Frazier  
Acting Chief, Regulatory Branch  
U.S. Army Engineer District, Kansas City  
601 East 12<sup>th</sup> Street, Room 706  
Kansas City, MO 64106-2896

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Dear Mr. Frazier:

Holliday Sand & Gravel Company respectfully requests the following modifications be made to its proffered Department of the Army permit No. 2001-01431:

**1. We request that the Project Description be revised to allow extraction of the 3,400,000 tons permitted within the Kansas City reaches between Missouri River miles 350.0 and 386.0 for the duration of the permit rather than be restricted in years 2008 and 2009.**

This would prevent any impacts to the Kansas City construction industry until the following can be completed:

- a) Additional data relating to the impacts of dredging collected and studied.
- b) Development of a new downstream terminal.
- c) Development of floodplain deposit mining.
- d) Construction of marine equipment needed for tows exceeding two hours.

Holliday has already been working on all four of the above projects, but a minimum of two years will be required for the next phases of the last three items. Our progress on future sites and barge construction were discussed in detail at our preliminary appeal meeting with KCD staff on September 28, 2007. We have intentionally left out specifics here for proprietary reasons.

The extension of Holliday's upstream KC limit to Mile 386.0 is needed as we are approaching the 382.7 limit now.

**Transfer of Unused Quota**

We request that special conditions be added to allow the transfer of unused tonnage quota:

**2. Up to 250,000 tons of unused quota may be produced during the following calendar year.**

This would help to accommodate large projects, such as state highway jobs that can be delayed over to the following year.

**3. Up to 250,000 tons of unused quota may be transferred annually to another permitted reach and/or permit holder with the prior approval of the KCD.**

This has been allowed with the Kansas River dredge permits, and has helped reduce impacts to the construction industry.

Should sediment availability prove to be a concern, this could be limited to only transferring tonnage quota to a downstream location so as to have no impact to sediment availability.

Modifications to Improve Practicality

**4. We request that Special Conditions b. and e. be modified to change the separate recording of the amount of material removed from 100 feet of dredge movement to 800 feet.**

It is not unusual for the dredge to move 800 feet within an anchor setting prior to coarse sand being located and loaded onto a barge.

**5. We request that Special Condition c. be modified to only require the hydrographic survey of the entire permitted dredge reach initially for a baseline. The annual hydrographic survey would be limited to the actual areas dredged, plus two miles upstream and downstream.**

This should give adequate data when combined with the USACE's existing program of overall hydrographic surveys. Should a producer desire to operate outside the currently surveyed area of their permit, it might behoove them to survey that reach to provide an updated baseline.

**6. We request that the last sentence of the Project Description relating to moisture content be changed from 10% to 4%.**

The new permitted tons were capped based on the reported sales quantities from 2006 that reflect material tonnages weighed on accurate truck scales with a moisture content between three and five percent by weight. Specifying that the tonnage reported must include 10% water consists of an additional built-in inaccuracy and reduction in saleable product by the difference of five to seven percent. The sand going across the belt scale will have moisture of anywhere from eight to twenty-two percent, depending on a multitude of factors. Instead of calibrating up or down to the ten percent water content, we request that a moisture content consistent with that of our historically reported tons sold be used instead. Therefore, we request that the tons be reported from the belt scale that is calibrated at four percent moisture content which is very close to what the actual moisture of the saleable product has been and will be.

**7. We request that unwanted sands that are returned to the Missouri River be accounted for and credited to the tonnage limits up to 50,000 tons per year.**

This would include spillage, and fill sand that is sold at little margin otherwise.

Holliday contracted the services of JD-Mc L.L.C., consisting of John Doyle and Henry Hauck who together have a wealth of experience with collecting and analyzing hydrographic data. Their assignment was to shadow the data collection by the USACE and evaluate that data, regardless of the results, as soon as possible. They have evaluated the data collected from the first dredge-hole study completed this year at Mile 368. The results were included with our presentation made on September 28, 2007 to KCD regulatory personnel. Attached is their summary of the findings presented at that meeting. We would be glad to present the data for additional viewing so the necessary commentary can be provided.

The data at Mile 368 and at Washington appear to illustrate the following:

- The dredge holes filled at normal stream flow rates.
- The dredge hole remained within its original boundaries and did not show signs of sloughing or headcut as it refilled.
- There was no indication of degradation above or below the dredge hole.
- An absence of short term impacts to the streambed

We realize that the data to this point are snapshots and situational but the data should be considered for what it is, what it shows and what it doesn't show. We feel that this early data deserves a "wait and see" attitude toward dredging impacts. The data will begin to roll in and we ask for time to see what it says and time for us to prepare alternative sources and methods before any reductions in the Kansas City area are instituted.

We very much appreciate your time and consideration of the requested modifications.

Sincerely,

Holliday Sand & Gravel Company



Mike Odell  
Vice President Production

Enclosures

**JD-Mc L.L.C.**  
**Engineering & Construction**

**To:** Holliday Sand & Gravel Company  
**From:** John Doyle, Henry Hauck  
**RE:** Commercial Sand Dredging on the Missouri River  
**Date:** September 28, 2007

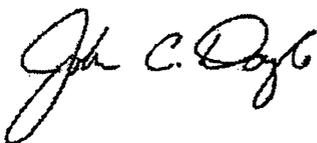
Attention Mike Odell:

This letter is in response to the meeting held at the Bolling Federal Building in Kansas City, Missouri on September 25, 2007. The meeting pertained to the ongoing bed degradation problem on the Missouri River and the potential effects commercial sand dredging contributes to the problem. The meeting established reasoning behind dredge monitoring equipment and hydrographic surveying. The meeting also recommended the USACE investigate the possibility for Holliday Sand & Gravel Company to continue to extract all permitted tonnages in its "original" dredge reaches due to the inability for Holliday Sand & Gravel Company to relocate the operation to the proposed reach in a timely fashion. These recommendations were requested based on data collected and provided by the U.S. Army Corps of Engineers. The data was reviewed by Ken Starks of the U.S. Army Corps of Engineers and by private consulting professionals John Doyle, P.E. and Henry Hauck.

The data presented at the meeting is encouraging to the dredging industry and clearly illustrated dredging does not have a short term impact on the Missouri River bed degradation issue. The data was collected by the USACE in a joint effort with Holliday Sand & Gravel Company. The data was edited by the USACE staff and then shared with Holliday Sand & Gravel. The data illustrated that the surveyed dredge hole located near river mile 368 continued to fill and replenish at normal stream flow rates and the dredge hole remained confined within its original boundaries throughout the study period. Ken Starks of the USACE remarked that he obtained very similar results in both the dredge study at river mile 368 and on a dredged area located near Washington, Missouri. Furthermore, historical data presented at the meeting visibly indicated the Missouri River near Kansas City has experienced continuous degradation over the past 80 years. The data did not show or suggest dredging has an adverse impact on bed degradation as the slope of degradation appeared to be constant.

Finally, we would like to emphasize the importance each entity represents in this situation. With cooperation from both Holliday Sand & Gravel Company along with the Kansas City District of the U.S. Army Corps of Engineers a reasonable short-term compromise may be obtained for the proposed permit cycle. If there is anything else we can help you with please let us know.

John C. Doyle, P.E.



Henry S. Hauck



**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: Holliday Sand & Gravel Co. File Number: 200101431 Date: **AUG 20 2007**

Attached is: See Section below

XX	A. INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	B. PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	C. PERMIT DENIAL	C
	D. APPROVED JURISDICTIONAL DETERMINATION	D
	E. PRELIMINARY JURISDICTIONAL DETERMINATION	E

**SECTION I - The following identifies your rights and options regarding a modification, reconsideration, or administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.**

**A: INITIAL PROFFERED PERMIT: You may accept or request modification of the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **REQUEST MODIFICATION:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT: You may accept or appeal the permit.**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.**

**D: APPROVED JURISDICTIONAL DETERMINATION: You may accept the approved JD, appeal the approved JD, or submit new information and request reconsideration of the approved JD.**

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.
- **RECONSIDERATION BASED ON NEW INFORMATION:** You may submit new information to the District Engineer for reconsideration of an approved JD: You must submit the information within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.**

SECTION II - Fill out this section and return this form to the appropriate office only if submitting a request for modification or reconsideration to the District Engineer, or if submitting a request for Administrative Appeal to the Division Engineer. All such submittals must be made within 60 days of the date of this notice.

Submit the following requests to the District Engineer

- A. Modification of an INITIAL PROFFERED PERMIT (Item A).
- D. Reconsideration of an APPROVED JURISDICTIONAL DETERMINATION based on NEW INFORMATION (Item D RECONSIDERATION).

Submit the following requests to the Division Engineer

- B. Administrative Appeal of a PROFFERED PERMIT (Item B).
- C. Administrative Appeal of a PERMIT DENIAL (Item C).
- D. Administrative Appeal of an APPROVED JURISDICTIONAL DETERMINATION (Item D APPEAL) (for reasons other than reconsideration of an approved JD based on new information).

(Note: Preliminary Jurisdictional Determinations (Item E) are not appealable. If you have concerns regarding a preliminary Jurisdictional Determination, you can request an approved Jurisdictional Determination).

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

(See attached letter.)

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SUBMITTAL OF NEW OR ADDITIONAL INFORMATION: The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

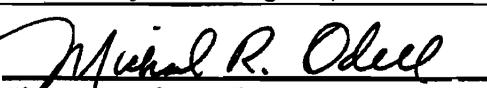
U.S. Army Engineer District, Kansas City  
DISTRICT ENGINEER  
Attn: Mark D. Frazier  
Acting Chief, Regulatory Branch  
601 East 12<sup>th</sup> Street, Room 706  
Kansas City, MO 64106-2896  
Telephone: 816-389-3990

(Use this address for submittals to the District Engineer)

If you wish to submit an appeal or have questions regarding the appeal process you may contact:

U.S. Army Engineer, Northwestern Division  
DIVISION ENGINEER  
ATTN: Karen Kochenbach  
Regulatory Program Manager  
Post Office Box 2870  
Portland, Oregon 97208-2870  
Telephone: 503-808-3888

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

  
Signature of appellant or agent.

Date:  
10/11/07

Telephone number:  
913-438-0240

Enclosure 6.6 Kaw Valley Sand appeal of permit denial from October 12, 2007.

**THE LAW OFFICE OF  
CHARLES D. KUGLER, LLC**

748 Ann Ave.  
Kansas City, KS 66101

913-371-1930  
913-3710147 [fax]  
cdkugler@yahoo.com

October 12, 2007

Division Engineer  
ATTN: Karen Kochenbach  
Regulatory Program Manager  
U. S. Army Corps of Engineers  
P. O. Box 2870  
Portland OR 97208-2870

**ADMINISTRATIVE APPEAL OF PERMIT DENIAL pursuant to 33 C.F.R. §331.5**

Affected Party: Kaw Valley Sand & Gravel, Inc., proposed dredging - RM 360.5-370.5, deep, open water - Missouri River, Kansas City Reach  
Corps File Number: 200101436  
Jurisdictional Determination: Denial of permit to Kaw Valley Sand & Gravel, Inc.  
Date of JD: August 20, 2007

Dear Division Engineer Kochenbach:

Please consider this letter Kaw Valley Sand & Gravel, Inc.'s appeal of the denial of its commercial sand and gravel dredging application on August 20, 2007.

**I. Permit Denial - Chronology**

- A. 1996-2001: Kaw Valley was approved by the Department of the Army for a 300,000 ton permit, but did not extract any sand or gravel.
- B. July 13, 2001: Kaw Valley applied to the Department of the Army, Kansas City District, to request authorization to extract up to 1,000,000 tons of sand and gravel per year from the Missouri River with a mobile, floating hydraulic cutter section dredge plant.
- C. August 20, 2007: the Department of the Army denied Kaw Valley's request for this permit.

D. October 19, 2007: Kaw Valley timely files this appeal within sixty (60) days, pursuant to 33 C.F.R. §331.

## **II. Reasons for Appeal of Permit Denial**

The Department of the Army Corps of Engineers denied Kaw Valley's request for a permit because it would "result in unacceptable impacts on the aquatic environment of the Missouri River" and "permits for extraction of material in excess of the amount reportedly extracted [by other authorized operations] in 2006 would be contrary to the public interest".

The Jurisdictional Decision lists four (4) substantive evaluation areas to support its denial of Kaw Valley's permit application: water quality, fish and wildlife habitat, bed degradation and horizontal collector wells.

**1. Water Quality:** §3.3.1 states "... testing [in response to Friends of the Kaw concerns] has confirmed that these operations [commercial dredging] negatively impact water quality in a very limited area for a short time. The proposed permit conditions combined with §401 Water Quality Certification conditions will adequately address these issues [impact on water quality from sedimentation, mixing of sediment and released toxins, excess material discharge, and accidental petroleum product discharge]." Therefore, water quality would not be impacted by Kaw Valley's proposed dredging operations.

**2. Fish and Wildlife Habitat:** §3.3.2 states "... the CENWK-OD-R [Kansas City District Corps of Engineers Regulatory Branch], in informal consultation with the FWS [Fish and Wildlife Service] and applicants, has developed permit conditions intended to help identify potential and critical habitat, limit dredging to the main navigation channel, and prevent impacts to the identified potential and critical habitats". The identified critical habitats are to the habitats of the least tern, the piping plover, neither of which are found in the area of Kaw Valley proposed dredging [see, §4.1], and the pallid sturgeon. The spawning ground of the pallid sturgeon is presently protected in a restricted zone of dredging within the Kansas City Reach [see, §4.1]. These fish thrive in the turbidity of the Missouri River [see, §6.1.4]. Therefore, as special conditions as to critical habitat protection are already incorporated into the terms of a granted permit application, fish and wildlife habitat impact would be minimal.

**3. Horizontal Collector Wells:** §3.3.4 states "... permit conditions ... would exclude extraction 1000 feet upstream and 1000 feet downstream of [the two] existing [BPU] horizontal collector wells." Therefore, as special conditions as to the protection of the water intake and collection are already incorporated into the terms of a granted permit application, horizontal collector wells impact would be minimal.

