



November 17, 2015

Nicole Dandurand
State of Louisiana
Department of Natural Resources
Office of Coastal Management
Post Office Box 44487
Baton Rouge, LA 70804-4487
nicole.dandurand@la.gov

**RE: RAM Terminals, LLC Coastal Use Permit Application
CUP Number: P20120190**

This letter is submitted on behalf of the Gulf Restoration Network, the Sierra Club, the Louisiana Environmental Action Network, and the Lower Mississippi Riverkeeper in regards to the application of RAM Terminals, LLC (“RAM”) for a Coastal Use Permit (“CUP”) for its proposed coal export terminal. After reviewing the letter that RAM submitted to LDNR on October 25, 2015 in response to LDNR’s request for additional information on September 25, 2015, it is clear that RAM has not and cannot adequately answer LDNR’s or the public’s questions as to the nature of their project, the economic need for the project, or its potential impacts. As RAM has not responded to repeated requests for this information, LDNR should deny RAM’s application for a CUP.

I. RAM Cannot, and did not, Refute the Consensus Analysis that the Export Market for U.S. Coal is in Decline

In a letter dated September 25, 2015, LDNR asked RAM to provide additional information and responses to public comments. In particular, LDNR asked RAM to provide “an updated Needs and Alternatives analysis that includes market research through the years 2004-2014 that illustrates the most recent trends in coal production and export in the United States” and “provide a response [to sources cited by commenters showing a

decline in the international market for coal,] refuting each of these sources, if the information cited in these submittals is incorrect.”¹

RAM’s response fails to refute any of the sources cited by us in our previous comments. RAM also fails to acknowledge that, in the very EIA research it cites as supposedly supporting the need for added export capacity, the latest years of data show that coal exports have fallen by 23% from 2012 to 2014. RAM, just as it did in its NAJ, simply brushes past the recent years of decline to mischaracterize the EIA data as showing an increase in exports instead. RAM claims that it is relying on “overall trends” and a general increase in the “global use of coal” in developing nations, but fails to cite to any sources projecting an increase in the demand for imported coal in these developing nations.² RAM has not, in any of its submittals, included a projection of supply and demand trends for coal exports over the next ten years, as required by LDNR’s Complex Justification guidelines and as requested by LDNR’s March 13th, 2015 letter requesting an “all-inclusive Category 3 alternatives assessment along with a complex justification analysis.”³ This failure alone is grounds to reject RAM’s permit application.

RAM’s reliance on data showing a general increase in the global use of coal is misplaced and misleading. First, the market for imported seaborne coal has always been very small in comparison to the market for domestic coal.⁴ Most countries primarily burn coal mined and produced domestically. For example, while coal use in China has skyrocketed in recent decades, until 2009 it still exported more coal than it imported. For a few years it topped the list of coal importers, but, due to policy changes aimed at reducing air pollution and an economic slow down, its imports have fallen by 30-40% from 2014 to 2015 and domestic coal use is expected to decline by up to 5% in 2015.⁵

Potential United States coal exporters face a number of hurdles that prevent profitable expansion. First, as mentioned in our previous comments, the current international market for coal is oversupplied and demand has been weakening since 2012; global coal prices have tumbled 52% since 2011.⁶ Even in 2012 during the peak of coal exports from the U.S., no existing U.S. coal export terminals utilized more than 70% of their capacity.⁷ This trend shows no sign of abating, as competition from natural gas, increased environmental regulation, and decreasing costs of renewables drives investment away from coal.⁸ Investment analysts, looking at the dim prospects for exports combined with falling domestic demand for coal, are predicting multiple bankruptcies for U.S. coal companies in the coming years.⁹ Four major coal companies have already filed for

¹ See Attachment A, Letter from N. Dandurand, dated September 25, 2015, at 1.

² See Attachment B, Letter from P. Lanier, dated October 25, 2015, at 1.

³ See Attachment C, Letter from N. Dandurand, dated March 13, 2015, at 1.

⁴ <http://www.reuters.com/article/2015/09/04/us-column-russell-coal-asia-idUSKCN0R412H20150904#Huw8tP4WU5YtOiqL97>

⁵ <http://marketrealist.com/2015/06/chinas-coal-imports-go-bad-worse/>

⁶ <http://www.wallstreetdaily.com/2015/02/06/u-s-coal-producers/>

⁷ <http://www.ieefa.org/wp-content/uploads/2014/11/Sanzillo-port-capacity.pdf>

⁸ *Id.*

⁹ *Id.*

bankruptcy since 2014.¹⁰ There is simply no economic need for more U.S. coal export capacity. This is particularly true in Plaquemines Parish, which already has two terminals in the immediate area of RAM's proposed facility.

Second, the largest exporters of coal, Australia, Indonesia, and South Africa, are all geographically closer to the Asian markets that RAM states are its intended targets. Russia has also become more of a competitor in the international coal market, given its low-cost coal and proximity to Asian markets.¹¹ By comparison, the costs of transporting U.S. coal, particularly from the Gulf region, to these markets means that almost all coal from the U.S. is "out of the money" and unprofitable at current prices.¹² In fact, the largest coal exporter in the Western U.S. is suspending coal exports until 2018 and is currently paying terminals *not to ship coal*; for this exporter, paying penalties on its contracts with the terminals is actually less of a loss than attempting to sell the coal on the oversupplied market.¹³ Finally, if an international agreement to decrease greenhouse gas emissions is reached at the next United Nations Climate Change Summit in Paris, Citigroup is predicting \$100 trillion in stranded fossil fuel assets, where "coal bears the brunt, accounting for more than half the value of stranded assets, even in the unlikely event that carbon capture and storage becomes a viable technology."¹⁴

It is telling that RAM fails to cite to any energy market analysts or long term forecasts to support its allegation that there is a growing market for U.S. coal exports out of the Gulf. In fact, concerning long-term "overall trends," analysts from major investment firms and industry watchers agree that the market for seaborne coal is not experiencing "temporary pricing swings," but is actually in structural decline.¹⁵ Citigroup notes that, while the fossil fuel industry is "optimistic that demand will pick up and prices with it, and hopeful that 'clean coal' technology will become available and save the day... [o]n the demand side we think thermal coal is cyclically and structurally challenged and that current market conditions are likely to persist."¹⁶ Chinese regulators are attempting to decouple coal from electricity production, and "Indian Energy Minister Piyush Goyal has repeatedly stated the country will stop coal imports within three years."¹⁷ Seaborne coal prices are at record lows, and in "September 2015 Goldman Sachs cut their long term coal

¹⁰ <http://www.cbsnews.com/news/alpha-joins-the-lineup-of-coal-miners-in-bankruptcy/>

¹¹ <http://www.smh.com.au/business/mining-and-resources/russia-rides-devalued-rouble-into-australian-coal-export-markets-20150401-1mdaf0.html>

¹² <http://www.ieefa.org/wp-content/uploads/2014/11/Sanzillo-port-capacity.pdf>

¹³ <http://www.sightline.org/2015/10/29/cloud-peak-to-put-coal-exports-on-hold/>

¹⁴ <http://cleantechnica.com/2015/08/26/citigroup-predicts-100-trillion-in-stranded-assets-if-paris-summit-succeeds/>

¹⁵ <http://ieefa.org/seaborne-thermal-coal-dead-or-at-least-in-permanent-structural-decline/>; <http://reneweconomy.com.au/2014/beginning-end-coal-citi-sees-structural-decline-30396>; <http://www.theguardian.com/environment/2015/mar/24/us-coal-sector-in-terminal-decline-financial-analysts-say>; <http://oilprice.com/Energy/Coal/Coal-Industry-in-Structural-Degradation.html>

¹⁶ <http://cleantechnica.com/2015/08/26/citigroup-predicts-100-trillion-in-stranded-assets-if-paris-summit-succeeds/>

¹⁷ <http://www.australianmining.com.au/features/ccs-coal-not-all-it-s-cracked-up-to-be-opinion>

forecast 23 per cent to” \$50 per ton of coal, making U.S. coal unprofitable and not competitive with other exporting nations.¹⁸

RAM has not provided any data supporting its claim that long term trends provide an economic justification for this project. In fact, the market trend analysis points squarely against the viability of building new coal export capacity. LDNR should deny RAM’s permit application.

II. RAM Still Refuses to Provide Information on Other Commodities

The public, LDNR, and Judge Conner have all asked for more information on what other commodities RAM plans to transport through its terminal. This information is vital to both the agency and the public getting a full and accurate account of the potential negative environmental and public health impacts of the project, and for LDNR to make the legally required assessment as to whether other alternatives to the construction in the coastal zone are available. It is particularly critical because, as described above, it simply may not be economical for RAM to serve exclusively as an export hub for coal.

In the September 25 letter, LDNR correctly called on RAM not only to explain which additional commodities might pass through the terminal, but also to fully update the Complex Needs and Alternatives Analysis so that, among other things, RAM maps competitor facilities for these additional commodities and analyzes the market trends for each commodity.¹⁹ RAM ignored these requests, failed to include any information on other commodities, and did not provide any maps, competitor information, or market trends for other potential commodities.

LDNR’s request for this information is significant because different commodities will pose different threats and impacts to surrounding communities and ecosystems. Coal and petroleum coke, for example, have toxic constituents that can be discharged into surrounding water bodies through fugitive dust deposition and through contaminated storm water. These constituents are different than the ones found in metal ores, or portland cement, or other bulk commodities. Heavier commodities also require more engines on each train, increasing diesel particulate emissions and posing public health threats to communities along the rail line. Other raw materials or hydrocarbon liquids or gases may pose safety hazards (such as the transport of crude oil by rail, or the storage of compressed natural gas, which can lead to explosions). It is impossible to know the nature and significance of these impacts if there is no information on the types and quantities of the materials that RAM plans to move through its facility.

Once again, RAM attempts to dodge this issue, and claims it has only “included the potential for additional commodities to provide flexibly in the operating model.” RAM claims that it “has not identified a particular commodity that would be targeted,” but that it “believes any such commodities would almost certainly fit within its current Air

¹⁸ *Id.*

¹⁹ *See* Attachment A at 1-2.

Quality Permit and should not require additional permitting.”²⁰ The question before LDNR, however, is not whether RAM has acquired the necessary air permits to move any material that it wants, but, rather, what impacts moving these bulk materials will have on coastal resources, and whether alternatives exist that would eliminate the need for a new facility to be constructed in the coastal zone to handle these other materials. LDNR cannot answer these questions if it does not know what materials will be transported by the facility. As RAM has not provided enough information to fully analyze the potential environmental impacts of its proposed development, LDNR should deny its permit application.

III. RAM’s Response Is Misleading and Ignores Potential Conflicts with the Mid Barataria Diversion

LDNR’s September 25, 2014 letter included a request for a copy of the signed Memorandum of Agreement (“MOA”) between RAM and CPRA. In addition to providing this document, RAM’s response alleges that the proposed coal terminal “essentially does not materially impact the effectiveness of the diversion project,” citing a 2012 report by the Water Institute. RAM’s letter goes on to claim that it will compensate the state for any negative impacts to the diversion, as set forth in the MOA. These statements are false and misleading.

First, the payments provided for in the MOA are not triggered by a finding that the terminal is impacting the diversion; they are stipulated penalties that are triggered by RAM’s failure to comply with portions of the MOA.²¹ These penalties are only applicable if RAM fails to comply with the agreement by operating its terminal during the diversions “Peak Operating Period,” as defined in the MOA.²² These Peak Operating Periods are limited in the agreement; they may last no longer than 15 days, and there may be no more than 5 such periods each year. Thus, RAM is only liable for sediment losses experienced in these limited times, and only if it violates the agreement by continuing operations during those times. The state is not compensated for any sediment loss caused by the terminal from its mere presence (i.e., the lost sediment that will occur just from the disruption to water flow caused by the presence of RAM’s pilings and docks) or losses that occur during non-peak operating periods.

²⁰ See Attachment B at 2.

²¹ See Attachment D, Memorandum of Agreement between RAM Terminals, Inc. and the Louisiana Coastal Protection and Restoration Agency, at 4-5.

²² The agreement provides for some adjustment of penalties based on monitoring showing the actual impact of the facility on sediment delivery into the diversion, but provides that this adjustment “shall not result in a difference greater than twenty percent (20%) more or less or the original payment.” This adjustment is not mandatory (“sediment payment schedule ... may be modified”), and does not guarantee that RAM will be compensating the state for the full cost of the loss of sediment caused by the terminal, since the payments are capped. And, again, RAM is only liable for payments under the MOA if it continues to operate during a Peak Operating Period; if RAM does not operate, there will be no payments due under the agreement, and therefore no adjustment to those payments based on actual impacts. See Attachment D, Memorandum of Agreement between RAM Terminals, Inc. and the Louisiana Coastal Protection and Restoration Agency, at 5.

Even the minimum losses cited by RAM are significant, and will negatively impact the success of the diversion project. RAM admits to The Water Institute's statement that there would be at least 6.5 acres a year lost over the 50 year life of the project, just from loss of sand alone. The number of acres lost would likely be larger, since fine sediments, which can *only* be delivered by the sediment diversion, are an essential part of the benefit of the diversion which cannot be delivered by mechanical dredging²³. The sediment lost is up to five times the sand load.

"You run into two problems trying to replace sediment diversions with sediment dredging. Problem number 1 is accessing the sediment in the river. It is estimated that 80% of the sediment in the river is actually in the water column--which you can't capture in a dredge, which captures the sediment on the bottom of the river. The second thing is that the cost of dredging is exponentially higher."

-Congressman Garret Graves, former head of CPRA, on the importance of sediment diversions²⁴

RAM does not include any statement on how the admitted loss of the minimum 325 acres would be avoided, minimized, or mitigated. As stated above, RAM is only liable for sediment losses if it violates the agreement by continuing operations during certain times, but the minimum 325 acres in question would be lost due to the placement of the pilings, which we must assume will not be removed during "Peak Operating Periods." RAM has not assessed alternative sites that might avoid these fine sediment losses.

RAM claims, without factual support or citation to any analysis, that "any impact RAM may have is well within the margin of error of the [Water Institute Report] and therefore irrelevant."²⁵ The Water Institute Report itself makes no mention of any margin of error, and, instead states that significant impacts were demonstrated even considering "the uncertainty present in any numerical model."²⁶ In fact, neither RAM nor CPRA have provided any explanation, analysis, or data showing how the MOA will reduce the impacts of the proposed terminal on the diversion project.

The Water Institute report referenced by RAM found that "[n]early 500,000 tons of Sand will be lost in a decade due to the presence of the RAM facility," and concluded that, even considering "the uncertainty present in any numerical model, the results of all the simulations performed here showed persistent reduction of sediment load captured in the

²³ Garret Graves talks about sediment diversions, nola.com retrieved Nov 13th, 2015; http://videos.nola.com/times-picayune/2013/09/garret_graves_talks_about_sedi.html

²⁴ Graves' statement is back by several assessments of river sediment, including [Alison et al. 2012](#) A Water-Sediment Budget for the Lower Mississippi-Atchafalaya River in flood years 2008-2010; [Bentley et al 2014](#) Building Land in a Delta from River-Sediment Diversions: Constraints, Potential, and Examples in the Mississippi River Delta; [Ramirez et al, 2014](#) Sedimentary Dynamics of the Lower Mississippi River and Implications for River Diversions. What is important to understand is that the loss of mud has some impact.

²⁵ See Attachment B at 3.

²⁶ See Attachment xx, Water Institute Report at 4-5.

outfall channel due to the presence of the RAM facility.”²⁷ Even under the best case scenario outlined by the Water Institute, where it assumed only the presence of the facility and associated barges, nearly 80,000 tons of sediment would be lost per decade.²⁸

In addition, RAM simply ignores The Water Institute's concern that contamination transported into "marsh areas" "should be investigated."²⁹ RAM must estimate the volume of coal and pet coke, and /or other unknown materials RAM would transport into the marsh areas, and estimate its impact on plant and animal life that the diversion seeks to enhance. This impact is not acknowledged; there is no minimization, nor are there alternatives suggested.

The Water Institute Report also found that the “existence of the RAM loading facility on top a lateral bar would severely limit the ability to harness the available sand directly through dredging or using other agitating techniques to increase the amount of sediment diverted toward the outfall channel,” limiting the state’s ability to utilize this vital and limited resource.³⁰ In 2012, CPRA and the US Army Corps were in conflict over use of the Alliance sandbar. CPRA concluded that "Tens of Millions of State Dollars will be lost by [the Corps'] decision" to block CPRA's use of the Alliance sandbar³¹. RAM has absolutely failed to address the Water Institute's identical concern for the South Alliance sandbar.

Once again, the MOA provides no mechanism for compensating the state for its lost access to the South Alliance sandbar. Given these findings, it is difficult to see how RAM comes to the conclusion that it will have “essentially” no impact on the diversion project. RAM has not supported its claims that it will not impact the diversion, and its statements on the subject are false and misleading. LDNR should therefore reject its permit application.

IV. RAM Has Not Justified Its Need For Rail

RAM has repeatedly alleged that the current site was selected in large part due to the existing rail line, which it has described as “imperative” to the project’s purpose.³² This siting criteria limited the selection of potential alternative locations.³³ And yet, RAM has stated that it intends to use the rail line rarely and that commodities will primarily arrive at the facility by barge. RAM has long been trying to have it both ways: it wants to curtail any alternatives analysis by highlighting its inflexible need for rail, while, at the same time, it wishes to ignore the foreseeable impacts rail transport of bulk commodities would have on

²⁷ See Attachment E, Water Institute Report at 4-5.

²⁸ *Id.* at 18.

²⁹ *Id.* at 18.

³⁰ *Id.* at 5.

³¹ [Mississippi River Sediment Management Concerns](#). Kyle Graham, Deputy Executive Director, CPRA, 8/22/2012 retrieved 10 Nov 2015

³² See Attachment F; Excerpts of May 2015 Lanier & Associates Alternatives & Justification Analysis, at 2-3 (“Selecting a site that has existing rail infrastructure ... is imperative in meeting the objective of the proposed project. ... Again, the proposed facility must have deep water access and rail access to meet the stated project objectives.”)

³³ *Id.*

South Louisiana communities. Judge Conner noted these inconsistencies, concluding that, based on RAM's statements in the record, "it is unclear whether rail is even necessary to its project."³⁴ "If, as RAM has claimed, the primary function of the facility will be the transfer of coal, and the rail line will rarely -- if ever -- be used to transport coal, access to the rail line should not have been a primary factor in site selection."³⁵ Recognizing this legal defect, LDNR's letter demanded that RAM "provide an explanation that illustrates why rail access should be considered an integral component of site selection," including a quantitative outline of what percentage of products would arrive at the facility by rail.³⁶

RAM's response provides no such explanation. Here again, RAM ducks the issue and refuses to respond to questions from the courts, the public, and LDNR on this issue. Despite being repeatedly referred to its own conflicting statements on the record, RAM alleges that "this issue has been adequately addressed in our previous submittals."³⁷ It then simply states that the rail line is a common carrier and so is permitted to transport "coal and other products."³⁸ This does nothing to answer the question as to why, if RAM does not intend to use the rail line frequently or even for coal, having access to a rail line was "imperative" to the project and limited the range and selection of alternatives. As LDNR knows, a proper assessment of alternatives is required by Article IX of the Louisiana constitution and by statute in order for LDNR to decide whether to grant a coastal use permit. As RAM has failed to explain its conflicting statements on the need for rail, and as this issue has colored its selection of alternative sites, LDNR should reject RAM's application for a CUP.

V. RAM Failed to Respond to Other Substantive Comments in the Record

In its September 25, 2015 letter, LDNR asked RAM to "carefully review each comment that makes reference to any issue not identified or addressed above in this request for information that is in the administrative record of this matter" and "give serious consideration to each comment, and provide, for the administrative record, a response document that individually summarizes and adequately addresses each of the commenters' concerns."³⁹

RAM declined to address any other public comments. RAM failed to justify its comparison of the selected alternative, in which wetland impacts are already mitigated, to raw data on total wetland acres from the alternative sites without mitigation. This issue was pointed out both by us in our previous comments and by other environmental non-profit organizations.⁴⁰ RAM declined to explain how it ignored both the existence of the historic town of Ironton and its cultural resources (including cemeteries and a historic

³⁴ [Sierra Club Delta Chapter, Cornin, Davis, et al vs LA DNR](#). LA 25th Dst. Ct of Plaquemines Div A. 23rd Dec 2014

³⁵ *Id.*

³⁶ Attachment A at 2.

³⁷ *See* Attachment B at 2.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *See* [attach NWF letter].

church), which are located less than a mile away from RAM's property. RAM, which did not defend its permit application at the September public hearing, ignored all of the public comments submitted in response to its application, apparently dismissing such concerns. RAM should not be allowed to ignore substantive comments from the public.

VI. Conclusion

It is clear by RAM's repeated failures to provide information that the court and agency ordered were necessary, and especially by RAM's cursory response to the latest request, that RAM isn't going to treat this process with the seriousness that building a heavy polluting industrial facility in the fragile coastal zone requires. As RAM has failed to provide a response to the comments submitted by the public and the information requested by LDNR and Judge Conner, LDNR should deny this permit.

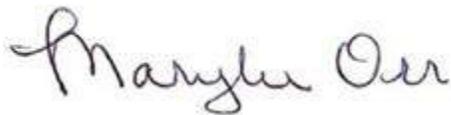
Sincerely,



Brianna Fairbanks, Staff Attorney, Sierra Club



Scott Eustis, M.S., Coastal Wetland Specialist, Gulf Restoration Network



Marylee Orr, Executive Director, Louisiana Environmental Action Network



Paul Orr, Riverkeeper, Lower Mississippi Riverkeeper

Attachment A

Monica Dandurand

From: Monica Dandurand
Sent: Friday, September 25, 2015 12:12 PM
To: Price Lanier (planier@lanier-engineers.com)
Cc: Charlie Wesley (cwesley@armstrongcoal.com); Michael.V.Farabee@usace.army.mil
Subject: P20120190 Request for Information
Attachments: P20120190_RFI_9_25_2015.pdf

Good afternoon Price, attached please find a request for information for P20120190 based on the public hearing and additional comments received. If you have any questions, please feel free to contact me to discuss further.

Nicole Dandurand
Permit Coordinator, Western Section
Office of Coastal Management

225-342-1076

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State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

September 25, 2015

Lanier & Associates Engineers
4101 Magazine St.
New Orleans, LA 70115
Attn: Price Lanier

**RE: P20120190, Coastal Use Permit Application
RAM Terminals, LLC**

Description: Proposed installation of a coal export facility. Docking facilities will be installed along with a total of 34 dolphins for barge fleetings adjacent to the site. Work occurring behind the levee and on the batture will include installation of a rail loop, retention ponds and placement of fill: 128,000 cy of excavated native material, 700,000 cy of hauled-in soil, 14,000 cy of rock and 15 cy of concrete.

Amendment: Modifications to the location and dimensions of proposed pond, changes to rail loop and dimensions of coal stacks.

Location: 16111 Hwy 23 Myrtle Grove, 70037; Lat. 29° 40' 02"N, Long. -89° 57' 50"W.

Plaquemines Parish, LA

Dear Mr. Lanier:

On September 17, 2015, the Office of Coastal Management (OCM) conducted a public hearing regarding the above referenced application. In response to comments received at the hearing and subsequent comments that OCM received, please provide the following information for consideration by OCM:

Provide an updated Needs and Alternatives analysis that includes market research through the years 2004-2014 that illustrates the most recent trends in coal production and export in the United States. (The current NAJ document only provides data up to 2010.) Comments received by OCM on September 10th, and reiterated at the public hearing on September 17th, on behalf of Sierra Club, Gulf Restoration Network, Louisiana Environmental Action Network and Lower Mississippi River Keeper, cite several sources (pages 2-4) which indicate that the demand for coal has declined in more recent years. Please provide a response refuting each of these sources, if the information cited in these submittals is incorrect.

Your March 4, 2015 response referenced potential alternative commodities (wood pellets, fertilizer, aggregate, petroleum coke) which may be exported from

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the proposed facility. Please provide additional information regarding the specific commodities and quantities thereof that may be transported to the facility by rail and the anticipated frequency of such shipments (how many trains, how many railcars, what type of rolling stock, etc.) As part of the Justification Analysis, please provide documentation of the need to distribute the anticipated alternative commodities. Identify on a map all competitor facilities (those providing the same or similar products and/or services to the same market). Provide a narrative explaining the competitor's location(s) relative to the proposed facility and include any identifiable limitations of each competitor. Provide supply and demand trends over the last 10 years for the proposed products in the identified market area and provide projections of the same over the next 10 years.

Please provide an explanation that illustrates why rail access should be considered an integral component of site selection. According to the response received by OCM on March 4, 2015, RAM indicated that barge shipment will likely be the main source of product to the proposed facility and that only 0 – 3 trains per week total are expected. According to the Alternatives and Justification analysis submitted on June 1st, 2015, the information provided states that the Mississippi and Ohio Rivers are the main thoroughfares used to barge coal from the main coal product source. What percentage of coal exports will be delivered to the facility by rail? What percentage of alternative products will be delivered to the facility by rail? Please provide an analysis of market conditions to support the need for the proposed terminal to have the ability to receive shipments of alternative commodities by rail, as it has been opined by commenters that the project would be equally successful without a rail component.