**4. River Bed Degradation:** §3.3.3 states "... [river bed] degradation results when sand and gravel extraction exceeds the bed material load." The Jurisdictional Decision and supporting documentation all note that "... our

understanding of the effects of dredging on bed degradation ... is incomplete and that a comprehensive study needs to be done." Supporting documentation has also identified three (3) other factors which also contribute to river bed degradation: dam and other riverside construction, flooding and drought. The Corps continues to be uncertain that commercial dredging is the primary cause of bed degradation. Flood plain management and dam construction are part of the Corps' historic and present functions (see, <http://www.usace.army.mil/missions/water.html>), and are also factors contributing to bed degradation. Major flood events of 1993, 1995 and 1997 and drought in the early years of this century also contribute. [See, undated "Missouri River Bed Degradation" draft, Chapter 30, Jurisdictional Decision supporting document 12.57].

The Corps maintains that its desired goal, in the Kansas City water area, is to be able to reach a FONSI [Finding of No Significant Impact] in the preparation of its EIS [Environmental Impact Statement]. By "reducing or excluding dredging within vulnerable areas", it discounts the impact percentages of the other three identifiable and significant factors on the vulnerable areas of the Missouri River, and in particular, the Kansas City Reach. While the Corps cannot directly affect drought and flooding, one of its main functions is the timing and construction of dams and bridges along the Missouri River. None of these factors has been given its proper effect as contributing factors to river bed degradation. Therefore, until a comprehensive study is done, the Corps cannot focus on limiting dredging as the primary means of solving the degradation problem.

Kaw Valley's proposed permit does not impair the Corps' stated concerns. The Corps has correctly stated its regulations and officially-promulgated policies, but permit denial is not supported by the explanation contained in the Jurisdictional Decision. Therefore, this appeal is properly brought pursuant to 33 C.F.R. §331.5(a).

### **III. Issues on Appeal**

#### **1. The Jurisdictional Decision is against the weight of its own analysis.**

The Jurisdictional Decision denied Kaw Valley's permit for increased dredging for two (2) reasons: the extraction would "result in unacceptable impacts on the aquatic environment of the Missouri River" and "permits for extraction of material in excess of the amount reportedly extracted [by other authorized operations] in 2006 would be contrary to the public interest". Nothing in the Jurisdictional Decision points out where commercial dredging, as presently regulated, harms aquatic life or would have a negative impact on public interest factors.

**A. Unacceptable Impact on Aquatic Environment - this conclusion is not supported by the evidence contained in the Jurisdictional Decision. The Corps' denial of Kaw Valley's permit application was improper, based on this ground.**

**1. Special Aquatic Sites -** the Jurisdictional Decision notes, in §6.1.2, that "the suspended sediment load and turbidity measurements in the Missouri

River have been reduced dramatically because of regulation, flood control structures, bank stabilization and land management." It also notes that sand and gravel dredging churn up the channel so that aquatic life is not smothered by turgid sediment. [See, § 6.2.4]. "... the river is deep and fast flowing with few special aquatic sites in the main channel where dredging occurs." Present special conditions to dredging permits are already in place to minimize the impact on wildlife sanctuaries, refuges, wetlands, mudflats, and vegetated shallows.

However, such aquatic features and sites are not abundant in the Kansas City area where Kaw Valley has proposed to dredge. The analysis of the Jurisdictional Decision does not support its conclusion that Kaw Valley's proposed dredging will negatively impact Missouri River aquatic life in the Kansas City reach or elsewhere.

**2. Fish and Wildlife** - "the fast water of the navigation channel has very little potential for fish production." §6.1.3. In addition, for almost twenty years, Missouri fish consumption has been discouraged because of accumulated chlordane and polychlorinated biphenyl in its fatty tissue from prior permitted pest control measures. §6.1.1. The high turbidity of the Missouri River, which is enhanced by commercial dredging, while reducing "light penetration into the water thereby reducing photosynthesis by phytoplankton, attached algae, and submerged vegetation," has allowed fish native to the area to develop and thrive. §6.1.3.

"Fish habitat, spawning activities, and feeding areas occur normally in areas with slow current", such as oxbow lakes and closed-off channels. *Id.* Areas of slow current are not present within the Kansas City reach. There is some habitat loss from construction of unloading and stockpiling facilities for non-endangered species such as raccoon, fox, opossum, squirrels, cotton-tail rabbits, voles and various birds. §6.2.5. Therefore, the Corps' conclusion that Kaw Valley's proposed dredging would have an unacceptable adverse impact on this aspect of aquatic environmental concerns is not supported by analysis in the Jurisdictional Decision.

**3. Endangered Species** - in §3.3.2 of the Jurisdictional Decision, the Corps of Engineers states that existing permit conditions do not significantly alter the shallow water habitat or create an environment which might cause fish entrainment, or affect the pallid sturgeon.

In § 4.1, the Corps states that while the proposed dredging sites are within the historic range of the piping plover, the least tern and pallid sturgeon, "the described work is not likely to adversely affect these species." The pallid sturgeon's environment has also been affected through river channelization, construction of impoundments upstream and other changes to the water flow. The pallid sturgeon thrives in large turbid rivers such as the Missouri. [See, §6.1.4]. Therefore, the Corps' conclusion that Kaw Valley's proposed dredging would have an unacceptable adverse impact on this aspect of aquatic environmental concerns is not supported by analysis in the Jurisdictional Decision.

Section 6.2.4 notes that "the detrimental impacts ... from dredging [specifically, the cutter-head suction dredges which suck in and dismember aquatic life or bury them in the discharge] result more from the disposal and placement of dredge material rather than the removal of sand and gravel from the channel." Nevertheless, special permit condition 1 prohibits dredging within 100 feet of the river bank or within 200 feet from navigation structures, which are in the less turbid portions of the river which do contain fish populations. The fish, in any event, are banned from human consumption because of elevated levels of chlordane and polychlorinated biphenyls within the fish themselves. The Decision notes that dredging has beneficial side effects for the aquatic environment. [See, §6.3].

Therefore, the Corps of Engineers determination that Kaw Valley's proposed dredging would "result in unacceptable impacts on the aquatic environment of the Missouri River" is not proven by its analysis.

**B. Requested Extraction Contrary to Public Interest - the determination is not supported by the evidence contained in the Jurisdictional Decision.**

33 C.F.R. §320.4(a) sets forth the criteria which comprise a "public interest review". The Corps is to make "an evaluation of the probable impact, including cumulative impacts, of the proposed activity and its intended use on the public interest", carefully weighing "the benefits which reasonably may be expected to accrue from the proposal" against "the reasonably foreseeable detriments." The Corps' denial of Kaw Valley's permit application was improper, based on this ground.

**1. Economic Impact on Missouri** - the river is used to transport raw materials, agricultural products, and manufactured goods. In 2000, commercial tonnage reached 8,733,000 tons, 82.7% of which was the transport of sand and gravel. Half of the loading docks are in and around Kansas City. [See, §6.1.7]. The Corps believes "the permit conditions should supply sufficient sand to meet most industry needs", while also stating "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". [See, §6.2.8]. The supporting documentation shows that all commercial dredgers are reporting an increase in demand for sales, as well as an increased need for Missouri River sand by the MoDOT in the repair and construction of its highways. [See, e.g., Jurisdictional Decision supporting document 12.65 January 8, 2007 letter from Hermarin Sand to the Corps of Engineers]. Section 6.2.11, "denial of all permits or immediate reduction in total extraction would force dredging companies to immediately find upland sources and provide little time for further analysis [of developing plans for undeveloped land in urban areas]". [See also, §6.2.17].

An extraction freeze requiring sand to be transported longer distances has a profound economic ripple effect. Because of the "low unit value [of sand and gravel] and the [its] bulky nature", *id.*, the distance a dredger must haul its extracted raw material directly drives up the costs to the end user. The Corps underestimates the

already-quantifiable need for sand and gravel in the private construction industry and public road repair, with its added improvement in employment opportunities, and overstates its unproven allegation that commercial dredging is the major cause in river bed degradation, interference with aquatic, fish and wildlife.

**2. Human Environment Impact** - on recreational and commercial fisheries, "the navigational channel or fast water [churned up by dredging and naturally-occurring] has very little potential for fish production." [See, §7.4.2]. The Missouri River is not at its historic high level of turbidity, but with any increase because of dredging, "the increased turbidity would have a short term and local negative impact on popular non-indigenous sport fish species such as bass that forage or hunt by sight." *Id.*

The Missouri River is used "to some extent" by recreational motor boaters, canoeists, and kayakers. [See, §7.4.3]. Kaw Valley's proposed commercial dredging would have *de minimus* effect on the tiny segment of recreational motor boating, canoeing or kayaking which might occur within the urban area of the Kansas City reach. "The dredges are anchored to the river bottom so the anchor cables are mostly under water and don't pose a significant hazard to the recreation boats or their occupants", with "plenty of space in the navigation channel for other recreation boats to pass" any loading or unloading barges. *Id.*

As regards the aesthetics of the water plumes created by commercial dredging and discharge of unwanted materials from the slurry, the Corps notes that "the discharge turbidity plume is indiscernible to the human eye." [See, §7.4.4]. Any sight or sound of a dredging operation "would have a minor local impact on the 'wildness' and solitude of the river to some recreationists and residents nearby." *Id.* The Corps also notes that dredging and barge traffic have a long history on the Missouri River, and are integral to the river's "mystic [*sic* - mystique]". *Id.*

Therefore, collectively, none of the human use considerations raised by the Corps would be more than minimally affected by granting Kaw Valley a permit to dredge sand and gravel within the Kansas City reach. Its denial of a permit to Kaw Valley as "contrary to the public interest" with regard to human use and recreation is not supported by the Jurisdictional Decision analysis.

### **3. Clean Water Act**

The Corps of Engineers states that existing permit conditions for active dredgers and water testing "has confirmed that these operations negatively impact water quality in a very limited area for a short time." The "§401 Water Quality Certification conditions will adequately address these issues." [See, §3.3.1]. Sections 6.2.2, 6.2.3, and 4.3 also conclude that water quality and quantity have been adequately protected by existing permit requirements. Therefore, clean and plentiful potable water is not a factor of actual import in this public interest analysis.

The Jurisdictional Decision also evaluates other possible aversive impact factors. These are: the physical, chemical and biological characteristics of the water, special aquatic and geographic sites, human use, testing already done, and actions already taken to minimize adverse impact, through continued dredging.

a. *Physical substrate* - "because of the relatively high river velocity, no long-term or permanent changes in bottom geometry would occur." [See, §7.1.1]. However, the Corps engages in faulty reasoning in restricting commercial dredging in the Kansas City area as the solution for adequate replenishment of the river bed material load, as "dredging constantly extracts the same gradation of sand". The Corps estimates that the entire Missouri River annually produces approximately 7.8 million tons of sand and gravel. [See, §5.1.1]. The Jurisdictional Decision states that "based on sediment studies conducted in the Kansas City reach, the median annual bed material load for the Kansas City reach was estimated to be 7.4 million tons." Even given "the limited sediment contribution by tributaries between Kansas City and the mouth of the Missouri River", the 2007 cap of 3.4 million tons does not begin to approach "annual extraction volumes ... near or exceeding the annual bed material load." *Id.*

b. *Turbidity and elutriation* - a cutter-head dredging operation such as Kaw Valley proposes, increases turbidity by releasing a plume of water downstream from the cutter head. [See, §7.1.2]. However, "the Missouri River was historically much more turbid than it is today and native aquatic organisms are well adapted to more turbid conditions" with "no direct destructive effects ... anticipated". Microscopic "nektonic and planktonic organisms would be disturbed by the hydraulic dredging." But, they would be disturbed through any other human activity such as dam construction, bridge building, pleasure boating and commercial fishing, approved as in the public interest.

Old elutriate testing shows that existing contaminants (*i.e.*, in the fatty tissue of fish from chlordane and polychlorinated biphenyls released in the water years ago, and subsequently banned) might still be absorbed in the sediment and adjoining river banks, which could be released upon dredging. Even if this is true, the fish cannot become more inedible as a result. Many of the affected fish, such as buffalo, drum, suckers, carp, or paddlefish, are not considered fit to be eaten. The contaminants do not affect the potability of the processed drinking water, nor will "dredging ... add any new contaminants to the river". [See, §7.1.3]. The last elutriate testing done by the Corps was in 1988 [see, §7.5.2], and cadmium dilution testing in the thalweg show "less than the dimensions of a loading barge indicating that the contaminant concentrations of the dredge and discharge site are not significantly different". *Id.*

While a hopper dredging operation such as Kaw Valley proposes to use "can become the worst type of dredging operations" because of the increased water turbidity and dispersal of suspended solids, in the Kansas City reach, which includes the confluence of the Kaw and Missouri Rivers, "concentrations return to background

concentrations within a quarter mile or 1,300 feet." As the two-river confluence is a no-dredge zone, Kaw Valley's proposed dredging operation would pose little significant adverse impact on aquatic life and water potability. In addition, "the 4,000-foot no-dredge mixing zone required above municipal water intake structures eliminates the need for site specific testing." [See, §7.5.3].

c. *Biological characteristics* - the Corps found that the present special dredging conditions adequately protects possible threatened and endangered species. It also notes that while "the detrimental impacts on the aquatic environment from dredging operations result more from the disposal and placement of dredge material rather than the removal of sand and gravel from the channel", "silt and sediment are particularly damaging to ... many aquatic insects and other invertebrates", with the dredging discharging have only an "incidental, insignificant mortality of [bottom-dwelling] invertebrates." [See, §7.5.3].

d. *Water patterns, circulation, fluctuations* - in §7.1.4 and §7.1.5, the Corps concludes that Kaw Valley's proposed commercial dredging would "not permanently change the hydrography of an area" with concomitant "changes in circulation patterns and shoaling areas". It also reiterates that dredging is one of the four (4) factors which contribute to lowering water elevations, by lowering the average bed elevation through the sand and gravel extraction. However, the Corps has failed to conduct a comprehensive study to accurately allocate to each of those four factors a percentage of bed degradation contribution. This would more accurately pinpoint to which of the four possible causes categories to best allocate its resources in managing or limiting. Until such a study is done, restricting sand and gravel extractions to half of the annual bed material load is an arbitrary restriction and capricious solution.

e. *Protection of specific geographic features* - the Corps notes that either certain geographic features do not exist in the Kansas City reach, such as coral reefs, riffle and pool complexes, or are protected by current special conditions developed in cooperation with the Fish and Wildlife Service, Department of Natural Resources, other interested agencies and the commercial dredgers themselves. Therefore, the Corps' Jurisdictional statement does not support its conclusion that Kaw Valley's proposed dredging will be "contrary to the public interest" with regard to protecting wetlands, mudflats and vegetated shallows.

None of the concerns raised by the Corps are significantly impacted by commercial dredging in general, nor would they be by granting a permit to Kaw Valley Sand & Gravel, Inc., in particular.

#### **4. Historic Site Preservation**

Section 4.2 states that the lack of response from the National Register of Historic Places or from the public is "assumed to be concurrence that renewal of dredging will not affect any property listed on the National Register of Historic Places or any historic or archaeological site listed in the state inventory." Many of the 273 steamboats

wrecked on the Missouri River up to 1897 are not located in the current river channel. [See, §6.1.5]. Further, "dredging has occurred in these areas for more than a half century and is part of the cultural fabric." [See, §7.4.5].

**5. Other Significant Impacts** - in other areas of concern to the Corps about Kaw Valley's permit application, none have any appreciable impact on the stated public interest analysis.

a. *Flood Hazards and Floodplain Values* - "the proposed facilities, with material stockpiles included, would result in a negligible impact on flood water heights". [See, §6.2.5].

b. *Dam Construction and Present Structure Maintenance* - "the river bed has degraded several feet since these structures were constructed, disabling several water intake structures, contributing to several levee slope and sheet piling and bank failures, contributing to tributary head cutting and leaving the remaining structures vulnerable to some degree...". These are the effects also attributed to commercial dredging, yet modification or curtailment of the building of water intake structures, bridge abutments, boat ramps, and wharves has not been addressed to limit river bed degradation, although identified as one of the significant factors impacting river bed degradation. [See, §6.1.7].

c. *Historic purpose of the Corps* - traditionally, commercial dredging aided in the Corps' navigable waters maintenance within the Kansas City reach. [See, §6.1.1]. Under the Federal Power Act of 1920, 16 U.S.C. 791a *et seq.*, the Corps is guardian of the integrity of publicly-used structures, such as bridges, revetments, towers, harbors, dams and dikes. At present, commercial dredging does not affect maintenance of the Missouri River channel navigability or its man-made structures because of the river's high turbidity, and prohibition against dredging in other than the deepest part of the channel. Therefore, the Corps' conclusions in denying Kaw Valley a dredging permit is not supportable by its analysis.

The Jurisdictional Decision states there is no or minimal impact from dredging found in the following: air quality and noise levels (§6.2.15), impact on flood water heights (§6.2.5), endangered species (§6.2.6), cultural resources or historic properties (§6.2.7), safety to commercial dredgers (§6.2.16), land use (§6.2.17), local, state, and federal wildlife and wildlife refuges (§7.2.1), water quantity (§7.4.1), or new or significant release of old, contaminants into the river (7.4.1).

The Jurisdictional Decision notes some negative impact found in meeting mineral needs with ongoing dredging operations (§6.2.18) and river bed degradation (§6.2.8); but also that sand and gravel limits adversely affect construction costs, particularly in the Missouri Department of Transportation (§6.2.19); food and fiber production (§6.2.18). The Corps states in §6.3 that "the dredging, unloading, stockpiling, and sale of sand from the Missouri River will have no expected direct environmental benefits",

while noting elsewhere that sand and gravel dredging churn up the channel so that aquatic life is not smothered by turbid sediment. [See, §6.2.4].

### **Issue 1 Summary**

The Corps has not demonstrated that the Kansas City reach is at or near its extraction limit. The total available bed material for the 498 miles of Missouri River is 7.8 million tons, with the available bed material extracted and available in the Kansas City reach at 7.4 million tons. While the Kansas City available bed material comprises most of the entire Missouri River available bed load, only if commercial dredging approaches an annual extraction rate of 7.0 million tons or greater, would it be accurate to state available bed material extraction is "at or near" the bed load limit. Furthermore, once extracted, the resource is renewable. Kaw Valley's application for the extraction of 1,000,000 tons, coupled with the 3.4 million tons presently extracted by Holliday Sand, would remove slightly over fifty percent (50%) of the available bed load during any given year.

The Corps' purpose in regulating extraction permits is to make "an evaluation of the probable impact, including cumulative impacts, of the proposed activity and its intended use on the public interest", carefully weighing "the benefits which reasonably may be expected to accrue from the proposal" against "the reasonably foreseeable detriments." 33 C.F.R. §320.4(a). It has not demonstrated a level of "reasonably foreseeable detriments" to the Missouri River from Kaw Valley's proposed commercial dredging. The economic benefits of Kaw Valley's proposal outweigh the slight detriments. Such benefits would include competitive pricing of sand and gravel, additional employment opportunities, and increased product availability to the construction industry within the Kansas City area and Missouri as a whole. The Jurisdictional Decision demonstrates that the cumulative impacts on the various components of both the public interest and on the Missouri River aquatic life are slight, and the Corps' knowledge about the accurate interplay between the four possible factors affecting river bed degradation murky.

In the balancing of "relevant impositions", *Northwest Bypass v. U.S. Army Corps of Engineers*, 470 F.Supp.2d 30 (D.N.H. 2007), the hardship to Kaw Valley in losing a business asset is not at odds with the Corps' interest in preserving its authority to grant or deny permits for Corps authority activities. Without a reasonably precise evaluation of the effects of drought, flooding, and structure construction on river bed degradation, the Corps cannot definitively state the best solution is to deny a permit to a long-time holder of such a commercial dredging permit. Nor can the Corps state that dredging is the primary cause of contaminants (polychlorinated biphenyls and chlordane) release. Sediment dislodgment or vertical bank cuts can also occur by dam building and modification, building structures with foundations below ground level, and natural events such as drought or flooding.

Restricting commercial dredging without analysis of its true place on river bed degradation or contaminants release shifts the Corps' responsibility to study all

possibilities by denominating commercial dredging as the villain. Present special conditions are already in place to promote areas of particular concern. The Jurisdictional Decision denying Kaw Valley's application for a commercial dredging permit is against the weight of the Corps' own analysis, and should be reversed.

## **2. The Jurisdictional Decision is unreasonable, arbitrary and capricious.**

### **A. The Corps seeks to shift its own responsibility to ameliorate river bed degradation by restricting only one of the four possible causes.**

Corps authority is not plenary. *Rapanos v. United States*, 126 S.Ct. 2208 (2006); *Solid Waste Agency of Northern Cook Cty. v. U. S. Army Corps of Engineers*, 531 U.S. 159 (2001) (Corps exceeded authority to regulate wetlands under the Clean Water Act; *Rapanos* "significant nexus" analysis not applicable).

It is plain that the Corps seeks the most expedient solution to its mandate to retard river bed degradation. Restricting sand and gravel extraction when it does not know which of the four possible factors is the largest contributing factor is the simplest solution for the Corps. Restraint of dredging is less costly to the Corps and eases the burden and function of the Corps to more particularly regulate dam construction and monitoring. Dam construction, built to moderate the uncontrollable floods and drought, affects bed degradation, too, and is within the sole authority of the Corps to oversee. Drought, flooding, and dam construction are all within the Corps' decision-making arena. While the Corps cannot direct flooding or drought, it is well within its province of authority to manage the effects and consequences of those natural events through channels and lock management, and dam water level manipulation. "Whether the benefits of particular conservation measures outweigh their costs is a classic question of public policy...", *Rapanos v. United States*, 126 S.Ct. 2208, 2221 (2006).

While the Corps has been delegated generous rule-making authority under the various federal acts which affect navigable waters, it has exceeded its authority in delineating that Kaw Valley's application to extract sand and gravel would "result in unacceptable impacts on the aquatic environment of the Missouri River" and "permits for extraction of material in excess of the amount reportedly extracted [by other authorized operations] in 2006 would be contrary to the public interest" with little evidence to support that conclusion.

By targeting one tangent source of a known problem - commercial dredging affecting river bed degradation - and failing to pursue the comprehensive study which would show the true level of contribution dredging makes, unfairly shifts the onus of Corps problem-solving to those denied a permit, such as Kaw Valley. Congress has given the Corps jurisdiction over three of the four potential causes of river bed degradation, yet the Corps chooses to target the fourth as the true culprit.

### **B. The Corps permit denial contradicts its stated analysis.**

In balancing the various hardships to aquatic life, to human activities and

concerns, to the competing and complementary fish, wildlife, water quality, and environmental interests within Corps jurisdiction with the benefits of increased sand production and economic well-being within Missouri, the Corps' ultimate conclusion must match its analytical process. The Corps' decision is considered arbitrary and capricious if it "... lacks a rational basis for adopting it [the decision] - for example, ... if the agency ... offered a rationale contradicting the evidence before it ...". *Northwest By pass v. U.S. Army Corps of Engineers*, 470 F.Supp2d 30, 37 (D.N.H. 2007).

### **Issue 2 Summary**

The various interested local, state, and national agencies, in conjunction with the Corps and other commercial dredgers have already instituted significant protections and safeguards to minimize adverse effects to aquatic and wildlife, and to the various components which make up the public interest factor. The public interest evaluation shows that Kaw Valley's proposed dredging actually only marginally affects the various components which comprise that balancing test. The only true factors in play are river bed degradation, which the Corps has acknowledged to be only partially affected by commercial dredging. The Jurisdictional Decision denying Kaw Valley's application for a commercial dredging permit is unreasonable in light of its analysis, and therefore, arbitrary and capricious, warranting reversal.

**3. The Corps perpetuates Holliday Sand & Gravel's illegal monopoly in the commercial dredging business, depriving Kaw Valley of property without due process of law.**

#### ***A. Corps denial of all other dredging permits creates a de facto illegal monopoly in the dredging business for Holliday Sand within the Kansas City reach.***

The Sherman Act makes it illegal for entities or agencies acting in trust to restrain trade or commerce, 15 U.S.C. §1. Section 2 of the Sherman Act also extends to unilateral conduct, without a finding of conspiracy or acting in concert with another. 15 U.S.C. §2. "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize, or attempt to monopolize any part of the trade or commerce ..." describes such unilateral conduct. "A single firm's restraints directly affect prices and [can] have the same economic effect as concerted action might have." 15 U.S.C. §2; *Abraham v. Intermountain Health Care, Inc.*, 461 F.3d 1249, 1253 (10<sup>th</sup> Cir. 2006).

In 2006, the active dredging companies throughout Missouri extracted 6,490,251 tons of sand and gravel from an estimated 7.8 million ton bed material load. [See, §5.5.1]. The primary source of bed material is in the Kansas City area, with approximately 7.4 million tons available annually. [See, §7.1.1]. With a maximum allowance of sand and gravel extraction of only 3.4 million tons in 2007 in the Kansas City reach, the sand and gravel extraction is only at 49% of the available bed material in the area in which Kaw Valley proposed to extract.

Holliday Sand has already stated sand and gravel extraction rights should not be extended to competing dredgers. It makes no secret that it wants the entire Kansas City reach on its permit. [See, April 20, 2004 letter from Holliday Sand to Corps of Engineers, Jurisdictional Supporting Document 12.33].

In granting the Kansas City area sand and gravel permit to only one commercial dredger, the Corps gives Holliday Sand license to charge the highest cost the market will bear. Holliday Sand is the only provider of such raw materials in the Kansas City environs and need not be competitive in supply or costs. The Corps' Jurisdictional Decision states that the Kaw Valley permit denial fulfills the Corps' primary purpose of protecting the integrity of the river bed against further degradation while the analysis itself does not support the permit denial. It thereby disguises its aim to limit the extraction of sand in gravel to only Holliday Sand. See, *Columbia Aggregates, Inc. v. Whatcom County*, 121 F.3d 715 (9<sup>th</sup> Cir. 1997) (denial of extraction permit permissible only if county's "primary purpose" was not to limit the export of gravel or discriminate against Canadians, but to prevent endangerment to an important aquifer).

Even if the intention to create a monopoly, restrain trade or price fix is not present, the Corps' actions have created *de facto* restraint of trade and the possibility of prohibitive supply costs by limiting the commercial dredgers to Holliday Sand. Holliday Sand is authorized to extract the entire Kansas City reach allotment for sand and gravel, leaving no possible room for any other commercial dredgers. [See, §5.5.4]. By denying Kaw Valley a permit to increase its prior allotment to a commercially-viable level, the Corps has acquiesced in and approved the Holliday Sand Kansas City reach monopoly in commercial dredging.

The Jurisdictional Decision plainly states its interest in protecting the economic and business interests of the commercial dredgers already in operation. In the Kansas City area, this translates into a monopoly in favor of Holliday Sand. Protecting the interests of commercial dredgers is not a Corps function and a violation of 15 U.S.C. §1 and §2 in restraining trade.

***B. The Corps' decision to deny it an active dredging permit deprived Kaw Valley of property without due process of law.***

Whether Kaw Valley has a cognizable and protected property interest in its inactive permit is "stem[s] from an independent source such as state law." *McIntosh v. LaBundy*, 161 S.W.3d 413, 416 (2005).

Kaw Valley has a property interest in its sand and gravel extraction permit which is recognizable and important. See, *Sucesion Suarez v. Gelabert*, 701 F.2d 231 (1<sup>st</sup> Cir. 1983) (permit denial affirmed only because the court found appropriate agency compliance with correct procedures). It has the 'right' to conduct a legitimate business and make a profit, meets all legal requirements for a permit. *Chiplin Enterprises, Inc. v. City of Lebanon*, 712 F.2d 1524 (1<sup>st</sup> Cir. 1983) (Apartment building permit denial a violation of due process, but case dismissed on lack of federal jurisdictional grounds).