Please provide a copy of the Memorandum of Agreement signed and executed by both CPRA and representatives for RAM terminals.

Finally, we urge you to carefully review each comment that makes reference to any issue not identified or addressed above in this request for information that is in the administrative record of this matter. After completing the careful review, give serious consideration to each comment, and provide, for the administrative record, a response document that individually summarizes and adequately addresses each of the commenters' concerns.

This information is being requested pursuant to the Louisiana Administrative Code, Title 43, Part I, Chapter 7, § 723.c.7 and must be submitted within 30 days of the date of this letter. In accordance with the Rules and Procedures for Coastal Use Permits, Part III G(1), we will resume processing your application when the above information is received. Further information may be required based on your answers to the above questions or to questions which may arise during processing.

CUP 20120190, Coastal Use Permit Application
RAM Terminals LLC
September 25, 2015
Page 3

Please refer to the above Coastal Use Permit number when responding to this request.

If you have any questions, call me at (225) 342-1076 or (800) 267-4019.

Sincerely,

/s/ Nicole Dandurand
Permit Analyst

nd

cc: Michael Farabee, COE
Charlie Wesley, RAM Terminals, LLC

Attachment B

Monica Dandurand

From: Price Lanier <planier@lanier-engineers.com>
Sent: Sunday, October 25, 2015 6:08 PM
To: Monica Dandurand
Cc: Charlie Wesley
Subject: RE: P20120190 Request for Information
Attachments: Sierra Magazine.pdf; US Dept of Commerce.pdf; US Energy Information Administration.pdf; RAM CPRA Executed MOU 11-8-13.pdf; 15-10-25 Response Letter - DNR.pdf

Nicole,

Please find attached our response letter as well as some supporting documents. Please review and let me know if you have any questions or need any additional information from us. Thanks,

Price

From: Monica Dandurand [mailto:Monica.Dandurand@LA.GOV]
Sent: Friday, September 25, 2015 12:12 PM
To: Price Lanier (planier@lanier-engineers.com)
Cc: Charlie Wesley (cwesley@armstrongcoal.com); Michael.V.Farabee@usace.army.mil
Subject: P20120190 Request for Information

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Nicole Dandurand
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225-342-1076

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Explore, Enjoy, and Protect the Planet

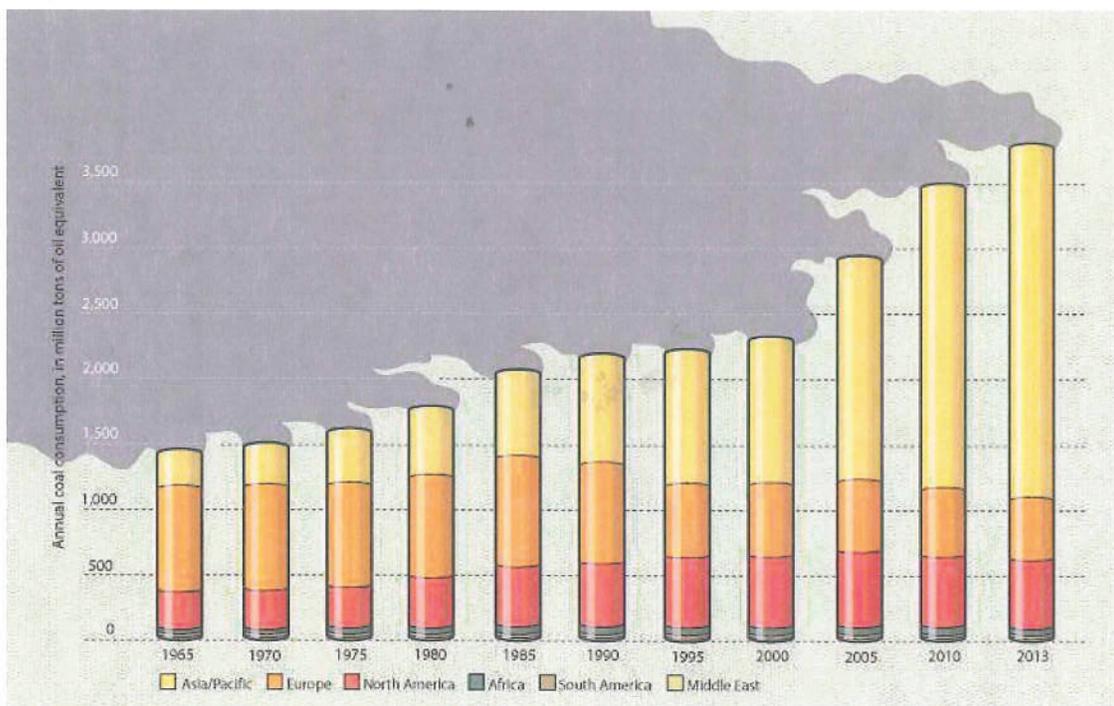
SEARCH SIERRA

GO

COALED, HARD FACTS

A graphic look at where coal use has increased and decreased since 1965.

BY [REED MCMANUS \(/SIERRA/AUTHORS/REED-MCMANUS\)](#)



Graphic by Peter and Maria Hoey

North Americans and Europeans have every reason to celebrate their success in reducing coal consumption over the past decade. (In the United States, much credit goes to the Sierra Club's [Beyond Coal](http://content.sierraclub.org/coal/) (<http://content.sierraclub.org/coal/>) campaign, which is a third of the way to reaching its goal of retiring or preventing from being built 523 coal plants—178 and counting.) But from a global perspective, coal remains a major concern. Its use has skyrocketed in Asia, where

70 percent of the world's coal is consumed; China alone burns half the world's coal. Nevertheless, China's coal boom may have peaked—its coal consumption actually decreased

slightly in the first half of this year—while global renewable energy sources have surged. Wind and solar energy now provide 3.2 percent of the world's electricity and represent 28 percent of the growth in electricity generation.

Graphic: Peter and Maria Hoey

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Reed McManus is a senior editor at *Sierra*.

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REPOWER LA

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Los Angeles is kicking coal, but it isn't easy. This labor-enviro coalition is helping low-income Angelenos make the transition—through energy efficiency and jobs.

ALSO IN THIS ISSUE



Home > International > International Energy Statistics

International Energy Statistics

Petroleum Natural Gas **Coal** Electricity Renewables Total Energy Indicators Country

All Flows | Production | Consumption | Reserves | Imports | Exports | Carbon Dioxide Emissions | Heat Content

Country: All Countries by Region

Start Year: 2008 End Year: 2012

UPDATE

Product: Total Coal

Unit: Thousand Short Tons

Total Coal Exports (Thousand Short Tons)

[Units Conversion](#) [Download Excel](#)

	2008	2009	2010	2011	2012
North America	119,974	92,187	120,105	145,806	165,788
Bermuda	0	0	0	0	0
Canada	36,485	31,777	36,920	37,568	38,830
Greenland	0	0	0	0	0
Mexico	11	6	7	10	238
Saint Pierre and Miquelon	0	0	0	0	0
United States	83,478	60,404	83,178	108,229	126,720
Central & South America	80,983	77,869	79,889	91,697	95,486
Antarctica	0	0	0	0	0
Antigua and Barbuda	0	0	0	0	0
Argentina	111	115	74	95	99

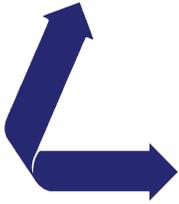
Note: Import and export data for natural gas in BTUs is currently unavailable as we improve our methodology for this calculation. We will repost the data once this effort is complete.

Related Information:

- [Table Notes](#)
- [Sources](#)
- [Glossary](#)
- [Contacts](#)
- [Country](#)

Footnotes:

-- = Not applicable
 (s) = Value is too small for the number of decimal places shown
 NA = Not available
 W = Data withheld to avoid disclosure



LANIER & ASSOCIATES
CONSULTING ENGINEERS, INC.

October 25, 2015

Ms. Nicole Dandurand
Office of Coastal Management
Department of Natural Resources
State of Louisiana
PO Box 44487
Baton Rouge, LA 70804

Re: RAM Terminals
Proposed Coal Export Facility
Response Letter
Application No. P20120190
L&A Job No. 8733-2

Dear Ms. Dandurand:

On behalf of our client, Ram Terminals, LLC (RAM), we are hereby submitting to your office this letter in response to your office's request letter dated September 25, 2015. Specifically, this letter provides additional information on the most recent trends in coal production and export in the United States, the potential for importing and exporting additional commodities at the facility, further explanation of the potential use of rail at the facility, and additional comments regarding the interaction between our facility and the proposed diversion canal.

Coal Market Trends

In response to the request for more current coal market trends, RAM is providing additional information supporting the increase in global use of coal. The global use of coal in developing countries, in particular, drives the investment decision to pursue additional terminal capacity. Investment decisions of this magnitude look at overall trends and discount temporary pricing swings. The long lead time to develop capacity only reinforces the need to begin such projects with sufficient time to have developed the project to completion prior to the extreme upswings in the market.

Additionally, the Energy Information Administration (EIA) depicts on their website the increasing coal exports from the United States. Exports of coal from the U.S. remain at historically high levels. We have attached a copy of the EIA report with this letter.

The Sierra Club aptly points out in the recent November/December 2014 issue of Sierra Magazine that Asian coal usage has “skyrocketed” over the past decade. This is the global seaborne market RAM seeks to address. We have attached a copy of that article written by Reed McManus which includes a graphic chart depicting the rise in international coal usage.

The arguments submitted to DNR regarding the domestic coal market are not only inaccurate but inapplicable to this project.

Potential Additional Commodities

In response to the comments regarding the possibility of moving additional commodities at the facility, RAM included the potential for additional commodities to provide flexibly in the operating model. Similar bulk facilities in Louisiana have moved such dry bulk commodities to supplement their business plans. This allows higher utilization of the facility in addition to maintaining employment when the primary commodities are in low demand.

As such, RAM has not identified a particular commodity that would be targeted, but RAM continues to seek throughput users in these additional commodities to supplement RAM’s business plans.

RAM would not begin moving any additional products without first covering them under their existing Air Quality Permit from the Louisiana Department of Environmental Quality. However, RAM believes any such commodities would almost certainly fit within its current Air Quality Permit and should not require additional permitting.

Use of Rail

In response to the request for more information on RAM’s use of rail, we feel that this issue has been adequately addressed in our previous submittals. The primary source of material coming into the facility will be by barge. However, RAM will use the existing rail service to bring commodities into the facility based on market conditions.

The active rail line on the RAM property is presently permitted and required, due to its common carrier status, to haul coal and other products to the RAM site. Train sets of similar length to the proposed product train sets are currently being operated on the RAM Terminals property. RAM is not requesting in this application to change any current rail conditions between New Orleans and its site but is merely going to accept train sets that are currently permitted to make their way to the site.

Diversions Canal

In regard to duplicative comments concerning the Mid Barataria Sediment Diversion (Diversion) and its potential to displace residents south of the structure, RAM supports the concerns of the residents of Ironton and Myrtle Grove that those communities will be cut-off from the northern parts of the parish if construction of the proposed canal commences.

RAM also fully agrees with the comments that the proposed facility will not have a net negative impact on any potential diversions efficacy. The study performed in 2012 by the Water Institute of the Gulf, which was cited in multiple comments, reveals how RAM essentially does not materially impact the effectiveness of the diversion project.

The study states that the proposed RAM marine facility could, in the worst case scenario, block approximately 49,000 tons of sand per year from entering the diversion. While this may sound significant, it would only equate to approximately 6.5 acres of restored wetlands when spread out 3' thick. If this scenario occurs, RAM has agreed to compensate the State up to \$1.95M per year. Based on current market value of dredged river sand, this payment could provide the State with approximately 300,000 tons of dredged sand per year which would equate to approximately 40 acres of restored wetlands each year.

Additionally, it should be noted that the accuracy of the modeling software used for the study indicates that any impact RAM may have is well within the margin of error of the study and therefore irrelevant.

As mentioned above, RAM, with a vested interest in protecting the coast in and around Plaquemines Parish, entered into a partnership with the Coastal Protection and Restoration Authority through a Memorandum of Understanding (MOU) which agreed, after significant research, to compensate the State for the facility's potential impact on the Diversion in spite of the report's indication that no such material impact will be noticed.

RAM's compensation will create up to 6 times more land every decade than if terminal was not built and the terms of the MOU were not initiated. With the MOU, not only are the benefits of the Diversion achieved, but they are significantly enhanced by RAM's over compensation for any potential impacts. RAM not only provides valuable jobs to the community, but the State's study and RAM's commitment to coastal restoration proves that RAM's operations significantly enhance the coastal restoration project.