Kaw Valley has held a Missouri permit to extract sand and gravel since the early 1980s, as the successor to Hub Materials, Inc. It is an asset of the company, with value should the corporation be sold, just as it was when Hub Materials merged with Kaw Valley. Kaw Valley has properly applied to renew its permit every five years, participated in the public comment process, and completed all reporting requirements. Its past qualification to be granted a permit still remains, as does the need for gravel and sand [see, §2.5]. With the reduction in sand availability from the Kaw River, no new alternate sources economically feasible or available in urban Kansas City, and the increased need from construction industry, especially from MoDOT, Corps denial of Kaw Valley's application encroaches on its choate interest in its already-existing permission to dredge. *Ferran v. Town of Nassau*, 471 F.3d 363, 379 (2<sup>nd</sup> Cir. 2006). The denial is "an encroachment on [its] private right to make a living." *McIntosh v. LaBundy*, 161 S.W.3d 413, 416-417 (2005); cf., *Rettie v. Unified School District #475*, slip op. 96,628 (Kan., September 27, 2007) (teacher with lapsed teaching certificate could not be denied opportunity of employment because no hearing had been conducted before terminating her employment).

### **Issue 3 Summary**

The Corps' denial of Kaw Valley's permit application plainly states its interest in protecting the economic and business interests of the commercial dredgers already in operation. In the Kansas City area, this translates into a monopoly in favor of Holliday Sand. Protecting the interests of commercial dredgers is not a Corps function and a violation of 15 U.S.C. §1 in restraining trade. While the Corps followed correct procedure and properly evaluated the competing interests, its decision to deny Kaw Valley an extraction permit for an increased amount of sand and gravel is undermined by that evaluation.

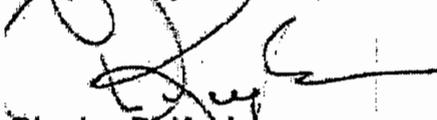
Kaw Valley seeks to have the Corps grant its permit because it already has a permit, and still meets all of the statutory and regulatory requirements to protect the area's environmental integrity. The Jurisdictional Decision gives no substantive supportable reason to deny Kaw Valley's application, thereby interfering with its prospective business gain and diminishing the value of its long-held permit. The decision analysis shows little impact of Kaw Valley' proposed dredging operation on either the Missouri River aquatic life or negatively on the public interests. Its denial of a permit to Kaw Valley has discriminatory effects against Kaw Valley and impermissibly restrains all trade by other commercial dredgers, except Holliday Sand.

### **IV. Relief Requested**

Kaw Valley is prepared to comply with all strictures as other active dredgers. Should the Corps re-evaluate its decision of August 20, 2007, it will file its dredging plan, showing its awareness of the appropriate special conditions and regulations. Kaw Valley applied for its permit to extract 1,000,000 tons of sand and gravel in 2001, after the flooding of the 1990s. Permission to extract at that level will not deplete the 2007 annual bed load material by even half, even when coupled by the extraction efforts of Holliday Sand.

**Kaw Valley Sand & Gravel respectfully requests that its appeal be found to have merit, and for reconsideration of its application to dredge in River Mile 360.5 through River Mile 370.5, exclusive of any restricted or no-dredge zones created therein, and outside of the protected zone of the water intakes of BPU, or any other adjacent area which might prove economically and environmentally feasible. In the alternative, Kaw Valley requests that it retain its Missouri permit for 300,000 annual extraction tons.**

**Respectfully submitted,**



**Charles D. Kugler**

**John L. Peterson**

**Counsel for**

**Kaw Valley Sand & Gravel, Inc.**

**5600 Kansas Avenue**

**Kansas City KS 66106-1147**

Enclosure 6.7 Capital Sand appeal of the initial proffered permit from October 17, 2007 and copy of letter accepting modification of existing permit.



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October 17, 2007

**VIA E-MAIL  
AND U.S. MAIL**

U.S. Army Engineer District, Kansas City  
DISTRICT ENGINEER  
Attn: Mark D. Frazier  
Acting Chief, Regulatory Branch  
601 East 12th Street, Room 706  
Kansas City, MO 64106-2896

RECEIVED  
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Re: Capital Sand Company, Inc.  
Your File No. 200101429

Dear Mr. Frazier:

Enclosed please find our appeal of an Initial Proffered Permit from your decision dated August 20, 2007, with regard to the above. The reasons for our objections are so stated. In addition, you are aware of concerns that we have discussed regarding this permit.

Should you have any questions, please feel free to contact me directly.

We continue to appreciate your willingness to discuss this permit and the various issues relating to Missouri River dredging.

Very truly yours,

LATHROP & GAGE L.C.

By:   
David A. Shorr

DAS/jf  
Enclosure  
cc: Ray Bohlken

JCDOCS 26606v1



**SECTION A:** Fill out this section and return this form to the appropriate office only if submitting a request for modification or reconsideration to the District Engineer or if submitting a request for Administrative Appeal to the Division Engineer. All such submittals must be made within 60 days of the date of this notice.

Submit the following requests to the District Engineer:

- A. Modification of an INITIAL PROFFERED PERMIT (Item A)
- D. Reconsideration of an APPROVED JURISDICTIONAL DETERMINATION based on NEW INFORMATION (Item D RECONSIDERATION)

Submit the following requests to the Division Engineer:

- B. Administrative Appeal of a PROFFERED PERMIT (Item B)
- C. Administrative Appeal of a PERMIT DENIAL (Item C)
- D. Administrative Appeal of an APPROVED JURISDICTIONAL DETERMINATION (Item D APPEAL) (for reasons other than reconsideration of an approved JD based on new information)

(Note: Preliminary Jurisdictional Determinations (Item B) are not appealable. If you have concerns regarding a preliminary Jurisdictional Determination, you can request an approved Jurisdictional Determination.)

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

Please see attached objections and requests for modification.

07 OCT 18 PM 2:18

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REGULATORY BRANCH

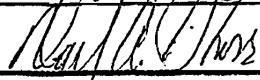
**SUBMITTAL OF NEW OR ADDITIONAL INFORMATION:** The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION**

If you have questions regarding this decision and/or the appeal process you may contact:  
 U.S. Army Engineer District, Kansas City  
**DISTRICT ENGINEER**  
 Attn: Mark D. Frazier  
 Acting Chief, Regulatory Branch  
 601 East 12<sup>th</sup> Street, Room 706  
 Kansas City, MO 64106-2896  
 Telephone: 816-389-3990  
 (Use this address for submittals to the District Engineer)

If you wish to submit an appeal or have questions regarding the appeal process you may contact:  
 U.S. Army Engineer, Northwestern Division  
**DIVISION ENGINEER**  
 ATTN: Karen Kochenbach  
 Regulatory Program Manager  
 Post Office Box 2870  
 Portland, Oregon 97208-2870  
 Telephone: 503-808-3888

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

  
 Signature of appellant or agent.

Date:  
 10-17-07

Telephone number:  
 573-898-4336

1. Capital Sand Company, Inc. ("Capital Sand") objects to the tonnage limitations proposed in the Initial Proffer. As Capital Sand has argued to the Corps, there is no demonstration of bed degradation in the area covered by the proffered permit. Even if protective measures were necessary to prevent bed degradation, the "mine and relax" strategy proposed by Capital Sand would be sufficiently protective. If the Corps does determine that a tonnage limitation is necessary, then any limitation must exclude material returned to the river, as the return of material is protective of the river bed, and it is not reasonable to consider such material in an overall cap on removal. Any tonnage limitation should also provide for a "roll-over" from year to year in order to permit mining in accordance with need for the material, rather than mining to a forced level each year in order to comply with permit restrictions. Inclusion of roll-over maintains the protections provided by the tonnage limitation as it operates as an overall cap on the material removed under the lifetime of the permit.

2. Capital Sand objects to the monitoring requirements of Special Condition B included in the Initial Proffer. As discussed in Capital Sand's September 7, 2007, and September 18, 2007, meetings with the Corps, the monitoring requirements proposed by the Initial Proffer are unduly burdensome and not reasonably related to the prevention of bed degradation. Capital Sand requests that the Corps reconsider the monitoring requirements proposed in the Initial Proffer and incorporate those changes and clarifications that were agreed upon between Capital Sand and the Corps regarding the Modification to DA Permit # 1996-01648. Capital Sand references the changes and clarifications as summarized in its September 20, 2007, Letter accepting the Modification, with Revisions (attached).

3. Capital Sand objects to the survey requirements of Special Condition C included in the Initial Proffer. As discussed in Capital Sand's September 7, 2007, and September 18, 2007, meetings with the Corps, the survey requirements proposed by the Initial Proffer are unduly burdensome and not reasonably related to the prevention of bed degradation. Capital Sand requests that the Corps reconsider the survey requirements proposed in the Initial Proffer and incorporate those changes and clarifications that were agreed upon between Capital Sand and the Corps regarding the Modification to DA Permit # 1996-01648. Capital Sand references the changes and clarifications as summarized in its September 20, 2007, Letter accepting the Modification, with Revisions (attached).



*Capital Sand Company, Inc.*

*P.O. Box 104990*

*Jefferson City, Missouri 65110-4990*

*(573) 634-3020*

*Fax # (573) 636-5734*

*"Aggregates for the Construction Industry"*

September 20, 2007

Mr. Mark Frazier  
Mr. Cody Wheeler  
U.S. Army Corps of Engineers  
Kansas City District  
700 Federal Building  
601 East 12th Street  
Kansas City, MO 64106

Re: Acceptance of Modifications to DA Permit #1996-01648 with Revisions

Dear Mr. Frazier and Mr. Wheeler:

This letter serves as the acceptance by Capital Sand Company, Inc. ("Capital Sand") of the proposed modification of its permit, DA permit #1996-01648 with revisions.

On September 7, 2007, consistent with rules and regulations, the U. S. Army Corps of Engineers Kansas City District held a meeting with Capital Sand to address concerns regarding the proposed modification. The purpose of the meeting, pursuant to rules and regulations, was to discuss concerns regarding the modification in an effort to resolve those concerns.

A subsequent meeting was held by conference call with Corps' staff on September 18, 2007, to further discuss details of concern.

From these meetings, you have clarified that an acceptable monitoring strategy to meet the requirements of Special Condition B would be to provide:

- (a) A sensor on the pump shaft of the dredge that would activate global positioning to determine actual locations when the suction pump is operating.
- (b) An estimate of quantity based on experience of the dredge operator of the amount of material placed in the transport barge.
- (c) Belt scales at offload locations to record actual tonnage.

Enclosure 6.8 Con-Agg appeal of the initial proffered permit from October 17, 2007 and copy of letter accepting modification of existing permit.



DAVID A. SHORR  
(573) 761-5005  
EMAIL: DSHORR@LATHROPGAGE.COM  
WWW.LATHROPGAGE.COM

314 EAST HIGH STREET  
JEFFERSON CITY, MISSOURI 65101  
(573) 893-4336, FAX (573) 893-5398

October 17, 2007

**VIA E-MAIL  
AND U.S. MAIL**

U.S. Army Engineer District, Kansas City  
DISTRICT ENGINEER  
Attn: Mark D. Frazier  
Acting Chief, Regulatory Branch  
601 East 12th Street, Room 706  
Kansas City, MO 64106-2896

RECEIVED  
REGULATORY BRANCH  
07 OCT 18 PM 2:18

Re: Con-Agg of Missouri, L.L.C.  
Your File No. 200101434

Dear Mr. Frazier:

Enclosed please find our appeal of an Initial Proffered Permit from your decision dated August 20, 2007, with regard to the above. The reasons for our objections are so stated. In addition, you are aware of concerns that we have discussed regarding this permit.

Should you have any questions, please feel free to contact me directly.

We continue to appreciate your willingness to discuss this permit and the various issues relating to Missouri River dredging.

Very truly yours,

LATHROP & GAGE L.L.C.

By:

David A. Shorr

DAS/jf  
Enclosure  
cc: Larry Moore

JCDOCS 26608v1

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROGRESS AND  
REQUEST FOR APPEAL**

Date: **Aug 20 2007**

Applicant: Con-Agg of Missouri, L.L.C.		File Number: 200101434	Date: <b>Aug 20 2007</b>
Attached is:			See Section below
XX	A. INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A	
	B. PROFFERED PERMIT (Standard Permit or Letter of Permission)	B	
	C. PERMIT DENIAL	C	
	D. APPROVED JURISDICTIONAL DETERMINATION	D	
	E. PRELIMINARY JURISDICTIONAL DETERMINATION	E	

**SECTION I** - The following identifies your rights and options regarding a modification, reconsideration, or administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/infactions/ow/cecw/repair/Corpsregulationsat33CERPart33>

**A: INITIAL PROFFERED PERMIT:** You may accept or request modification of the permit.

- ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- REQUEST MODIFICATION:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit.

- ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept the approved JD, appeal the approved JD, or submit new information and request reconsideration of the approved JD.

- ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.
- RECONSIDERATION BASED ON NEW INFORMATION:** You may submit new information to the District Engineer for reconsideration of an approved JD. You must submit the information within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II** will allow the sponsor of a permit to file a request to the appropriate office, only at submitting a request to modification or reconsideration to the District Engineer, or at submitting a request for Administrative Appeal to the Division Engineer. All such submissions must be made within 60 days of the date of this notice.

Submit the following requests to the District Engineer:

- A. Modification of an INITIAL PROFFERED PERMIT (Item A)
- D. Reconsideration of an APPROVED JURISDICTIONAL DETERMINATION based on NEW INFORMATION (Item D RECONSIDERATION)

Submit the following requests to the Division Engineer:

- B. Administrative Appeal of a PROFFERED PERMIT (Item B)
- C. Administrative Appeal of a PERMIT DENIAL (Item C)
- D. Administrative Appeal of an APPROVED JURISDICTIONAL DETERMINATION (Item D APPEAL) (for reasons other than reconsideration of an approved JD based on new information)

(Note: Preliminary Jurisdictional Determinations (Item E) are not appealable. If you have concerns regarding a preliminary Jurisdictional Determination, you can request an approved Jurisdictional Determination.)