Ms. Nicole Dandurand
October 25, 2015
Page 4

We respectfully request a review and determination of this response letter be made so that your office may continue the processing of our permit application. Please feel free to call if there is anything we can do to help expedite the review process. We will be glad to provide any additional information or meet with DNR at your request.

Very truly yours,

LANIER AND ASSOCIATES
CONSULTING ENGINEERS, INC.

N. Price Lanier

cc: Charlie Wesley (RAM)

Table 4. U.S. Coal Exports and Imports, 2009 - 2015

(thousand short tons)

Year	January - March		April - June		July - September		October - December		Total	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
2009	13,335	6,325	12,951	5,426	15,159	5,441	17,653	5,447	59,097	22,639
2010	17,807	4,803	21,965	5,058	21,074	4,680	20,870	4,811	81,716	19,353
2011	26,617	3,381	26,987	3,419	25,976	3,588	27,679	2,700	107,259	13,088
2012	28,642	2,022	37,534	2,329	31,563	2,415	28,006	2,394	125,746	9,159
2013	31,835	1,429	29,427	2,756	28,589	2,398	27,809	2,323	117,659	8,906
2014	27,584	2,450	24,674	3,574	22,723	3,151	22,276	2,174	97,257	11,350
2015	21,979	3,009	19,766	2,640	-	-	-	-	41,745	5,649

-- No data reported.

Note: Total may not equal sum of components because of independent rounding.

Source: Exports: U.S. Department of Commerce, Bureau of the Census, 'Monthly Report EM 545;' and Imports: U.S. Department of Commerce, Bureau of the Census, 'Monthly Report IM 145.'

Attachment C

Monica Dandurand

From: Monica Dandurand
Sent: Friday, March 13, 2015 12:36 PM
To: Price, John C MVN (John.C.Price@usace.army.mil)
Cc: 'PRICELANIER@HOTMAIL.COM'; 'Martin.s.mayer@usace.army.mil'
Subject: P20120190 Amended
Attachments: P20120190_Amended_RFI_3_13_2015.pdf

Good afternoon Price, attached please find a copy of the latest request for info sent out for RAM terminals, with a mailed copy to follow. If you have any questions, please feel free to contact me.

Nicole Dandurand
Permit Coordinator, Western Section
Office of Coastal Management

225-342-1076

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BOBBY JINDAL
GOVERNOR



STEPHEN CHUSTZ
INTERIM SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

March 13, 2015

Lanier & Associates Engineers
4101 Magazine St.
New Orleans, LA 70115
Attn: Price Lanier

RE: P20120190 (Amended), Coastal Use Permit Application
RAM Terminals, LLC

Description: Proposed installation of a coal export facility. Docking facilities will be installed along with a total of 34 dolphins for barge fleetings adjacent to the site. Work occurring behind the levee and on the batture will include installation of a rail loop, retention ponds and placement of fill: 128,000 cy of excavated native material, 700,000 cy of hauled-in soil, 14,000 cy of rock and 15 cy of concrete.

Amendment: Modifications to the location and dimensions of proposed pond, changes to rail loop and dimensions of coal stacks.

Location: 16111 Hwy 23 Myrtle Grove, 70037; Lat. 29° 40' 02"N, Long. -89° 57' 50"W.

Plaquemines Parish, LA

Dear Mr. Lanier:

On December 23, 2014, the 25th Judicial District Court rendered judgement necessitating the suspension of the above referenced Coastal Use Permit (CUP) issued to RAM Terminals, LLC (RAM) pending additional review consistent with that judgement. In this regard, the Office of Coastal Management (OCM) requested details of site alternatives and products to be transported on February 2, 2015. OCM is in receipt of information submitted March 4, 2015 on behalf of RAM. Upon review of this submittal, OCM has determined that this submittal is insufficient.

Please provide an all-inclusive Category 3 alternatives assessment along with a complex justification analysis as outlined in the Industrial Development section of the Office of Coastal Management Needs, Alternatives, & Justification (NAJ) Guidelines (starting on page 18, found here: http://data.dnr.louisiana.gov/ABP-GIS/ABPstatusreport/NAJ_Combined_Document_5_10_2013.pdf)

Though some of the requested information may have been previously submitted, please provide a single, comprehensive document to meet the NAJ request. In

Post Office Box 44487 • Baton Rouge, Louisiana 70804-4487
617 North Third Street • 10th Floor • Suite 1078 • Baton Rouge, Louisiana 70802
(225) 342-7591 • Fax (225) 342-9439 • <http://www.dnr.louisiana.gov>

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P20120190 (Amended), Coastal Use Permit Application
RAM Terminals, LLC
March 13, 2015
Page 2

addition, please describe the methods and procedures used to limit coal spillage into the Mississippi River and surrounding coastal areas. Please provide specifications for all related equipment used in loading and unloading vessels with an explanation of how it will be designed and/or operated to minimize spillage. Provide a contingency plan for containment and removal of coal spillage in the Mississippi River. Also, please provide the contingency plans for securing coal piles, barges and equipment during storm and/or other weather events. Include a timeline for when response activities are expected to occur and the conditions under which the contingency plan will be employed.

This information is being requested pursuant to the Louisiana Administrative Code, Title 43, Part I, Chapter 7, § 723.c.7 and must be submitted within 30 days of the date of this letter. In accordance with the Rules and Procedures for Coastal Use Permits, Part III G(1), we will resume processing your application when the above information is received. Further information may be required based on your answers to the above questions or to questions which may arise during processing.

Please refer to the above Coastal Use Permit number when responding to this request. If you have any subsequent questions, call me at (225) 342-1076.

Sincerely,



Nicole Dandurand
Permit Analyst

nd

cc: Martin Mayer, COE
David Cobb, RAM Terminals, LLC

Attachment D

Michael Vice

From: Monica Dandurand
Sent: Friday, August 30, 2013 12:41 PM
To: Michael Vice
Subject: FW: RAM Terminal
Attachments: Mid-Barataria Sediment Diversion (BA-153) - RAM MOA.PDF

Hi Mike, can you please compile this e-mail and PDF document and add to the comments section of P20120190?

Nicole Dandurand
Permit Analyst
Office of Coastal Management

225-342-1076

Please consider the environment before printing this e-mail

-----Original Message-----

From: Karl Morgan
Sent: Friday, August 30, 2013 12:33 PM
To: Monica Dandurand
Subject: FW: RAM Terminal

For the file

-----Original Message-----

From: Jerome Zeringue
Sent: Friday, August 30, 2013 11:42 AM
To: Karl Morgan
Cc: Keith Lovell; Matthew Nowlin; Clifton Bingham
Subject: FW: RAM Terminal

Karl,

As a follow up to my June 24 email below, CPRA has entered into a Memorandum of Agreement (copy attached) that addresses those concerns initially raised by CPRA regarding the potential impact of the RAM Terminal operations on CPRA's planned Mid-Barataria Sediment Diversion project, and compliance with the 2012 Louisiana's Comprehensive Master Plan for a Sustainable Coast. Subject to RAM's compliance with those criteria, requirements and stipulations raised in RAM Terminal permit P20120190 and/or the MOA, CPRA does not have any continued objection to DNR CMD processing or moving forward on Ram Terminal permit P20120190.

Please let me know if you need any additional information to continue the permit process.

Thank you,

Jerome Zeringue

----- Original Message -----

From: Karl Morgan

Sent: Thursday, August 08, 2013 04:20 PM
To: Jerome Zeringue
Cc: Keith Lovell; Monica Dandurand
Subject: RE: RAM Terminal

Jerome,

I will be in touch to discuss the agreement. Once we talk, I will get you to confirm that CPRA has no further objection to the project.

Thanks

Karl

-----Original Message-----

From: Jerome Zeringue
Sent: Monday, June 24, 2013 5:38 PM
To: Karl Morgan
Cc: Keith Lovell
Subject: RAM Terminal

Hello Karl,

We have developed an agreement that will address concerns that were raised in regard to the permit for the planned RAM terminal facility. We are ready to discuss with you our proposal so that the RAM terminal permit can proceed.

Please let me know if you need any additional information to continue the permit process.

Thank you

Jerome Zeringue
CPRA

MEMORANDUM OF AGREEMENT

between

State of Louisiana

and

RAM Terminals, LLC

Regarding

Operation of the Mid Barataria Sediment Diversion and RAM Terminal Project

This Memorandum of Agreement (hereinafter the “MOA”) provides procedures and guidance as to the implementation of conditions included in Coastal Use Permit No. P20120190 (hereinafter “Permit No. P20120190”) relating to the Mid Barataria Sediment Diversion (hereinafter the “MBSD”) and the RAM Terminal Project (hereinafter the “RAM TERMINAL”) at Myrtle Grove, Louisiana in Plaquemines Parish is entered into by and between the following parties: (1) the State of Louisiana through the Coastal Protection and Restoration Authority (hereinafter “CPRA”) and (2) RAM Terminal LLC (hereinafter “RAM”). The alignment of the MBSD and the location of the RAM TERMINAL are shown on Exhibit A. This MOA will become effective as of the date of the signature of the last party to sign. Based on the current design schedule of the MBSD, a detailed comprehensive operational and implementation plan will be developed by CPRA and its contractors once the design of the MBSD is completed. When the comprehensive operational and implementation plan is finalized, due to the complexity of the structure design and changing conditions in the Mississippi River, this MOA may need to be modified.

BACKGROUND AND OBJECTIVES

The initial concept of the MBSD, at River Mile Above Head of Passes (“RM AHP”) 60.2, began in the Coastal Wetlands Planning, Protection and Restoration Act (hereinafter the “CWPPRA”) program (Project Priority List 10 – January 2001). When it became apparent that such a project was beyond the budget and scope of the CWPPRA Program, it was deauthorized by the United States. The MBSD concept was reintroduced in the November 2004 Louisiana Coastal Area (hereinafter the “LCA”) Report (Chiefs Report signed 31 January 2005), which is the basis of 2007 WRDA section 7006. The project was identified in the 2007 Louisiana State Master Plan and then again in the 2012 Louisiana State Master Plan. Anticipating the LCA Program, the state, with several non-governmental organizations (“NGOs”), initiated preliminary engineering and design. In October 2011, a report done by environmental NGOs documents that this work was done by the State independently of the LCA Program, in conjunction with other NGOs, and supports the screening down of both the LCA Myrtle Grove and the State Master

Plan Mid Barataria Project to its current location and alignment at RM AHP 60.7 as the most efficient sediment capture configuration on the Mississippi River.

Given the availability of riverine sediment and previous modeling work, CPRA moved forward with the engineering and design phase of the MBSD (as identified in *Louisiana's Comprehensive Master Plan for a Sustainable Coast, 2012* as Mid Barataria Diversion, Project No. 002.DI.03, within the first implementation period (2012 - 2031) for the southeast coast of Louisiana) independent of the LCA Program, in anticipation of receiving the funding to construct in the near future. The State of Louisiana intends to develop the MBSD on a portion of the property now owned by RAM. The MBSD includes the construction and operation of a diversion of 75,000 cfs and dedicated dredging and sediment transport for the purposes of land building, wetland protection, and coastal restoration.

On May 26, 2011, RAM acquired a 602 acre site on the lower Mississippi River at Mile Post 61 for the purpose of developing a bulk export terminal, increased fleeting operations and liquid hydrocarbon storage and transloading facilities, along with other ancillary industrial uses. The property includes 6535 feet of batture which is presently permitted and leased for fleeting activities. RAM intends to fully develop the property including the development of a mid-stream berthing facility near the RAM TERMINAL to provide additional export capacity. Because of CPRA's concerns that the RAM TERMINAL will affect the efficient and effective operation of the MBSD, Permit No. P20120190 identifies the conditions under which the RAM TERMINAL will operate. This MOA sets forth the mechanisms for the implementation of those conditions on the part of CPRA and RAM.

I. DEFINITIONS

A. Operating Period. The term "OPERATING PERIOD" means the days, beginning at 12:00 AM and ending at 11:59 PM (Central Standard Time), during which the MBSD is open, commencing after day 15 of the PEAK OPERATING PERIOD. RAM is not subject to the provisions in Section III during an OPERATING PERIOD and nothing in this MOA prevents RAM from mooring vessels and conducting normal operations during an OPERATING PERIOD. The length of the OPERATING PERIOD is not restricted.