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

Please see attached objections and requests for modification.

07 OCT 18 PM 2:18

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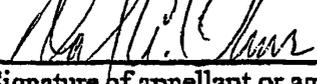
**SUBMITTAL OF NEW OR ADDITIONAL INFORMATION:** The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:  
 U.S. Army Engineer District, Kansas City  
**DISTRICT ENGINEER**  
 Attn: Mark D. Frazier  
 Acting Chief, Regulatory Branch  
 601 East 12<sup>th</sup> Street, Room 706  
 Kansas City, MO 64106-2896  
 Telephone: 816-389-3990  
 (Use this address for submittals to the District Engineer)

If you wish to submit an appeal or have questions regarding the appeal process you may contact:  
 U.S. Army Engineer, Northwestern Division  
**DIVISION ENGINEER**  
 ATTN: Karen Kochenbach  
 Regulatory Program Manager  
 Post Office Box 2870  
 Portland, Oregon 97208-2870  
 Telephone: 503-808-3888

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

  
 Signature of appellant or agent.

Date:  
 10-17-07

Telephone number:  
 573-893-4336

1. Con-Agg of Missouri, L.L.C. ("Con-Agg") objects to the tonnage limitations proposed in the Initial Proffer. As Con-Agg has argued to the Corps, there is no demonstration of bed degradation in the area covered by the proffered permit. Even if protective measures were necessary to prevent bed degradation, the "mine and relax" strategy proposed by Con-Agg would be sufficiently protective. If the Corps does determine that a tonnage limitation is necessary, then any limitation must exclude material returned to the river, as the return of material is protective of the river bed, and it is not reasonable to consider such material in an overall cap on removal. Any tonnage limitation should also provide for a "roll-over" from year to year in order to permit mining in accordance with need for the material, rather than mining to a forced level each year in order to comply with permit restrictions. Inclusion of roll-over maintains the protections provided by the tonnage limitation as it operates as an overall cap on the material removed under the lifetime of the permit.

2. Con-Agg objects to the monitoring requirements of Special Condition B included in the Initial Proffer. As discussed in Con-Agg's September 7, 2007, and September 18, 2007, meetings with the Corps, the monitoring requirements proposed by the Initial Proffer are unduly burdensome and not reasonably related to the prevention of bed degradation. Con-Agg requests that the Corps reconsider the monitoring requirements proposed in the Initial Proffer and incorporate those changes and clarifications that were agreed upon between Con-Agg and the Corps regarding the Modification to DA Permit # 1996-01652. Con-Agg references the changes and clarifications as summarized in its September 20, 2007, Letter accepting the Modification, with Revisions (attached).

3. Con-Agg objects to the survey requirements of Special Condition C included in the Initial Proffer. As discussed in Con-Agg's September 7, 2007, and September 18, 2007, meetings with the Corps, the survey requirements proposed by the Initial Proffer are unduly burdensome and not reasonably related to the prevention of bed degradation. Con-Agg requests that the Corps reconsider the survey requirements proposed in the Initial Proffer and incorporate those changes and clarifications that were agreed upon between Con-Agg and the Corps regarding the Modification to DA Permit # 1996-01652. Con-Agg references the changes and clarifications as summarized in its September 20, 2007, Letter accepting the Modification, with Revisions (attached).

# Con - Agg of MO, L.L.C.

September 20, 2007

Mr. Mark Frazier  
Mr. Cody Wheeler  
U.S. Army Corps of Engineers  
Kansas City District  
700 Federal Building  
601 East 12th Street  
Kansas City, MO 64106

Re: Acceptance of Modifications to DA Permit #1996-01652 With Revisions

Dear Mr. Frazier and Mr. Wheeler:

This letter serves as the acceptance by Con-Agg of MO, L.L.C. ("Con-Agg") of the proposed modification of its permit, DA permit #1996-01652 with revisions.

On September 7, 2007, consistent with rules and regulations, the U. S. Army Corps of Engineers Kansas City District held a meeting with Con-Agg to address concerns regarding the proposed modification. The purpose of the meeting, pursuant to rules and regulations, was to discuss concerns regarding the modification in an effort to resolve those concerns.

A subsequent meeting was held by conference call with Corps' staff on September 18, 2007, to further discuss details of concern.

From these meetings, you have clarified that an acceptable monitoring strategy to meet the requirements of Special Condition B would be to provide:

- (a) A sensor on the pump shaft of the dredge that would activate global positioning to determine actual locations when the suction pump is operating.
- (b) An estimate of quantity based on experience of the dredge operator of the amount of material placed in the transport barge.
- (c) Belt scales at offload locations to record actual tonnage.

While the Corps expects a dredge monitoring plan to provide further details, the above will meet the requirement of Special Condition B as it applies to operation, location, and timing and the calculation of estimated tonnage.

In addition, clarification was made on the requirements in Special Condition C for a hydrographic survey, which concluded:

- (a) The survey can be conducted in a four-month period between June and September.
- (b) The survey would be annual.
- (c) The survey can be conducted on 250-foot baselines.
- (d) The Corps will conduct the first year's survey to provide benchmarks and baseline information.
- (e) The Corps will provide the benchmarks and baseline information to Capital Sand in order to achieve comparable results and reduce costs.
- (f) The Corps will continue to provide assistance with regard to the survey plan.

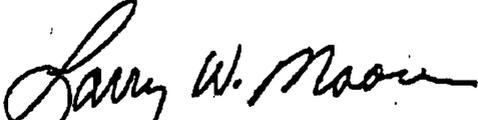
You also informed us of your willingness to reconsider the language of the Special Conditions to reconcile with these conclusions in DA permit No. 2001-01434.

There are several issues that remain to be discussed including items relating to the calculation of total tonnage and annual tonnage production. The parties have agreed to meet to resolve these issues. These will not impact Con-Agg's acceptance of the 1996 modification but are important to our conclusions on the 2001 permit.

We continue to appreciate the efforts of the Corps to coordinate these projects and look forward to our continued dialogue.

Very truly yours,

CON-AGG OF MO. LLC

  
Larry W. Moore

Enclosure 6.9 Hermann Sand appeal of initial proffered permit from October 18, 2007.



October 18, 2007

Hermann Sand & Gravel, Inc.  
P.O. Box 261  
Hermann MO 65041

District Engineer  
Mark D Frazier  
US Army Corps Engineer District, Kansas City  
601 East 12th Street, Room 706  
Kansas City, MO 64106-2896

Re: Appeal Letter Permit No. 2001-01430

Dear Mark D Frazier,

This letter is to appeal some of the conditions of permit No. 2001-01430. The conditions that Hermann Sand & Gravel, Inc. wishes to appeal are condition (.c) hydrographic surveying and the extraction limit of 300,000 tons.

The reason we are appealing condition c. is it will be a huge financial hardship for a small business. We will have a hard enough time to foot the bill for the additional monitoring equipment but we believe it will provide data for the overall bed degradation study. The study that was in the permit decision was a draft, clearly a speculation or assumption. There is no data to back up that dredging has any effect. The studies I have seen so far is a compliment to the design of the self maintaining MO River. The structures put in place have impressively kept the navigational channel open no matter how much or what kind of sediment is out there to a one to three foot minus bed elevation. If you think that our 12 inch dredge is any comparison to a 20 feet deep, 750 feet wide, with 4 to 7 mph current then I believe your staff should revisit your engineering degrees. This river doesn't even compare to the Kansas River where you have requested this type of condition. The corps has not clarified what bed degradation is or how much would warrant this kind of monitoring. We have giving you real data with over 70years of baseline to show that there is very little if any degradation at Hermann which should allow us to dredge more tonnage there.

The Kansas City District has continually threatened they could require an EIS and shut us down. It is obvious that the Corps personnel is not looking at data already collected because there has already been an EIS done on MO River dredging by the Kansas City District, L385 which was in the Kansas City reach where extreme degradation issues have been documented. The study proved there was more than enough sediment. I believe the job was in a drought period and there was enough sediment to complete the job early. Now the river is sediment starved.

Telephone: 573-486-2913 P.O. Box 261 Hermann, Missouri 65041 Fax: 573-486-1407

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Your office has suggested we simply raise our price because you created a shortage and the demand for sand will support the higher price. I have tried that the last few months and haven't won any MODOT sand sales yet. I compete with St. Louis District dredgers and they are not required to do the hydrograph nor have they been capped.

Your office said that it was trying to be fair and treat all of the dredgers the same. Our company has never dredged more than we were permitted for nor has a neighboring stakeholder complained. I appreciate the raise in tonnage we received in 2004. We received that I believe because there wasn't any degradation in Hermann. It will cost us 50 cents per ton where our competition costs would be approx. 10 cents or none at all. How is that fair. We take out the least but pay the most. This is the best thing that could have happened to a large company because they have no competition. If I had a 2.5 million ton permit without anyone else in my area I would do these conditions automatic probably even send you a Christmas card. Our small business is already going to experience a huge financial burden with condition (b.) and condition (f.) (Capital Sand dredges more than 1.2 million tons in the reach above Jeff City we dredge 150 thousand tons making us go up river 5 miles I don't even know what that is going to cost. If I have reduced production of 1000 tons per day that is 4000 per day while I am going that far.) How much money do you expect me to spend?

The Corps is operating and making its decisions solely based upon personnel speculations, accusations and assumptions. The corps should investigate the facts and actually look at the data before demanding and placing enormous financial hardships on small businesses such as Hermann Sand & Gravel, Inc.

I want the condition (c.) hydrographic survey removed from permit No. 2001-01430. I will monitor the USGS gauge at Hermann and if there is a drastic change in riverbed I will alert your office. I also believe I can have a raise in tonnage if I take the tonnage out below Jefferson City, maybe 300,000 tons above Jefferson City and 700,000 below.

Should you have any questions please feel free to contact me. I look forward in working with your office and appreciate the chance to appeal.

Regards,

Hermann Sand & Gravel, Inc.



Steven W Engemann

Vice President

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Hermann Sand & Gravel, Inc. File Number: 200101430 Date: **AUG 20 2007**

Attached is: See Section below

XX	A. INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	B. PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	C. PERMIT DENIAL	C
	D. APPROVED JURISDICTIONAL DETERMINATION	D
	E. PRELIMINARY JURISDICTIONAL DETERMINATION	E

**SECTION I** - The following identifies your rights and options regarding a modification, reconsideration, or administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or request modification of the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **REQUEST MODIFICATION:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept the approved JD, appeal the approved JD, or submit new information and request reconsideration of the approved JD.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer (address on page 2). This form must be received by the Division Engineer within 60 days of the date of this notice.
- **RECONSIDERATION BASED ON NEW INFORMATION:** You may submit new information to the District Engineer for reconsideration of an approved JD. You must submit the information within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II** - Fill out this section and return this form to the appropriate office only if submitting a request for modification or reconsideration to the District Engineer, or if submitting a request for Administrative Appeal to the Division Engineer. All such submittals must be made within 60 days of the date of this notice.

Submit the following requests to the District Engineer

- A. Modification of an INITIAL PROFFERED PERMIT (Item A).
- D. Reconsideration of an APPROVED JURISDICTIONAL DETERMINATION based on NEW INFORMATION (Item D RECONSIDERATION).

Submit the following requests to the Division Engineer

- B. Administrative Appeal of a PROFFERED PERMIT (Item B).
- C. Administrative Appeal of a PERMIT DENIAL (Item C).
- D. Administrative Appeal of an APPROVED JURISDICTIONAL DETERMINATION (Item D APPEAL) (for reasons other than reconsideration of an approved JD based on new information).

(Note: Preliminary Jurisdictional Determinations (Item E) are not appealable. If you have concerns regarding a preliminary Jurisdictional Determination, you can request an approved Jurisdictional Determination).

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

*Applicant wish to appeal condition C + remove cap. here financial burden. see attached letter.*

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 REGULATORY BRANCH  
 07 OCT 24 AM 11:23

**SUBMITTAL OF NEW OR ADDITIONAL INFORMATION:** The District Engineer may accept and consider new information if you request a modification to an initial proffered permit (Part A), or a reconsideration of an approved JD (Part D). An administrative appeal to the Division Engineer is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the administrative record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:  
**U.S. Army Engineer District, Kansas City**  
**DISTRICT ENGINEER**  
 Attn: Mark D. Frazier  
 Acting Chief, Regulatory Branch  
 601 East 12<sup>th</sup> Street, Room 706  
 Kansas City, MO 64106-2896  
 Telephone: 816-389-3990  
 (Use this address for submittals to the District Engineer)

If you wish to submit an appeal or have questions regarding the appeal process you may contact:  
**U.S. Army Engineer, Northwestern Division**  
**DIVISION ENGINEER**  
 ATTN: Karen Kochenbach  
 Regulatory Program Manager  
 Post Office Box 2870  
 Portland, Oregon 97208-2870  
 Telephone: 503-808-3888

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

*Steven W. Engemann*  
 Signature of appellant or agent.

Date:  
 10-18-07

Telephone number:  
 573  
 486-2913

Enclosure 6.10 December 3, 2007 Holliday Sand request to allow dredging closer to dikes.

**Wheeler, Cody S NWK**

---

**From:** Mike Odell [mikeodell@holidaysand.com]  
**Sent:** Monday, December 03, 2007 11:02 AM  
**To:** Wheeler, Cody S NWK  
**Subject:** MO River Dredging near dikes

Cody,

As you know we are up and running and getting used to accurate positioning. This is great and I wish we had done it earlier (would have saved us a \$350,000 bank repair caused by a novice dredge operator).

I was out on the dredge the other day and the operator gave me some interesting feedback about how this will change how and where we dredge and with regard to the dikes. Evidently we have been dredging too close to the dikes, but I'm not aware of any problems (cave-ins) and the operators say there has not been a problem over the years. If you are aware of dredge damage to dikes please let me know as what I'm about to propose is predicated on that assumption.