B. Peak Operating Period. The term "PEAK OPERATING PERIOD" means the days beginning at 12:00 AM and ending at 11:59 PM (Central Standard Time), during which maximum sediment capture by the MBSD is expected. The PEAK OPERATING PERIOD is the time in calendar days commencing on the day the MBSD has been opened (12 hours after OPENING OF THE MBSD has commenced) and ending when the MBSD has been closed, or at commencement of the "OPERATING PERIOD" as defined in subsection A above, whichever occurs first. CPRA shall use its best efforts to ensure maximum sediment capture by the MBSD in as short of a time period as possible so as to minimize the length of the PEAK OPERATING PERIOD and, under no circumstances, shall the PEAK OPERATING PERIOD exceed fifteen consecutive calendar days. No more than five PEAK OPERATING PERIODS may occur within a calendar year. The beginning of a PEAK OPERATING PERIOD cannot be declared unless the Mississippi River flow rate is at or above 600,000 cubic feet per second (cfs) at the U.S. Geological Survey monitoring station at Baton Rouge, Louisiana (USGS site 07374000) and

only one PEAK OPERATING PERIOD may be declared for each 600,000 cfs Mississippi River event. CPRA shall provide notice to RAM, within twenty four hours, of any decision to modify the length of the PEAK OPERATING PERIOD.

C. Opening of the MBSD. The term “OPENING OF THE MBSD” refers to the time period that is required to open the MBSD. For purposes of this MOA, a twelve hour period is assumed, although this time period may change as the MBSD design progresses. CPRA shall timely notify RAM of any design changes that affect the time period to open the MBSD.

II. RESPONSIBILITIES

A. The State of Louisiana, Coastal Protection and Restoration Authority agrees to the following:

1. CPRA shall provide RAM with the following notice prior to the declaration of any PEAK OPERATING PERIOD.
 - a. CPRA (through the Water Institute or other sources) will monitor Mississippi River stage data available from various agencies. Based on an analysis of the Mississippi River stage data, CPRA will notify RAM (means of notification to be determined) that there is potential for a PEAK OPERATING PERIOD to occur at least seven days prior to any potential OPENING OF THE MBSD.
 - b. Upon the Mississippi River reaching a discharge of 600,000 cfs at Baton Rouge, Louisiana (USGS site 07374000), CPRA will provide notice to RAM (means of notification to be determined) that a PEAK OPERATING PERIOD is highly likely to be declared at least 60 hours prior to OPENING OF THE MBSD. CPRA will promptly notify RAM (means of notification to be determined) that the OPENING OF THE MBSD will commence (conditioned on whether discharge has reached 600,000 cfs at the USGS site 07374000). A PEAK OPERATING PERIOD will begin 12 hours following commencement of the OPENING OF THE MBSD.
2. In the event CPRA fails to provide RAM with any of the notices required by Paragraph 1, RAM shall not be required to implement the provisions in Subsection B until compliance with Paragraph 1 has been achieved.
3. During the OPERATING PERIOD, RAM may conduct normal operations and the MBSD may be opened or closed during this period. CPRA shall provide notice to RAM, within 24 hours, of any decision to end the OPERATING PERIOD.

B. RAM agrees to the following:

1. RAM shall not operate the RAM TERMINAL during the PEAK OPERATING PERIOD. In the event that RAM operates the RAM TERMINAL during the PEAK OPERATING PERIOD, RAM shall be subject to the provisions of Section III.

2. Nothing in this MOA shall be construed to prohibit CPRA from the OPENING OF THE MBSD for purposes other than for capturing maximum sediment through diversion, including but not limited to freshwater flow, normal maintenance, repair, replacement, rehabilitation, and/or during emergency conditions. Such OPENING OF THE MBSD shall not be construed to commence a PEAK OPERATING PERIOD or an OPERATING PERIOD and RAM may conduct normal operations during such time. CPRA agrees to notify RAM of any OPENING OF THE MBSD under this paragraph and RAM agrees to use its best efforts to minimize the effect RAM TERMINAL operations will have on the MBSD during such time.

III. PROVISIONS FOR RAM NONCOMPLIANCE WITH PEAK OPERATING PERIODS AND PAYMENT.

- A. Noncompliance Operation during a PEAK OPERATING PERIOD.** A ship berthed, or docked at any stage of the ship loading cycle; or within the operating zone, as shown on Exhibit A, during a PEAK OPERATING PERIOD that has been declared consistent with Subsection II.A, shall be considered a NONCOMPLIANCE OPERATION (hereinafter "NONCOMPLIANCE OPERATION") of the RAM TERMINAL by RAM. In the event of a NONCOMPLIANCE OPERATION of the RAM TERMINAL, RAM shall be subject to the provisions of Subsections B and C.
- B. Daily Rate of Sediment Lost during NONCOMPLIANCE OPERATION.** CPRA and RAM hereby establish by mutual agreement a dollar amount for NONCOMPLIANCE OPERATION of the RAM TERMINAL during a PEAK OPERATING PERIOD. The agreed upon dollar amount will be a lump sum daily payment if any of the criteria in Subsection A are met. No partial application of Subsection A will be discussed or agreed upon by CPRA. If a ship enters any stage of operation mentioned in Subsection A a daily payment of \$26,000 will be assessed to RAM.¹

¹ Daily payment of \$26,000 is based upon the estimated daily loss of sediment . Finer material may be lost as a result of RAM operations during a PEAK OPERATING PERIOD and/or OPERATING PERIOD and is not included in this calculation.

1. Consistent with the provisions of Section IV, CPRA, the Water Institute, or Other Sources, will monitor and model the hydrodynamic and sediment transport near Myrtle Grove, Louisiana in addition to the routine monitoring done in the Mississippi River as part of the goals and objectives of the MBSD.

2. Payment for NONCOMPLIANCE OPERATION of the RAM TERMINAL during a PEAK OPERATING PERIOD will be made into an account established by CPRA to exclusively receive NONCOMPLIANCE OPERATION funds from RAM. The RAM NONCOMPLIANCE OPERATION fund will first be used to mitigate the effects NONCOMPLIANCE OPERATION of the RAM TERMINAL has on the Barataria Basin, including land building, wetland protection and restoration. The RAM NONCOMPLIANCE OPERATION fund may then be used to construct restoration projects or as a means to increase acreages of other restoration projects that have employed the use of a dredge in the Mississippi River.

C. Maximum Payment. In any calendar year, RAM shall not be liable for more than \$1,950,000 in payments under Subsection B into the RAM NONCOMPLIANCE OPERATION fund.

D. Adjustments to Sediment Payment.

1. CPRA and RAM shall meet 2 years after the State of Louisiana accepts and declares that the MBSD is complete (and every 5 years thereafter) to jointly review the data gathered under Section IV.

2. Based on the data gathered under Section IV, the sediment payment schedule set forth in Subsection B may be modified to reflect the actual impacts of RAM TERMINAL on the operation of the MBSD. Such modification shall not result in a difference greater than twenty percent (20%) more or less of the original payment schedule set forth in Subsection B.

3. Based on the modification under Paragraph 2, CPRA and RAM may modify the NONCOMPLIANCE OPERATION daily payment, including costs, imposed under Subsection B and the NONCOMPLIANCE OPERATION maximum annual payment imposed under Subsection C. Such modifications shall not be twenty percent (20%) more or less than the amount initially agreed to under Subsections B and C.

IV. MONITORING AND MODELING.

A. Pre-MBSD Construction. Within 60 days of the effective date of this MOA, CPRA and RAM shall agree to a protocol pursuant to which CPRA, the Water Institute or Other Sources will monitor and model the hydrodynamic and sediment transport near Myrtle Grove, Louisiana.

B. Post-MBSD Construction. Within 60 days of completion of the MBSD and prior to the opening of the MBSD, CPRA and RAM shall agree to a protocol pursuant to which CPRA, the Water Institute, or Other Sources will monitor hydrodynamic and sediment transport near Myrtle Grove, Louisiana. Such protocol shall reflect the data gathered under Subsection A.

C. Data Sharing. All data collected by CPRA, the Water Institute or Other Sources pursuant to the protocols established under Subsections A and B shall be shared with RAM within 30 days of collection.

V. MODIFICATION AND TERMINATION.

A. Modification. This MOA may be modified only by a written instrument executed by CPRA and RAM.

B. Termination. This MOA will terminate:

1. Fifty years after the acceptance of completion of the MBSD is declared by the State of Louisiana, unless extended or terminated by mutual written agreement of the parties; or
2. Ten years after the effective date of this MOA if the State of Louisiana has not begun to operate the MBSD; whichever is longer.

VI. POINTS OF CONTACT.

The parties designate the following persons to be their official contact in relation to this MOA. Any party may change its contact person upon written notice to the other party. Any notice, request, demand, or other communication required or permitted to be given under this MOA shall be deemed to have been duly given, if in writing and delivered personally or sent by registered or certified mail as follows:

A. CPRA.

Jerome Zeringue
Executive Director
Coastal Protection and Restoration Authority
P.O. Box 44027
Baton Rouge, LA 70804-4027
(225) 342-4683

B. RAM.

General Manager
RAM TERMINAL LLC
7733 Forsyth Blvd., Suite 1625
St. Louis, MO 63105
(314) 721-8202

VII. GENERAL PROVISIONS.

A. Merger. Notwithstanding any other terms or conditions contained in Permit No. P20120190, this MOA, together with any written modifications enter into pursuant hereto, contains all the terms and conditions agreed to by CPRA and RAM with respect to Permit No. P20120190.

B. No Third-Party Beneficiaries. Unless expressly identified herein, nothing in this MOA is intended or may be construed to grant any legally enforceable rights or provide any benefits to third parties.

C. Binding Effect. This MOA shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors, and assigns. The parties waive the defense of lack of consideration.

D. Disputes. CPRA and RAM agree that in the event of a dispute between them, they shall promptly use their best efforts to resolve the dispute in an informal fashion through communication and consultation, or other forms of non-binding alternative dispute resolution that are mutually acceptable; however, in the event any dispute cannot be resolved the terms and conditions of this MOA or any subsequent modification hereto shall remain in full force and effect. The Nineteenth Judicial District Court in and for the Parish of East Baton Rouge shall be the exclusive venue for any litigation arising out of this MOA.

E. Transfer. This MOA may be transferred by RAM in the event Permit No. P20120190 is transferred.

IN WITNESS WHEREOF, CPRA and RAM have executed this MOA on the date(s) set forth below:

RAM TERMINALS, LLC

STATE OF LOUISIANA
Coastal Protection and Restoration
Authority

BY: _____
_____, _____

BY:  _____
Jerome Zeringue, Executive Director

DATE: _____

DATE: 7/31/2013

WITNESSES:

WITNESSES:

Signature


Signature

Print Name

M. Jason Landis
Print Name

Signature


Signature

Print Name

Russ J. Joffrion
Print Name

STATE OF LOUISIANA

PARISH OF _____

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this ____ day of _____ 2013, personally came and appeared _____, or his assigned acting, _____, to me known, who declared that he is the _____ of RAM Terminals, LLC, that he executed the foregoing instrument on behalf of said entity and that the instrument was signed pursuant to the authority granted to him by said entity and that he acknowledged the instrument to be the free act and deed of said entity.

Signature

Print Name

Louisiana Notary Public / Bar Number

My commission expires: _____

(SEAL)

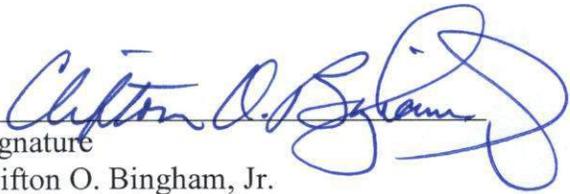
STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 31st day of July, 2013, personally came and appeared Jerome Zeringue, to me known, who declared that he is the Executive Director of the Coastal Protection and Restoration Authority, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.



OFFICIAL SEAL
Clifton O. Bingham, Jr.
BAR ROLL # 03052
STATE OF LOUISIANA
My Commission is for Life


Signature
Clifton O. Bingham, Jr.
General Counsel
Louisiana Bar Number 03052

My commission expires: with life

(SEAL)

Attachment E



To:

Copies:

Technical Memorandum

From:

Ehab Meselhe (The Water Institute)
John Richardson (ARCADIS)
Hugh Roberts (ARCADIS)
Randy Lagumbay (ARCADIS)

The Water Institute of the Gulf
301 N. Main St., Suite 2000
Baton Rouge, LA 70825

Date:

October 23, 2012

Project No.:

ARCADIS U.S., Inc.
4999 Pearl East Circle, Suite 200
Boulder, CO 80301

Subject:

RAM Terminal CFD Modeling Technical Memorandum

1. Introduction

This memorandum summarizes the results of Computational Fluid Dynamics (CFD) simulations used to analyze the transport of sediment to the proposed diversion channel at Myrtle Grove and to evaluate the flow patterns due to the proposed construction of the RAM terminal facility. To help with the analyses, numerical simulations of flow from River Mile (RM) 56.0 to RM 62.7 were carried out with the commercial CFD program known as **FLOW-3D** (www.flow3d.com). This program was previously used by The Water Institute to carry out hydrodynamics and sediment transport analysis in lower Mississippi near Myrtle Grove (Meselhe et al, 2011).