The dredge operators say that coarse sand makes-in on the top 30 feet of the river bottom off of the dike tips and they realize now they may have been pumping too close with the plot you have provided of the no-dredge area off of the dikes. So now, to find coarse material, we will have to dredge much deeper, but 200+ feet away.

Since we are talking about dikes here and not levees or shoreline owned by a third party, we ask that you consider an exception that would allow us to dredge somewhat closer, albeit shallower, to the dikes. 50 or 100 feet closer would be extremely helpful to the efficiency of our operation and if the dike tip did cave-off someday, it would not be so expensive to repair (by us off course) and there would not be any third party damage. (Nor would there be any question about how it happened.) Our track record shows that we are willing to repair our mistakes to your satisfaction.

Please let me know when you might be able to consider this and we would be glad to meet with you.

Best Regards,  
Mike Odell

## EDWARD N. RAU CONTRACTOR COMPANY

2809 State Road A, Suite A  
Washington, MO 63090  
PH: (636) 239-4748 (Washington) or (636) 227-3500 (St. Louis)  
FAX: (636) 239-9020

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December 17, 2007

Mr. Cody Wheeler  
Project Manager  
Kansas City District, Corps of Engineers  
601 E. 12<sup>th</sup> Street  
Room 706, Federal building  
Kansas City, MO 64106

RE: Appeal of permit to dredge sand.

Mr. Cody,

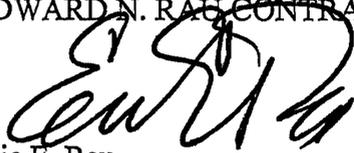
Thank you for taking time to discuss our appeal. As I explained we wish to add to the information we supplied in our first letter of appeal. Our additional information centers on two issues: 1. River bed Degradation and 2. Financial fairness.

1. River Bed degradation. It has come to our attention that the Corps' decision to restrict dredging to reduce bed degradation is based on a single, speculative "draft" document that has not undergone professional review or evaluation and has not been substantiated. Furthermore, this document did not evaluate the Eastern Missouri River nor did it conclude that dredging could reasonably be expected to cause site-specific degradation in the areas of our permit. Furthermore, St. Louis district permittees, a few miles downstream, do not experience such dredging restrictions. To refuse to renew a permit for the relatively small quantities, in the permitted mileage, to prevent bed degradation is simply indefensible and inequitable.
2. Financial fairness.
  - a. Hydrographic Surveying. Requiring hydrographic surveying is a sizeable burden to place on small companies when, in fact, it is the Corps' responsibility to do so. Certainly, at a minimum, it must be considered to make joint studies of the river bed prorated, perhaps, on the tonnage removed.
  - b. To restate the position in our October 5, 2007 letter: Denying our permit while others are granted 2,000,000 plus tons simply "gives" the business to our competitors and grants the benefit of this natural resource to a "chosen few"...and does nothing to "protect the river bed". By way of comparison: What would be the negative consequence to the river environment if the Corps chose to reduce an upstream permit by five percent (100,000 tons) per year to continue an existing permit of 100,000 per year east of Jefferson City?

In closing; while it is true that we did not dredge sand under our existing permit, recent changes, including increases in the demand for sand in our area and availability of dredging equipment have presented opportunities that make it possible for us to compete in the sand dredging business. We own the river frontage that grants access for stockpiling and in 2006 we had agreements to lease dredging equipment for operation in 2007 when we learned, in December 2006, that the Corps intended to "drop" our permit.

We respectfully request that the Corps reconsider its decision to revoke a decades-long permit to dredge sand. If we can participate further in this appeal by supplying any additional information we would be eager to do so. We thank you for your consideration of our positions.

Sincerely,  
EDWARD N. RAU CONTRACTOR CO.

A handwritten signature in black ink, appearing to read "Eric E. Rau", written over the typed name.

Eric E. Rau  
President

File: f:/winword/letters/Corps of Engineers 12.07

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**RESULTS OF ONGOING STUDY OF MISSOURI RIVER  
BED DEGRADATION**

Chapter XXX: CRP WATER SURFACE AND COMMERCIAL  
DREDGING VOLUME COMPARISONS  
1990 VS. 2002 AND 2005

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## CRP WATER SURFACE AND COMMERCIAL DREDGING VOLUME COMAPRISONS

### 1.0 KEY TERMS

BSNP: Missouri River Bank Stabilization and Navigation Project. The BSNP, or channelized portion of the river, spans from river mile 0 to 750, or from the mouth near St. Louis, MO to near Sioux City, IA. Kansas City and Omaha District maintain the BSNP downstream and upstream of Rulo, NE (mile 498), respectively.

Dike: Rock and/or timber-pile structures for the BSNP built approximately perpendicular to flow.

Revetment: Rock and/or timber-pile structures for the BSNP built approximately parallel to flow.

CRP: Construction Reference Plane (CRP) is a sloping datum representing the stage, or water surface elevation met or exceeded 75% of the time during navigation season (April to November). Dike and Revetment structures from the BSNP are built and maintained to elevations corresponding to CRP in feet. For example, a dike built to +3 CRP would be protruding three feet above the water surface when the river is flowing at CRP stage, and a dike built to -2 CRP would be submerged two feet below the water surface.

Sill: Riverward portion of a dike, typically designed lower than the landward portion of the dike at 1-foot to 3-feet below CRP.

Channel Width to Sills: Distance between revetment and riverward dike tips, per 1994 design criteria for the BSNP that increases with drainage area. Channel width to sills is 750-feet from mile 0 to 130 at the Osage River, 650-feet from mile 130 to 250 at the Grand River, 600-feet from mile 250 to mile 367 at the Kansas River, 550-feet from mile 367 to 498 at Rulo, and 500-feet upstream of mile 498.

Corps of Engineers Regulatory District Boundaries: St. Louis District is Missouri River mile 0 to 50, Kansas City District is mile 50 to 498, and Omaha District Boundary is the remainder of the river upstream of mile 498. Regulatory issues commercial dredging permits.

### 2.0 INTRODUCTION

Water surface elevations are monitored annually along the channelized portion of the Missouri River, or the downstream 750 miles between Ponca, NE and the Mouth. If repeated variations of more than a foot are observed, CRP is updated. CRP has been updated most recently in Kansas City District in 1990, 2002, and 2005. Omaha District updated CRP in 1988-89, 2001, and 2006; however, because the focus of the analysis is in Kansas City District, for the remainder of this memo Omaha and Kansas City District CRP updates are referred to as 1990, 2002, and 2005, respectively. In general, CRP elevations have been

dropping between Rulo and the Mouth (mile 498 to mile 0), stable to slightly raising from mile 498 to mile 670, and dropping upstream of mile 670.

It is hypothesized that an observed drop in water surface elevation could be attributed to a number of factors. Three of which include dam construction, commercial dredging, and the flooding of the 1990's. A report from the Meade Laboratory, most recently updated in 2001, shows that degradation effects as result of the dams occur upstream of mile 635 (USACE NWO 2001). Therefore, it is assumed observed drops in water surface elevation downstream of Rulo are result of factors other than dam construction.

Commercial sand dredging is allowed in St. Louis and Kansas City Regulatory Districts, and is also allowed in Omaha District; however, dredgers are not allowed to mine sand from below the river bed in Omaha District. Therefore, commercial dredging has developed only in Kansas City and St. Louis Districts.

### 3.0 METHODS

Discharge is not constant for each CRP revision; therefore, the 1990 and 2002 CRP elevations were "flow adjusted" to match the 2005 discharges. Table 1 presents CRP flows and the corresponding flow adjustments for 1990 and 2002 CRP. Flow adjustments were first computed at each gage, interpolated by river mile between gages, then added to the published CRP elevations. For the end points, flow adjustments were held constant both upstream of Sioux City and downstream of Herman. Flow adjustment was done for the purpose of comparing water surface profiles at the same discharge at each CRP update.

**TABLE 1: CRP DISCHARGES AND FLOW ADJUSTMENTS**

Gage	River Mile	1990 CRP	2002 CRP	2005 CRP	2005 - 1990	1990 CRP	2005 - 2002	2002 CRP
		Discharge (cfs)	Discharge (cfs)	Discharge (cfs)	Discharge (cfs)	Flow Adjustment (ft)	Discharge (cfs)	Flow Adjustment (ft)
Sioux City	732.2	30,000	30,000	30,000	0	0.00	0	0.00
Decatur	691.0	30,200	31,000	31,000	800	0.20	0	0.00
Omaha	615.9	31,000	33,400	33,400	2400	0.63	0	0.00
Neb. City	562.6	36,000	37,500	37,500	1500	0.33	0	0.00
Rulo	498.1	36,500	38,900	38,900	2400	0.60	0	0.00
St. Joe	448.2	37,500	41,200	40,600	3100	0.80	-600	-0.13
KC	366.1	43,000	46,000	44,200	1200	0.30	-1,800	-0.42
Waverly	293.4	43,500	46,800	45,100	1600	0.30	-1,700	-0.30
Boonville	197.1	46,000	50,600	48,300	2300	0.40	-2,300	-0.40
Hermann	97.9	54,000	59,500	55,900	1900	0.30	-3,600	-0.53

NOTE: Flow adjustments use 2005 rating curves and historic CRP discharges. Adjustments were interpolated between gages.

Commercial dredging quantities were compiled from data provided by both Kansas City and St. Louis District regulatory groups. Figure 1 presents a dual axis plot showing CRP change between the flow-adjusted 1990 and 2002 CRP elevations and 2005 CRP elevation, and location and amount of dredging from 1990 to 2005. Dredging quantities were summed by reach, starting at the downstream end. It should be noted that CRP elevation at mile zero is controlled by Chain of Rocks Dam on the Mississippi River, and that backwater influences

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approximately the lower 15 miles of the Missouri River, which somewhat skews water surface profiles and CRP elevations in the area.

Commercial dredging quantities were summed cumulatively for the entire river, and were converted to volume using a unit weight of 93 pounds per cubic feet, or 1.26 tons/cubic yard. CRP changes were converted to a volume as channel length times channel width to sills times change in flow-adjusted CRP elevations. Channel width to sills was selected for the computations because the area between the dike tips and revetments (1) is uncontrolled by river structures and the most susceptible to erosion, (2) conveys over 95% of the flow at CRP discharge, (3) is the area where commercial dredgers mine sand. Figures 2 and 3 present the volumetric comparison for 1990 to 2005 and 2002 to 2005, respectively.

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Figure 1: CRP Change Compared to Reach Dredging Tonnage (1990 to 2005)

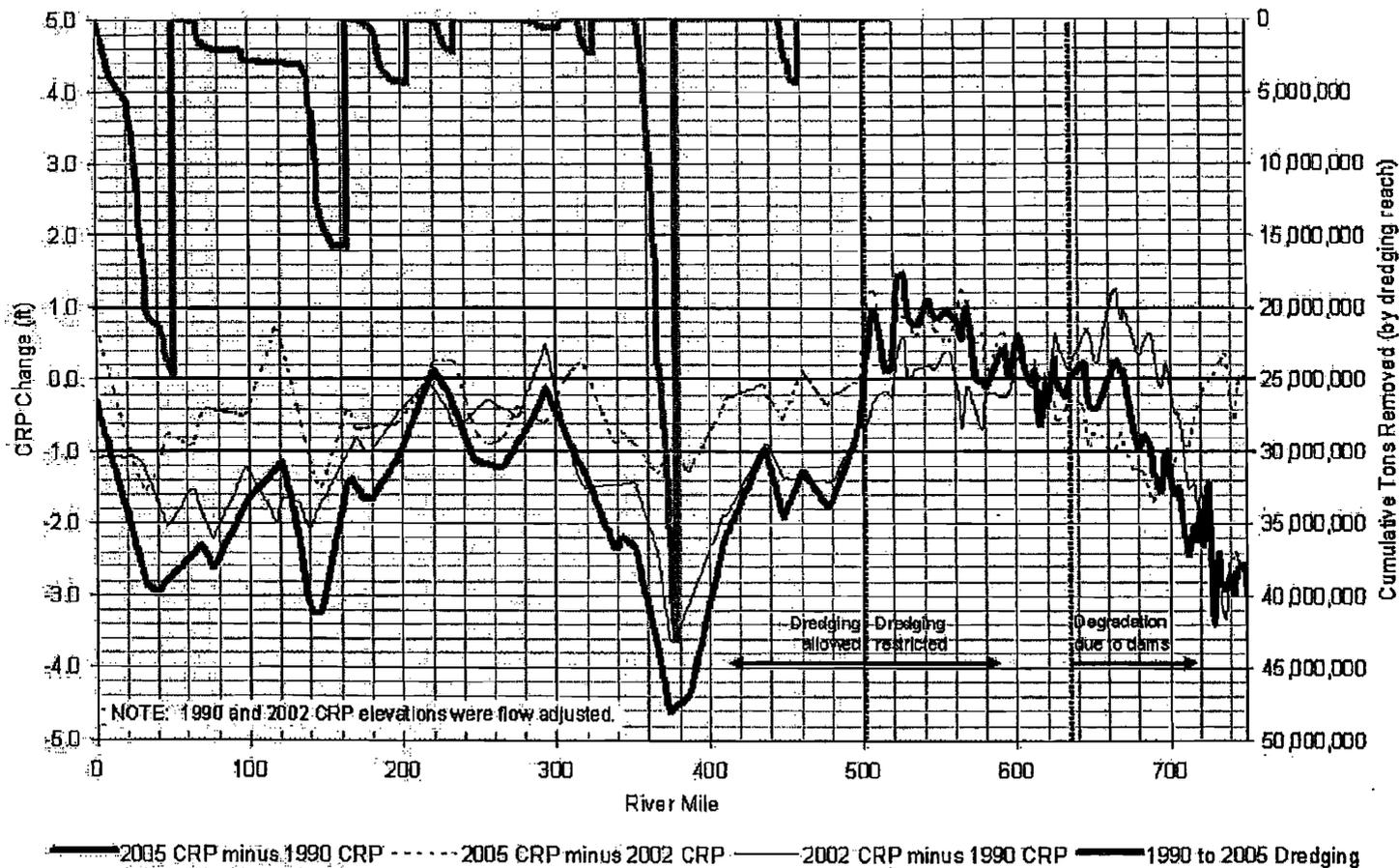


Figure 2: Volumetric Change in CRP and Dredging Volume (1990 to 2005)