The results of the analyses described herein were used to evaluate the effect of the proposed construction of the RAM facility on the sediment transport to the proposed Myrtle Grove delta diversion.

2. Approach

A three dimensional CFD model of the proposed RAM terminal facility with vessels combined with river bathymetry and proposed diversion channel was used to analyze sediment transport and to evaluate flow patterns approaching the facility and the diversion channel. This model was constructed within the framework of the **FLOW-3D** software package and was based on previous work carried out by The Water Institute (Meselhe et al, 2011).

The primary objectives of this study are to examine potential changes to the flow patterns near the intake of the proposed diversion and in the vicinity of the proposed RAM facility, and to determine the potential impact on the amount of sediment (sediment/water ratio) transported to the proposed diversion channel due to the presence of the RAM terminal facility placed upstream of the diversion.

The following describes the model setup in **FLOW-3D**.

Geometry

The model was created using **Rhino** pre-processing software. The model included the river bathymetry, proposed diversion channel, RAM terminal facility, and barge and ship. The river bathymetry and diversion channel was obtained from the previous study (Meselhe et al, 2011). The river bathymetry extends from River Mile (RM) 56.0 to RM 62.7 (Figure 1). CAD drawings of the terminal facility and barge and ship were provided by Lanier & Associates Consulting Engineers, Inc. The drawings were used to create geometries of the terminal facility and barge and ship, and combined with the river bathymetry (Figure 2).

Boundary Conditions

For consistency reasons, the boundary conditions used in this analysis are the same as those used in the previous modeling effort. The boundary conditions used in this study are as follows:

- Solid boundaries including river bed, diversion channel, barge and ship were specified. Standard Wall functions were used to compute the shear stress at the no-slip boundary.
- The terminal structures were modeled as porous planes to emulate the effect of the piers on the water flow. Twelve porous planes (baffles in **FLOW-3D**) were used to model the structures (Figures 3 and 4). Porosity and loss coefficients of the baffles are summarized in Table 1.
- The water surface was modeled as a sharp, free surface allowing accurate representation of the water/air interface.

Mesh Generation

Creating an appropriate computational mesh is an important aspect of every numeric modeling. The flow field is discretized into a number of small elements (cells) for solving the governing equations of fluid flow. The cell size must be small enough to capture the flow features of interest. In this study, the computational mesh used in the simulation is the same from the previous model to be consistent with the

analyses. Additional refinements to the mesh near the RAM facility and the intake of the proposed diversions were made. These refinements (horizontal grid spacing reduced from 15 meter to 2.5 meters) were made to enhance the ability to capture the details of the flow field.

3. Simulations

Several simulations were carried out in this study - all for a 700,000 cfs river flow. A description of these runs is provided below:

- Run #1 – Baseline condition. The model included only the river bathymetry and the proposed diversion channel (no facility, no barge and no ship).
- Run #2 – The model included the river bathymetry, proposed diversion channel, loading barge, and ship at - 40 feet draft (no facility).
- Run #3 – The model included the river bathymetry, proposed diversion channel, loading barge, ship at - 40 feet draft, and the terminal facility.
- Run #4 – The model included the river bathymetry, proposed diversion channel, loading barge, ship at - 9 feet draft, and the terminal facility.
- Run #5 – The model included the river bathymetry, proposed diversion channel, loading barge, ship at - 40 feet draft, terminal facility, and a guide vane at the entrance of the diversion.
- Run #6 – The model included the river bathymetry, proposed diversion channel, loading barge, and the terminal facility (no ship and no guide vane).

4. Results

Simulation results are presented both qualitatively and quantitatively. Qualitative results, appearing in Figures 5 through 16, show the trajectory of streamlines and velocity contours in the vicinity of the facility and entrance of the diversion channel. Streamlines were back calculated from the diversion channel to show where water entering the diversion came from. Velocity contours were used to show flow separation behind the ship.

Figures 5, 6, 7, 8, 9, and 10 show streamlines entering the diversion from different heights in the water column for Run #'s 1, 2, 3, 4, 5 and 6; respectively.

Figures 11, 12, 13, 14, 15, and 16 show velocity contours at elevation 4.1 feet (NAVD88) for Run #'s 1, 2, 3, 4, 5 and 6; respectively.

Sediments were represented by five different sizes of particles (32 microns, 63 microns, 96 microns, 125 microns, and 250 microns). Figure 17 shows the distribution of particles for Run #3 as an example. Particles were released upstream of the facility after obtaining a converged solution of flow fields.

Quantitative results of the sediment analysis are summarized in Table 2.

5. Closing Remarks and Preliminary Conclusions

The analysis presented in this letter-report provides a summary of the 8-week modeling effort performed to assess the potential impact of the RAM facility on the flow field in the vicinity of the facility and the intake of the proposed sediment diversion at Myrtle Grove, and on the efficiency of the proposed diversion to capture sediment from the main river channel.

The following are closing remarks and preliminary conclusions:

1. Figure 2 shows the presence and relative-size of the RAM facility near the intake of the proposed sediment diversion. Navigation concerns should be fully investigated to assess the potential impact on vessel traffic generated by the RAM facility with the presence of the cross-flow generated by the proposed Myrtle Grove sediment diversion. The investigation of navigational concerns was not part of the scope of the analysis presented here.
2. During the course of this analysis, it was indicated that barges would pass in front of the proposed diversion intake and park immediately downstream of the intake and along the right descending bank of the Mississippi River. Safety concerns for these vessels should be fully investigated due to the cross-flow generated by the proposed Myrtle Grove sediment diversion. Typically "ship-simulators" are used to address these safety concerns. The investigation of safety concerns was not part of the scope of the analysis presented here.
3. Figures 5 through 16 show the impact of the presence of the facility, barges and ship on the flow field near the intake of the proposed diversion. The difference in the flow pattern is visually detectable in these figures. These changes influence the location from which water is being drawn into the outfall channel and affect the water-sediment ratio.
4. Special emphasis should be placed on Run#1 and Run#3, representing the base case and the RAM facility presence. The Sediment-Water ratio was reduced by nearly 17%. A reduction in the sediment-water ration results in a loss of sand load diverted through the outfall channel. For an assumed pulse lasting 30 days per year, such a loss of sand load diverted through the outfall is summarized in Table 2. Nearly 500,000 tons of Sand will be lost in a decade due to the presence of the RAM facility. Despite the uncertainty present in any numerical model, the results of all the

simulations performed here showed persistent reduction of sediment load captured in the outfall channel due to the presence of the RAM facility. Additional simulations might narrow the range of variability stated in this comment, however the impact is likely to persist.

5. The streamlines shown in Figures 5 through 10 indicate that debris and dust generated during the loading process would be captured in the outfall channel and transported into the marsh areas potentially causing environmental issues. The investigation of water quality was not part of the scope of this analysis, but should be investigated to assess such environmental impact.
6. There is limited number of lateral bars in the Lower Mississippi River (downstream of River Mile 90 Above Head of Passes) and they are targeted as a resource to restore coastal Louisiana. Some of these bars are designated as a resource for the earthen sill needed during drought conditions. That further reduces the number of lateral bars available for coastal restoration. The existence of the RAM loading facility on top a lateral bar would severely limit the ability to harness the available sand directly through dredging or using other agitating techniques to increase the amount of sediment diverted toward the outfall channel.
7. The existence of the RAM loading facility upstream of the diversion intake may pose hazard to the foundation and pilings of the loading facility. Field measurements at West Bay shows several feet of erosion occurring upstream of a diversion.

6. References

Meselhe, E.A., Georgiou, I., and McCorquodale, J.A., "Myrtle Grove Delta Building Diversion Report", 2011.

5. Figures



Figure 1. Model Domain from RM 56.0 to RM 62.7

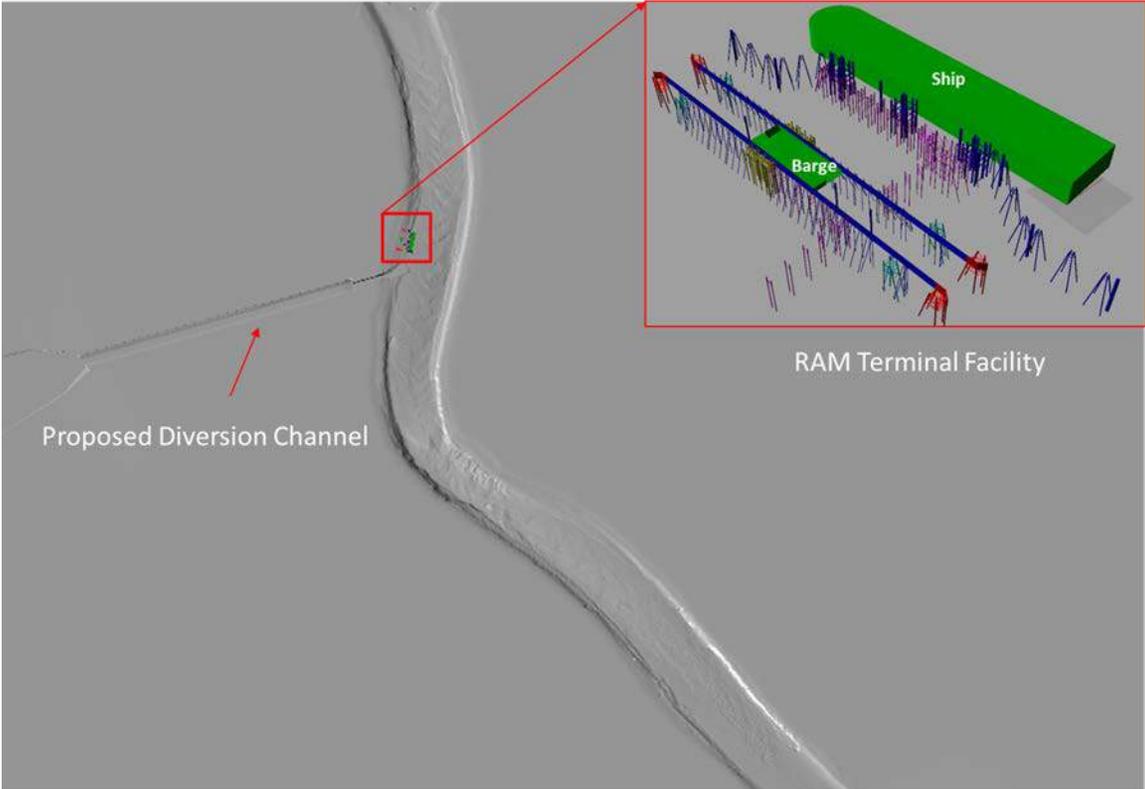


Figure 2. FLOW-3D Model of the RAM Terminal Facility Combined With the River Bathymetry and Proposed Diversion Channel.

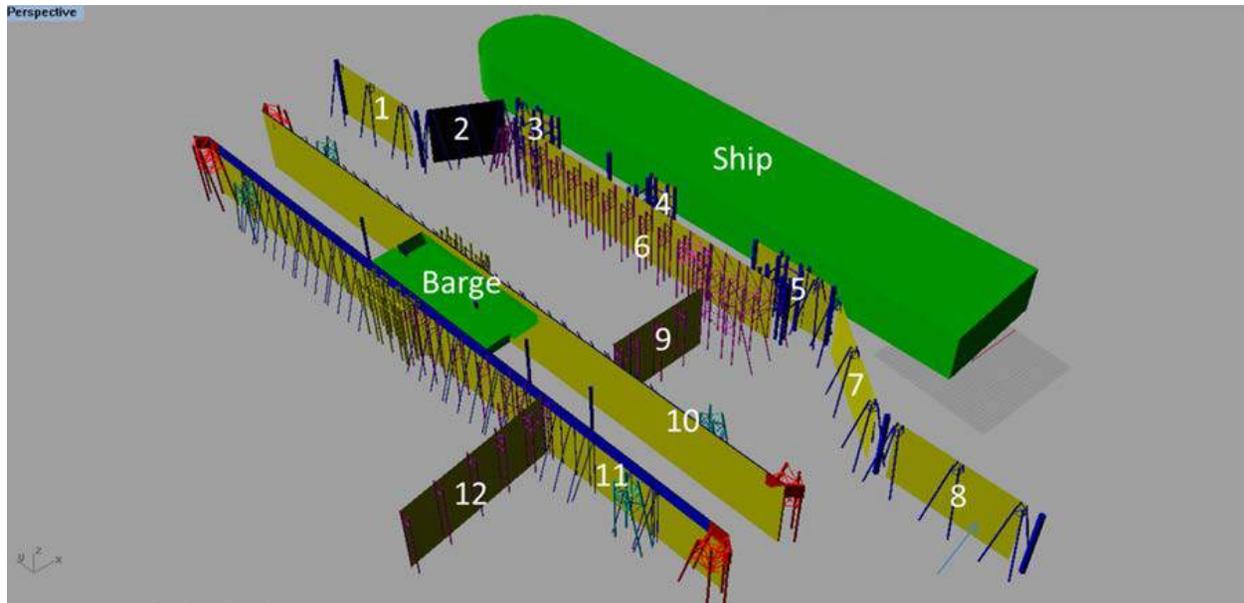


Figure 3. Twelve Porous Jump Planes (Baffles) Were Used To Model The Terminal Structures.

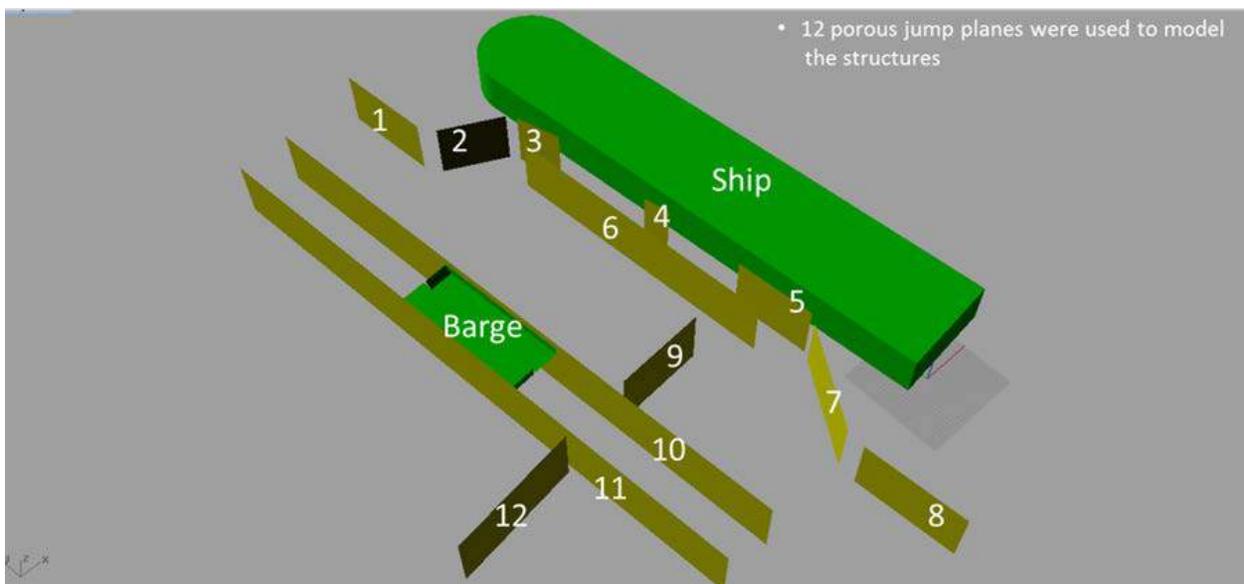


Figure 4. The Terminal Structures Were Replaced With Twelve Porous Jump Planes (Baffles).

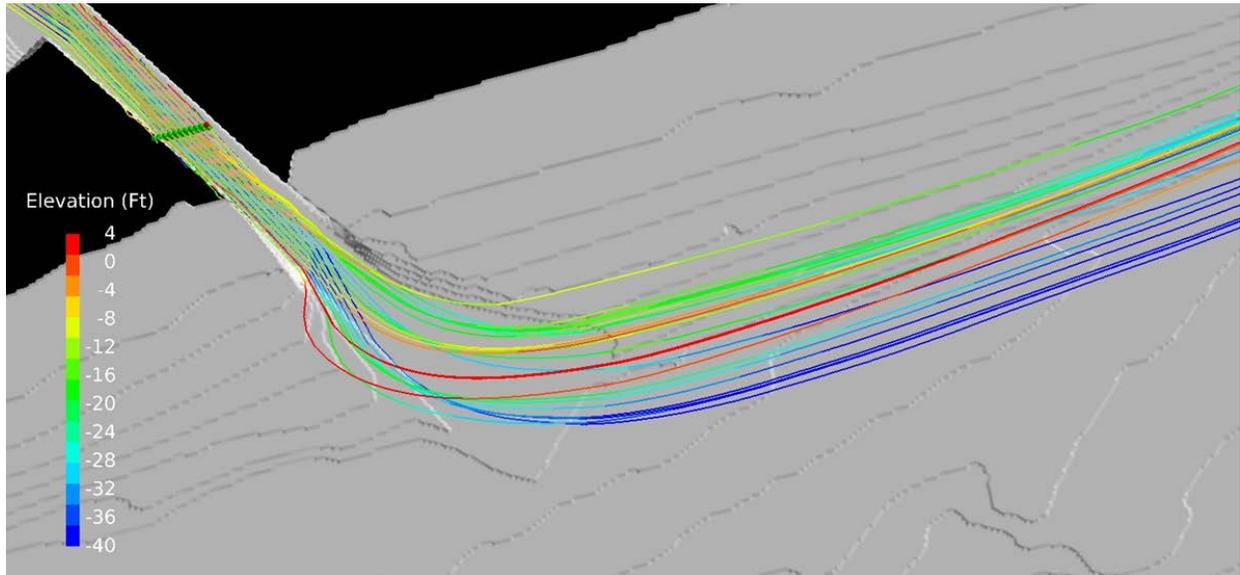


Figure 5. Run #1, Streamlines Back Calculated from the Diversion Channel.

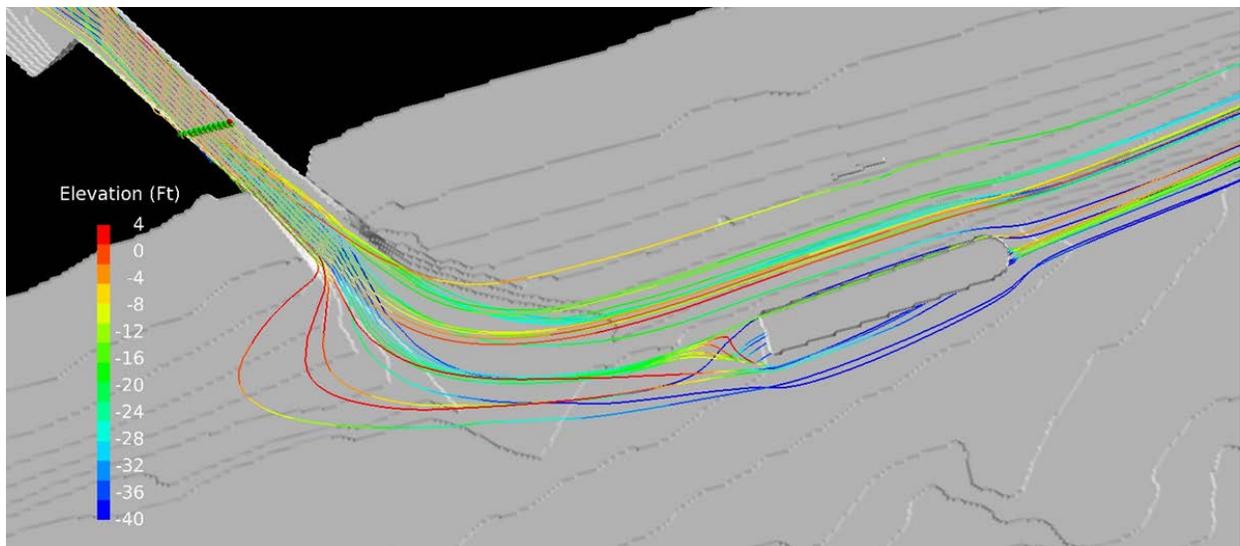


Figure 6. Run #2, Streamlines Back Calculated from the Diversion Channel.

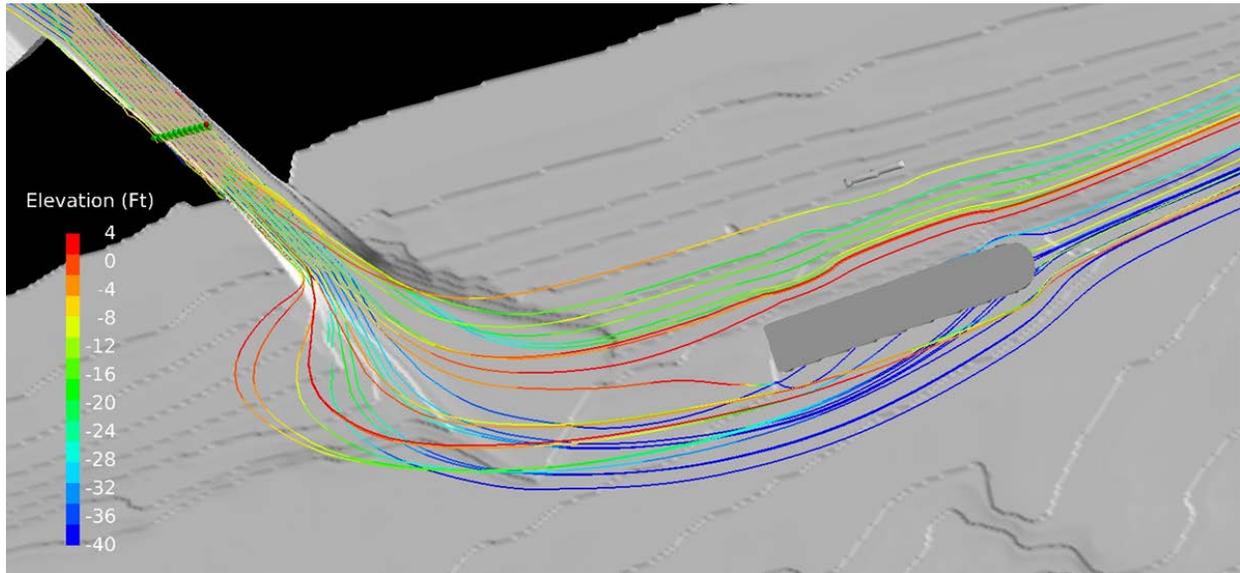


Figure 7. Run #3, Streamlines Back Calculated from the Diversion Channel.

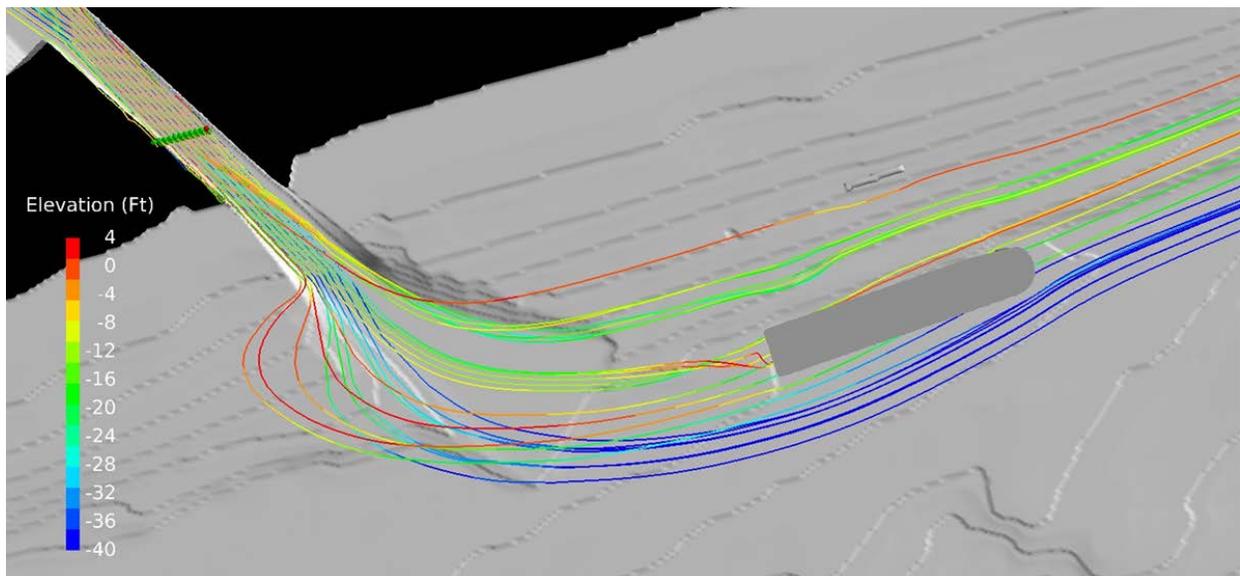


Figure 8. Run #4, Streamlines Back Calculated from the Diversion Channel.