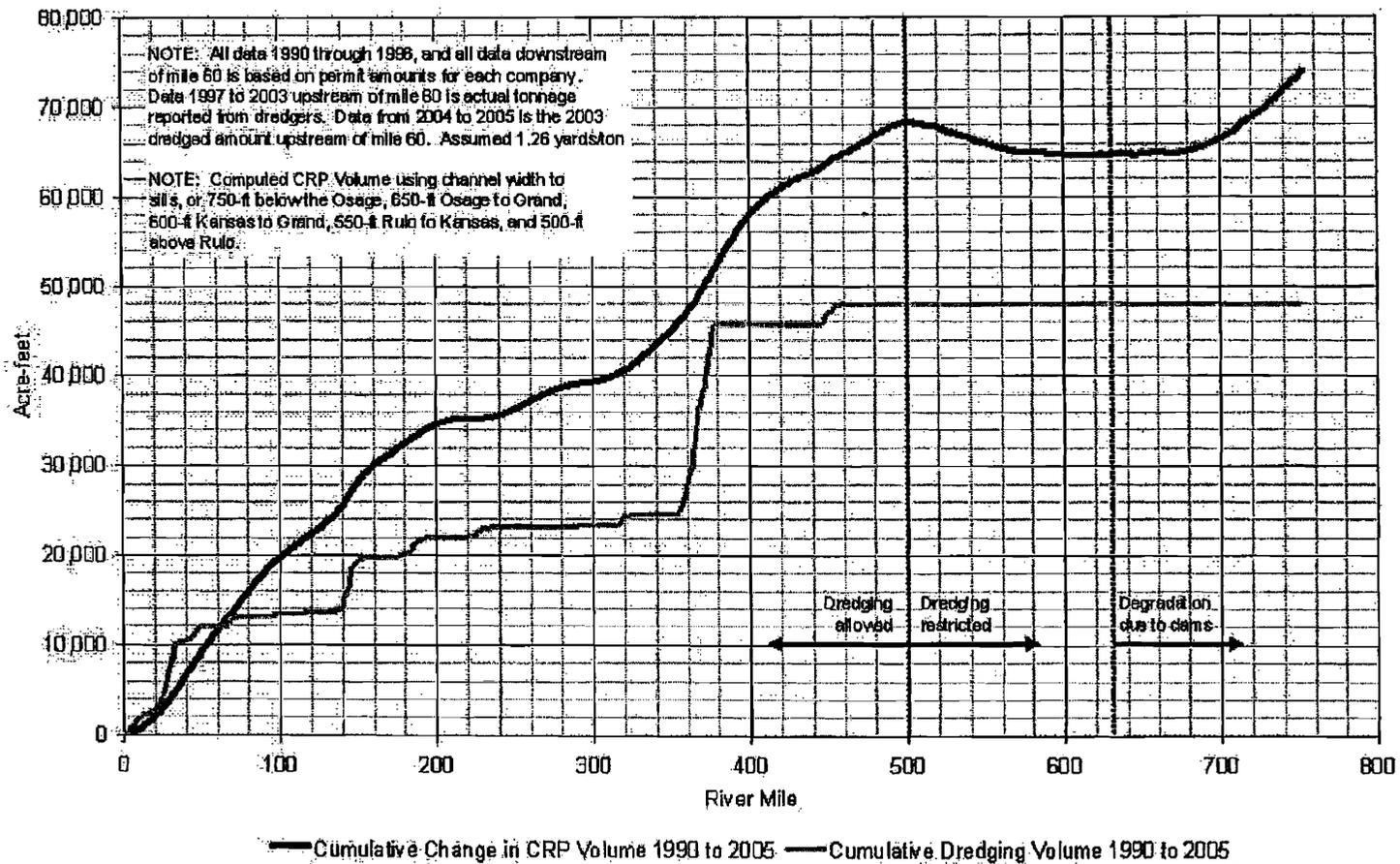
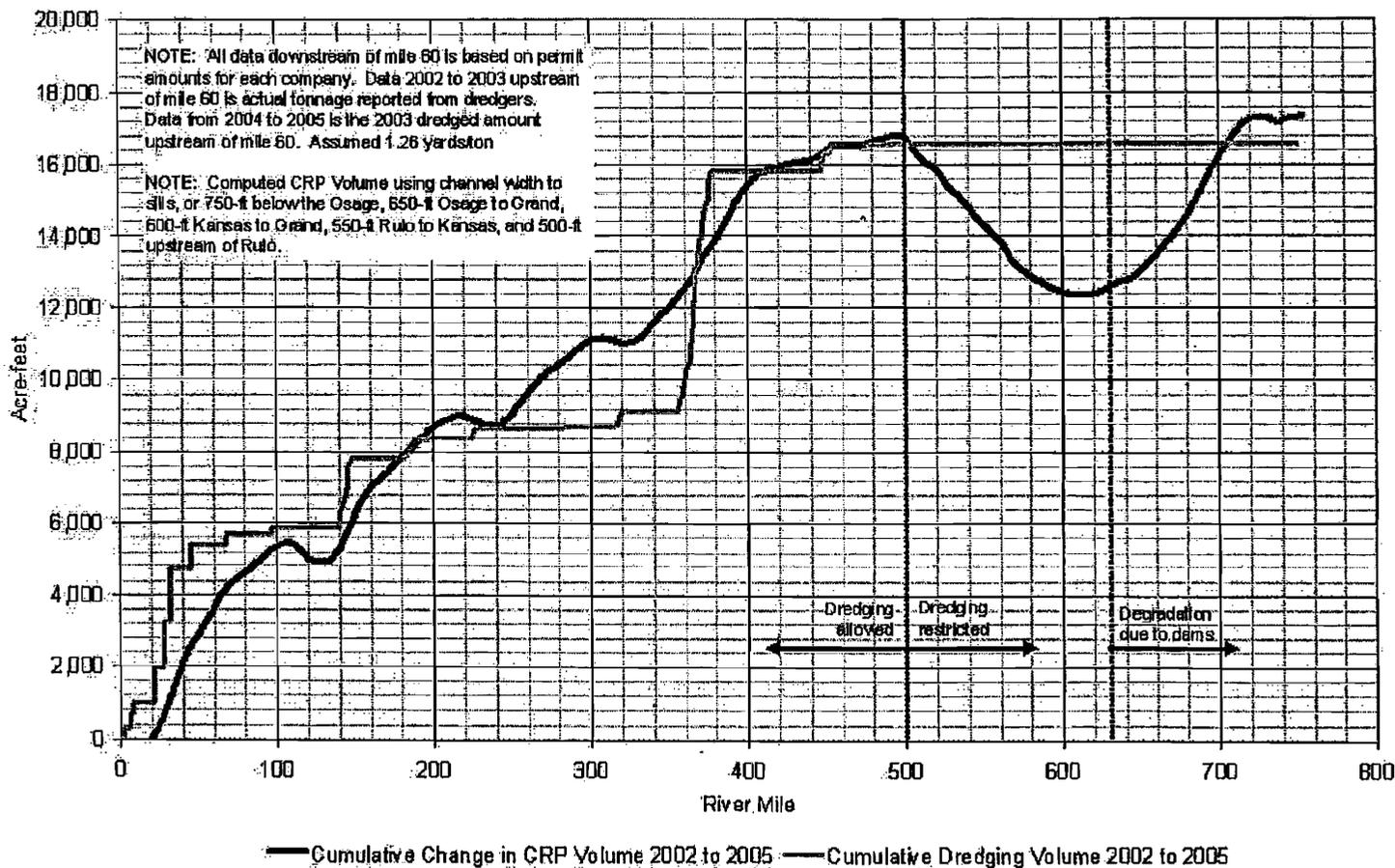


Figure 3: Volumetric Change in CRP and Dredging Volume (2002 to 2005)



#### 4.0 DISCUSSION

CRP change appears to be greatest at locations where commercial dredging is the most intensive, especially St. Charles, Jefferson City, and Kansas City. Exceptions include the area upstream of mile 635 where degradation has been attributed to dams, and near mile 250 as observed 2002 to 2005. Dredging volume is less than 1990 to 2005 volumetric CRP change, though the curves have similar shape in Figure 2; while 2002 to 2005 dredging volume and volumetric CRP change appear to be of similar magnitude. Volumetric CRP change in both Figures 2 and 3 appears to be greatest downstream of Rulo where commercial dredging is allowed.

Figure 2 shows approximately 68,200 acre-feet of volumetric CRP change between Rulo and the mouth, and an additional 5,900 acre-feet of volumetric CRP change upstream of Rulo. Accordingly, volumetric CRP change equates to approximately 8.6 acre-feet/mile/year where dredging is allowed versus approximately 1.4 acre-feet/mile/year where dredging is restricted. Approximately 47,900 acre-feet of sediment was mined from the river downstream of Rulo from 1990 to 2005, or roughly 6.0 acre-feet/mile/year, which is approximately 70% of the observed volumetric CRP change.

Similarly, Figure 3 shows approximately 16,800 acre-feet of volumetric CRP change between Rulo and the mouth, and only an additional 600 acre-feet of volumetric CRP change upstream of Rulo. Accordingly, volumetric CRP change equates to approximately 8.4 acre-feet/mile/year where dredging is allowed versus approximately 0.6 acre-feet/mile/year where dredging is restricted from 2002 to 2005. Approximately 16,500 acre-feet of sediment was mined from the river downstream of Rulo from 2002 to 2005, or roughly 8.3 acre-feet/mile/year, which equates to approximately 98% of the observed volumetric CRP change.

Major Missouri River flood events occurred in 1993, 1995, 1996, and 1997. As a result, a portion of the observed degradation from 1990 to 2005 could be attributed to scouring during flood events, among other factors. As no significant Missouri River flood events occurred from 2002 to 2005, it is assumed that flooding did not contribute to degradation during that time period. However, it should be noted that significant Grand River flood events occurred in 2002 and 2004. The 2002 and 2004 floods were the second highest stage and the fourth highest flow (143,000 cfs) observed at Sumner, MO for the period of record 1909 to 2006, respectively. High Grand River flows could explain the observed drop in CRP near mile 250 shown on Figure 1 from 2002 to 2005. Degradation upstream of mile 635 occurred only during the 1990 to 2002 time period, and little occurred 2002 to 2005, probably due to the difference in peak flows during the two time periods. Only areas with high dredging intensity experience a drop in CRP in both time periods.

Dredging intensity has increased from an average of 5.2 acre-feet/mile/year from 1990 to 2001, to 8.3 acre-feet/mile/year from 2002 to 2005 downstream of Rulo. Continued dredging at the 2002 to 2005 rate would remove enough material to lower the bed of the river approximately 1-foot every 10 years as averaged over the lower 498 mile length.

**5.0 REFERENCES**

1. USACE NWO (2001). Investigation of Channel Degradation 2001 Update, Missouri River Gavins Point Dam to Platte River Confluence.
2. USACE NWK and NWO 1990, 2002, and 2005 CRP.
3. USACE NWK and MVS Missouri River Commercial Dredging/Location Reports and Permits.

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ations No. 72

**A  
GEOLOGIC  
CROSS  
SECTION  
OF THE  
MISSOURI  
RIVER  
VALLEY  
AT  
KANSAS  
CITY,  
MISSOURI**

by  
**Richard Gentile,  
Richard L. Oberly,  
and  
Sharon K. Barnes**

**MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
Geology and Land**

## AREAL GEOLOGY

### DESCRIPTION OF SURFICIAL MATERIALS

#### River Bluffs

The tops and moderate to gentle slopes of the river bluffs are covered by glacial drift and loess of Pleistocene age. A representative section of Pleistocene deposits uncovered in the early 1980s in the excavation for Interstate Route 670 near the central business district at Kansas City, Missouri is shown in the cross section (Figure 2) and the stratigraphic section is described in Figure 3. The Pennsylvanian bedrock has been deeply weathered. Solution cavities in the upper Argentine Limestone Member have dimensions of several feet and are filled with reddish-brown clay and fragments of glacial till, chert, limestone, and shale (Figure 4).

Glacial drift belonging to the Kansan Stage (middle Pleistocene) rests unconformably on Pennsylvanian bedrock. The thickness of the drift ranges from 0 to over 20 feet on the bluffs along the line of the cross section but increases to over 40 feet in places on the bluffs, several miles east of Kansas City.

The drift consists of till interbedded with lenses of outwash (stratified drift). The till is composed mostly of clay- to sand-sized particles but 10 to 20 percent is of gravel-size. Isolated boulders commonly occur in the fine-grained matrix, hence the name "boulder" clay.

The glacial drift has been deeply weathered. It has been oxidized to shades of yellowish-brown and reddish-brown and

most carbonate rocks and minerals have been leached from the drift. The remaining non-resistant rocks and minerals are extensively altered. Granite and granodiorite crumble under slight hand pressure and limestone boulders and blocks are weathered to form nodules of soft, white calcium carbonate. The resistant rocks include gravel-size particles of pink quartzite, milky quartz, and chert.

Small isolated patches of unweathered till occur below or within the weathered drift. Unweathered till is dark gray; about 80-90 percent of the gravel-sized fraction is locally-derived pieces of limestone with lesser amounts of shale and sandstone. The resistant fraction consists of gravel-sized rock and mineral types with compositions similar to that found in weathered till.

Outwash (stratified drift) occurs as lenses of sand and gravel interbedded with the till. The sorting in outwash varies considerably but most outwash is poorly-sorted with gravel- and sand-sized particles intermixed. The lenses of outwash commonly are convoluted and distorted.

A localized patch of loess, several feet thick and assigned to the Illinoian Stage (Loveland Formation), was exposed in an excavation for highway construction on the bluff at the intersection of Interstate Route 435 and Missouri Highway 210 (SE $\frac{1}{4}$  SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 9, T. 50 N., R. 32 W.) about 5 miles east of the line of the cross section (Bayne et al., 1971). The Illinoian loess is

separated from the Kansan till by a poorly-developed paleosol (Yarmouth). In most places, Illinoian loess has been removed by erosion or incorporated into the Sangamon paleosol. The Sangamonian Stage is represented by one of the most extensively developed and widespread of the Pleistocene paleosols. The Sangamon is recognized over large areas in northeastern Kansas and northern Missouri. Development of the Sangamon soil was so intense that in most areas where the intervening Illinoian loess (Loveland) was deposited, soil-forming processes extended all the way through the Illinoian loess and into the underlying Yarmouth paleosol (Bayne et al., 1971). The Sangamon paleosol is typically 1 to 3 feet thick, but the underlying zone of weathering extends to a depth of several feet in places where the paleosol is developed on glacial drift. The weathered zone is oxidized to shades of yellowish-brown to reddish-brown, leached of calcium carbonate minerals, and typically overlies dark-gray "fresh" unweathered till and outwash.

The Sangamon paleosol is overlain by a thick layer of loess assigned to the Wisconsinan Stage. The loess is over 75 feet thick in places along the bluffs and is easily recognized by the homogeneous texture, tan to yellowish-brown color, and the property of standing in vertical face in excavations. Most of the section of Wisconsinan-age loess is assigned to the Peoria Formation.

Along the Missouri River bluffs, in particular the central business district of Kansas City, the loess deposits have been extensively disturbed by industrialization. In the early days of Kansas City it was common practice to "push a hill into a valley" to make space for the construction of buildings and streets.

#### River Valley-fill Deposits

Variations in the thickness of surficial materials that fill the lower part of the bedrock valley of the Missouri River are controlled by erosional irregularities in the

"buried" bedrock surface. Differences in surface elevation across the floodplain are relatively small and have little effect on the thickness of the valley fill materials.

The thickness of surficial materials varies considerably when traced from north to south across the valley. The thickness is controlled almost entirely by the topographic expression of the "buried" bedrock valley. The average thickness is 125 feet along the northern two-thirds of the valley, increasing to 186 feet in a deep, east-west trending trench and decreasing to 85 feet on an elevated surface south of the trench. The elevated surface is 30 feet higher than the bedrock valley north of the deep trench and is interpreted to be a bedrock terrace, an indication of more than one episode of valley erosion.

The major part of the surficial materials is classified as alluvium. These are the sediments that were transported and deposited by the Missouri and Kansas rivers and their ancestral counterparts. The alluvium is subdivided into three categories based on particle size, (in general, the particle size increases with depth): (a) The upper 10 to 35 feet of the alluvium is floodplain deposits of silt, clayey silt and fine-grained sand that settled from the backwaters when the Missouri River overflowed its banks. A soil profile has developed in the upper few feet. The floodplain deposits at Kansas City have been disturbed extensively by industrialization, including the construction of a system of earthen levees 20 feet high along the river. (b) The floodplain deposits are underlain by 75 to over 100 feet of sand with lenses of gravel. The gravel lenses are dispersed throughout the sand section and are rarely traceable for more than a few hundred feet. The maximum thickness of the individual gravel lenses ranges from a few inches to several feet. In places, isolated pebbles of gravel are scattered randomly throughout the sand section. The sand is predominantly quartz but a high percentage consists of fine-grained rock fragments and other minerals. Particles in the gran-

ule- to pebble-size range are mostly locally-derived chert and limestone, but a small percentage is pink quartzite, granite and gneiss that has been transported by continental glaciers from a northern source area, probably from as far north as Minnesota. Well-rounded small fragments of lignite are abundant at several horizons. (c) The lower (approximately) 5 feet of the alluvium contains isolated deposits of boulders with lenses of coarse-grained quartzose sand. The unit is informally called the "boulder" bed in reference to the large boulders and blocks that comprise a significant part of it. The largest boulders appear to be a few feet in greatest dimension and rest on the buried bedrock valley floor. The majority of the large boulders are limestone, but glacial erratics of pink quartzite, granite, and gneiss are common. The "boulder bed" is traceable intermittently in borings across the width of the valley. The association of boulders with lenses of coarse-grained sand indicates the deposit was worked by high-velocity currents. The large size and relationship of the boulders precludes distant transportation by running water and suggests that the boulder bed was derived from the glacial lobe that

filled the deep trench with till.

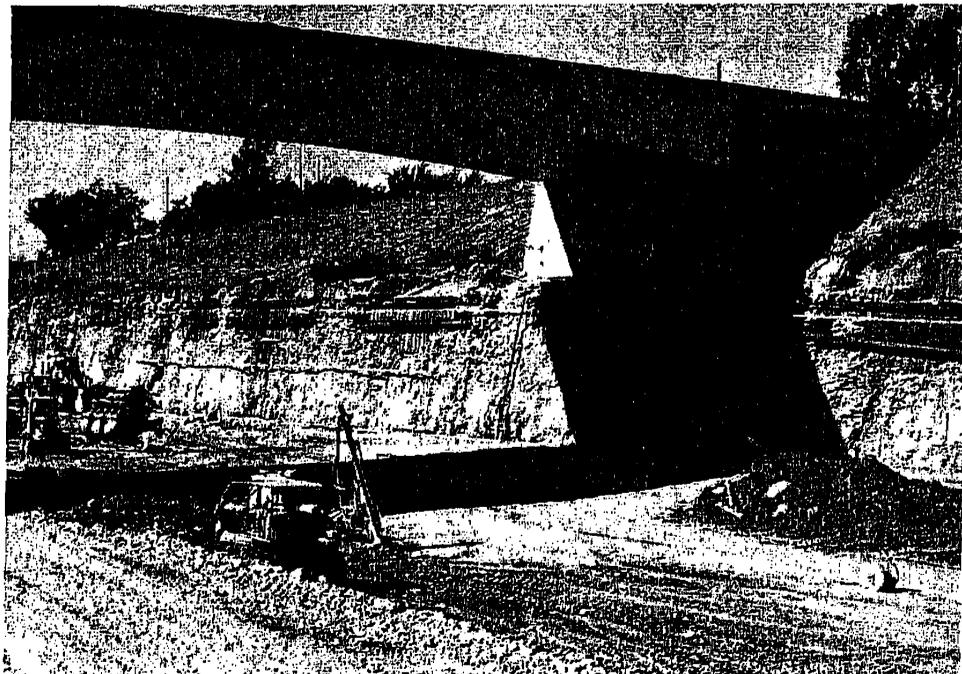
The uppermost 15 to 30 feet of alluvium is classified as Holocene in age and includes the sediments underlying the floodplain, forming low terraces along the river, and in transport in the river channel.

The thick section of alluvium underlying the Holocene deposits is believed to be of Wisconsinan in age (Late Pleistocene) (Heim and Howe, 1963; O'Connor and Fowler, 1963, and Dort et al., 1987).

A Holocene and Wisconsinan vertebrate fauna has been collected from gravel bars along the lower reaches of the Kansas River (Martin et al., 1979; Johnson and Martin, 1987). Wisconsinan-age deposits are currently being eroded in response to an increase in channel depth brought on by deep-dredging operations for sand and gravel, and the construction of dams upstream, which has increased the scouring capacity of the river, resulting in erosion through the Holocene and into the Wisconsinan deposits.

The deepest part of the buried bedrock valley is filled with a heterogeneous mixture of clay- to boulder-size material, consisting of numerous rock and mineral types. The abundance of gray clay in a

**Figure 4.**  
*Solution features in the upper Argentine Limestone Member. Excavation for Interstate Route 670 at the Summit Ave. Bridge, Kansas City, Missouri, 1981. The retaining forms cover the solution cavities and stabilize loose fill materials in them.*



heterogeneous mixture of clay- to boulder-size particles suggests this material is a glacial till. The gravel-sized fraction includes glacial erratics of pink quartzite and locally-derived limestone. The glacial till underlies the alluvium and is about 15 feet thick. In comparison to the width of the buried bedrock valley, the portion that is filled with till is relatively narrow. In reality, the till fills the lower part of a deep trench eroded into the bedrock valley floor. Borings C-1, -2, -3 for the TMRT are located to give information about the deep trench. The drill in Boring C-3 penetrated 12 feet of limestone, interpreted to be a large boulder or block.

The bottom of the deep trench is about 90 feet below the surface of the bedrock terrace south of it, and 60 feet lower than the bedrock surface north of the trench. The till-bedrock contact at the bottom of the trench is 555 feet (m.s.l.). The section of till in the excavation for the I-670 Interchange (Figure 2) is about 950 feet (m.s.l.) near the highest elevation in Kansas City. The difference in elevation is almost 400 feet, an indication of the minimum thickness of the ice sheet that filled the Missouri River Valley and advanced southward over the highest hills. This figure is based on the assumption that the till at both places was deposited from the same ice lobe.

A deep comparable trench was encountered in boreholes during construction of the Intercity Viaduct for Interstate Route 70 across the Kansas River, approximately 2 miles upstream and southwest of the TMRT. O'Connor and Fowler (1963) report that the trench is 1,500 feet wide, 150 feet deep and is filled with glacial till. The elevation at the bottom of the deep trench is 515 feet (m.s.l.), a figure that compares somewhat favorably with the 555 foot elevation at the bottom of the deep trench recorded from borehole data during the site investigation for the TMRT. Sections of alluvium underlain by glacial drift with a total thickness of 150 to 200 feet have been recorded from borehole samples at several

additional places along the Kansas and Missouri River valleys at Kansas City. These places of relatively thick sections of alluvium and glacial drift appear to be restricted to narrow, deep trenches. Most of the information about them is included in unpublished site investigation reports. Whether the deep trenches are integrated into a single system with a common base level has not been determined due to the lack of subsurface data. The depth, location and the extent of the deep trenches within the lower Kansas and Missouri river valleys are of considerable importance in design of deep structures in the Kansas City area.

There is general agreement that the deep trenches were eroded into the bedrock valley floor by large volumes of meltwater shortly before or during the maximum advance of the Kansan ice sheet (Fishel, 1948; O'Connor and Fowler, 1963; Heim and Howe, 1963b; Simms, 1965; Aber, 1988).

The Kansan (middle Pleistocene) was the most extensive Pleistocene glaciation and the only one to reach the Kansas City area (O'Connor and Fowler, 1963). Consequently, the glacial till filling the deep trench is assigned to the Kansan Stage. Also, it is reasonable to assume that at least part of the "boulder bed" that comprises the lower several feet of alluvium is of Kansan age and represents glacial outwash that was deposited from meltwater issuing from the receding ice lobe after it had advanced into the valley and filled the trench with till.

The Kansan drift has an age range between 0.7 to 0.6 million years B.P. (before present) based on radiometric dating of volcanic ash, biostratigraphy and paleomagnetism of till (Aber, 1991).

Revision of the standard classification system of Pleistocene units for the midcontinent U.S. has been proposed by Richmond and Fullerton (1986); Morrison (1991); and Aber (1991). Early and medial Pleistocene units have been assigned to the informal time division Pre-Illinoian and the

name Kansan is abandoned. The chronostratigraphic equivalence of the glacial deposits at Kansas City, Missouri with sections in other areas of the midcontinent has not been determined. Until the matter is resolved, the Kansan, a well-established name, is retained in this paper for glacial deposits along the Missouri River bluffs and in the deep bedrock trench at Kansas City. The classification system of Bayne et al. (1971) is followed in this report.

#### DESCRIPTION OF BEDROCK UNITS

The bedrock addressed in this study comprises a sequence of strata over 550 feet thick that is divided into 75 formally-named stratigraphic units that consist of four lithostratigraphic groups (in descending order): the Kansas City and Pleasanton Groups, Missourian Series, and the Marmaton and Cherokee Groups, Desmoinesian Series, Pennsylvanian System. The stratigraphic classification of the Pennsylvanian System is undergoing revision by midcontinent geologists. The classification currently in use by the Missouri Department of Natural Resources, Division of Geology and Land Survey (Thompson, et al., 1993) is retained in this report until an agreement is reached among midcontinent state geological surveys.

A composite stratigraphic section of the Pennsylvanian-age bedrock units along the line of the cross section is included in Appendix 1. Included in the section are some of the proposed revisions in classifications.

The long cores (B-1, -2, -3, -4, -5) from the site investigation for the Trans-Missouri River Tunnel project provided the necessary data to make a detailed stratigraphic analysis of the subsurface bedrock units. Prior to the current investigation, there was insufficient detailed stratigraphic information concerning the approximately 300 feet of bedrock that comprise the Lower Pleasanton, Marmaton, and Upper Cherokee Groups in the vicinity of Kansas City. This rock sequence makes up the bedrock

section that lies below the elevation of the major river valleys and is accessible only by subsurface methods of investigation.

#### **Kansas City Group**

The average thickness of the Kansas City Group is approximately 260 feet in the Kansas City area (Greene and Howe, 1952). The upper 50-75 feet has been removed by erosion along the line of the cross section. The middle part is exposed along the Missouri River bluffs and is approximately 150 feet thick; the lower 40 feet lies below the elevation of the floodplain of the Missouri River.

The Kansas City Group consists mostly of limestone and shale beds that alternate throughout the section. The Bethany Falls Limestone Member crops out on the south bank of the Missouri River and is the oldest exposed bedrock unit.

The Argentine Limestone Member is found near the tops of the hills and is deeply weathered, especially at places where the Island Creek Shale Member is relatively thin. Solution along joints has widened some of them to more than 2 feet and a pinnacled surface has developed on the Argentine at places where solution has been excessive. Cavities and solution-widened joints are filled with reddish-brown plastic clay. At a few places, glacial erratics of resistant rock and mineral types are embedded in the clay.

#### **Pleasanton Group**

The Pleasanton Group is about 110 feet thick and consists predominantly of gray shale with beds of sandstone near the top, middle, and bottom of the group.

The Exline Member, a thin, persistent bed of limestone, is a diagnostic marker bed in the lower part of the Pleasanton throughout northwestern and west-central Missouri.

The complete thickness of the Pleasanton Group was encountered in test boring B-5 and the lower part of the group in test borings B-1, -2, -3, and -4 for the TMRT.