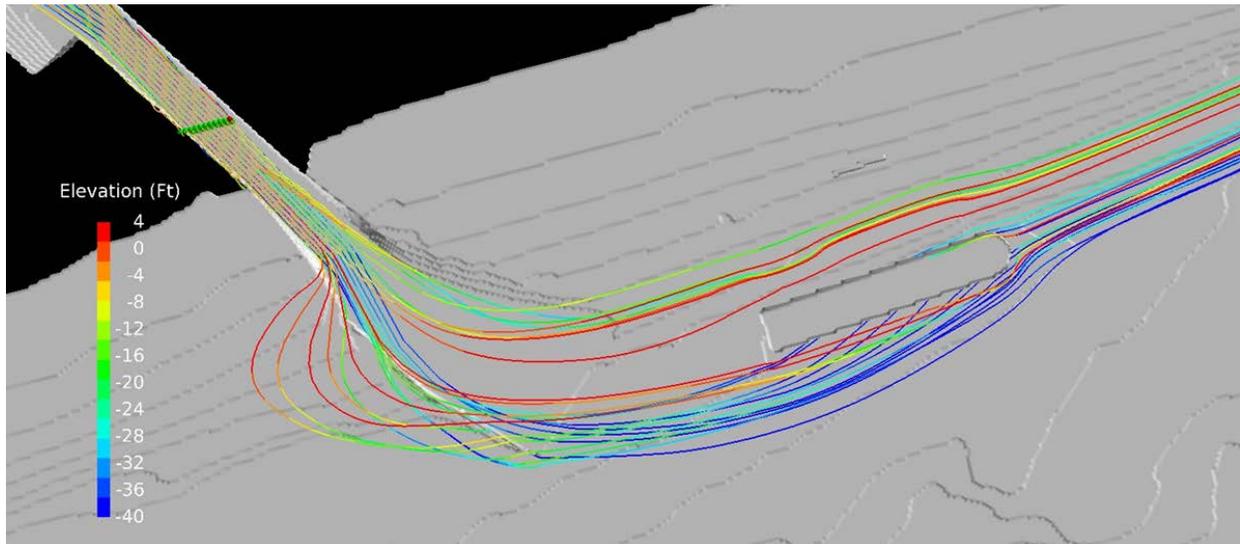


Figure 9. Run #5, Streamlines Back Calculated from the Diversion Channel.

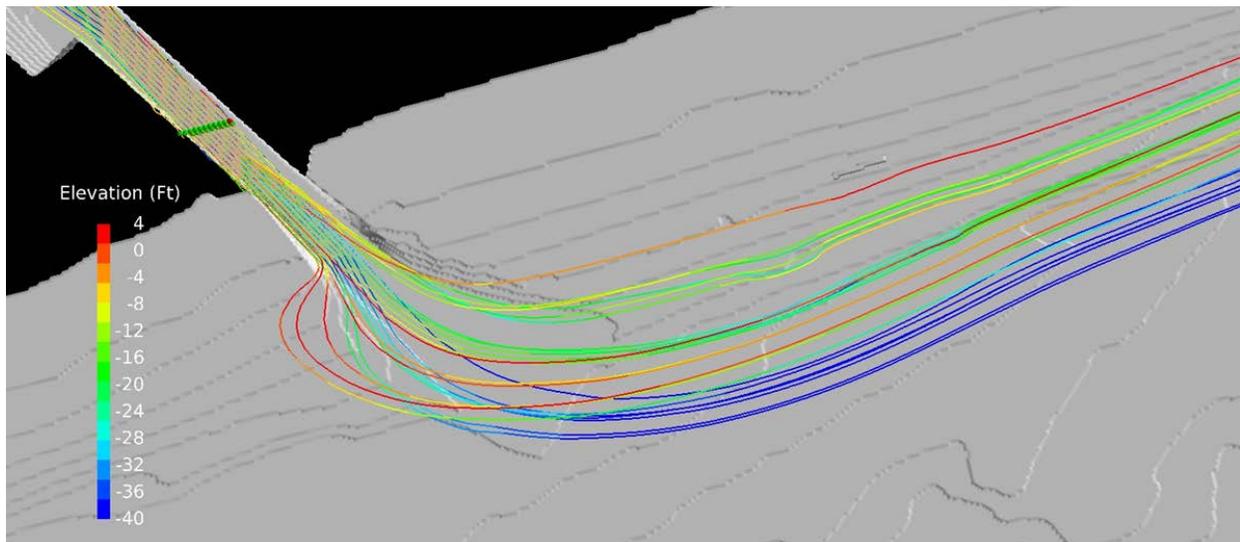


Figure 10. Run #6, Streamlines Back Calculated from the Diversion Channel.

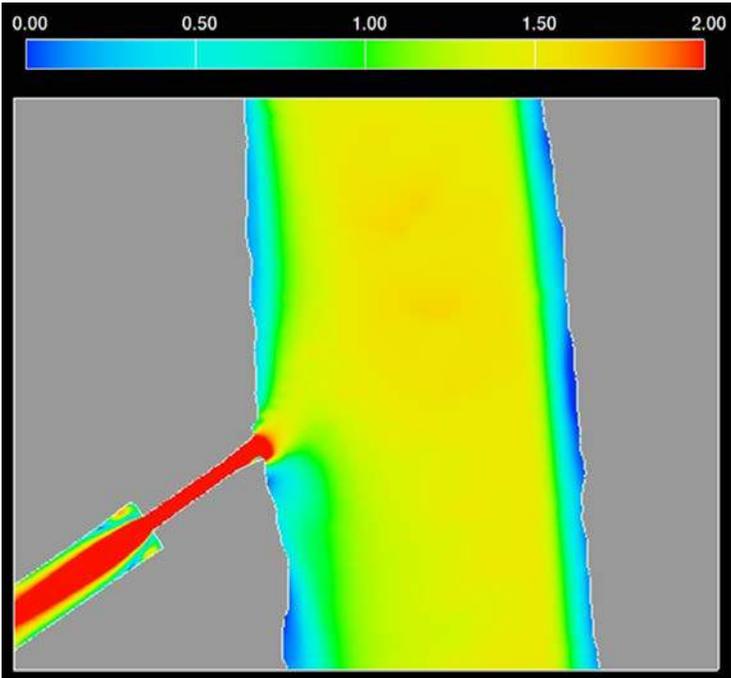


Figure 11. Run #1, Water Velocity at Elevation +4.1 Feet NAVD88.

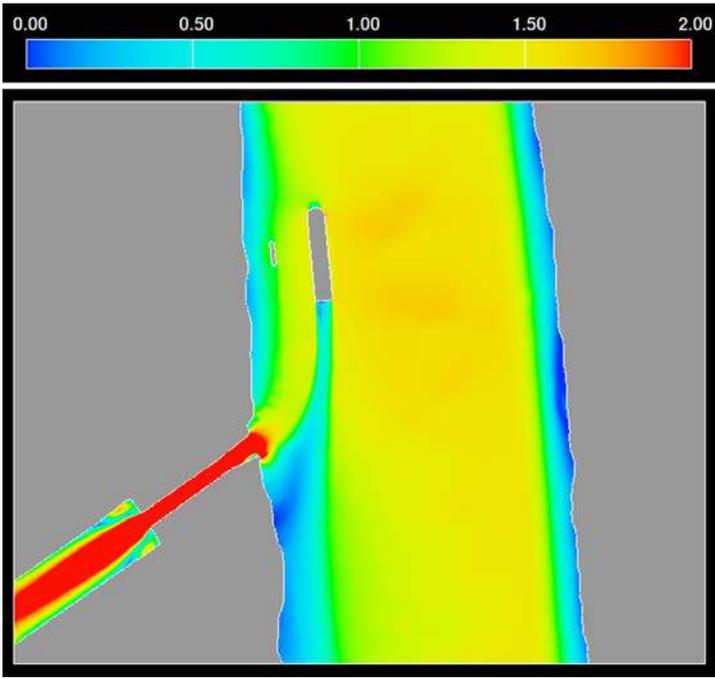


Figure 12. Run #2, Water Velocity at Elevation +4.1 Feet NAVD88.

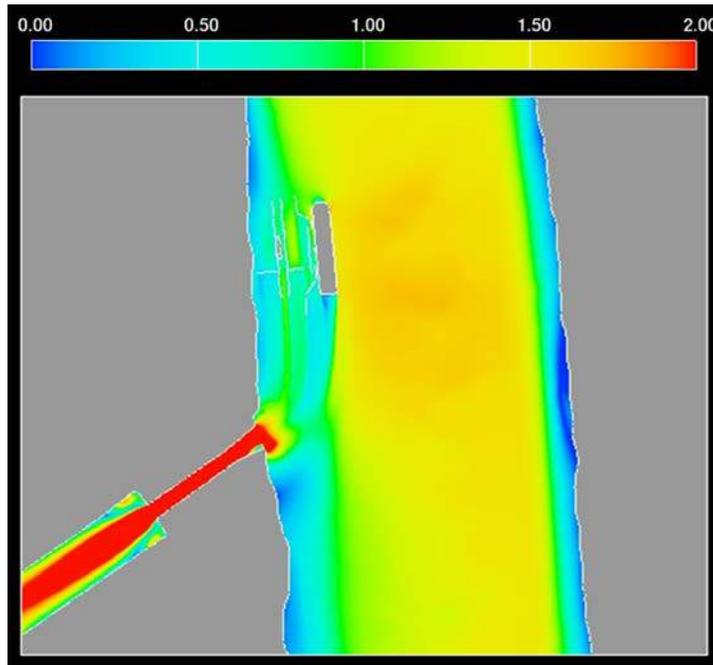


Figure 13. Run #3, Water Velocity at Elevation +4.1 Feet NAVD88.

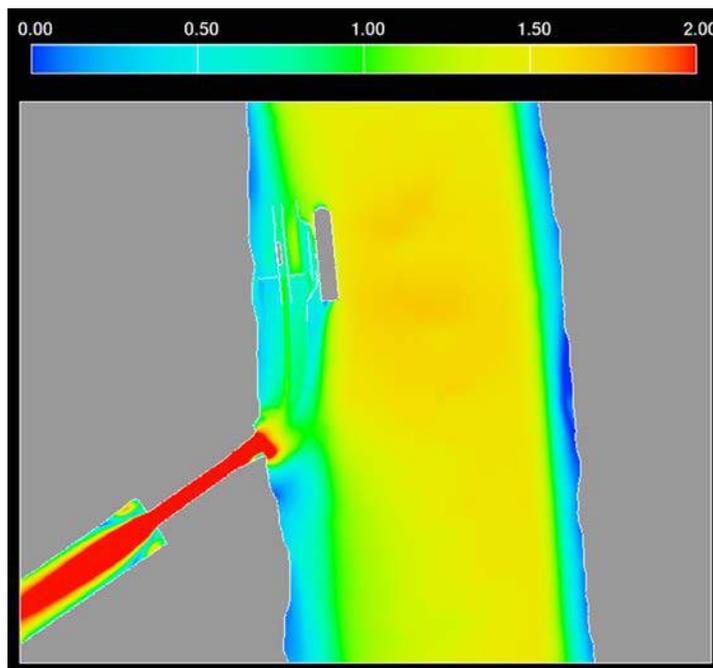


Figure 14. Run #4, Water Velocity at Elevation +4.1 Feet NAVD88.

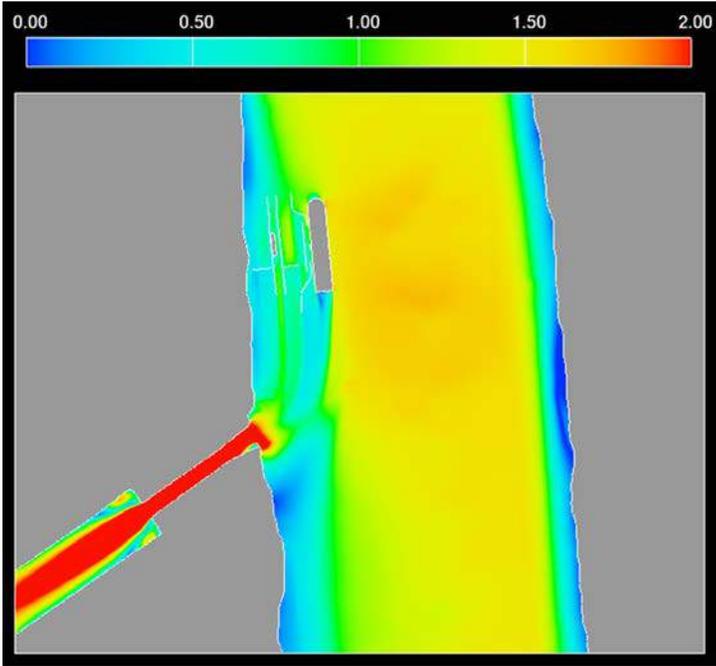


Figure 15. Run #5, Water Velocity at Elevation +4.1 Feet NAVD88.

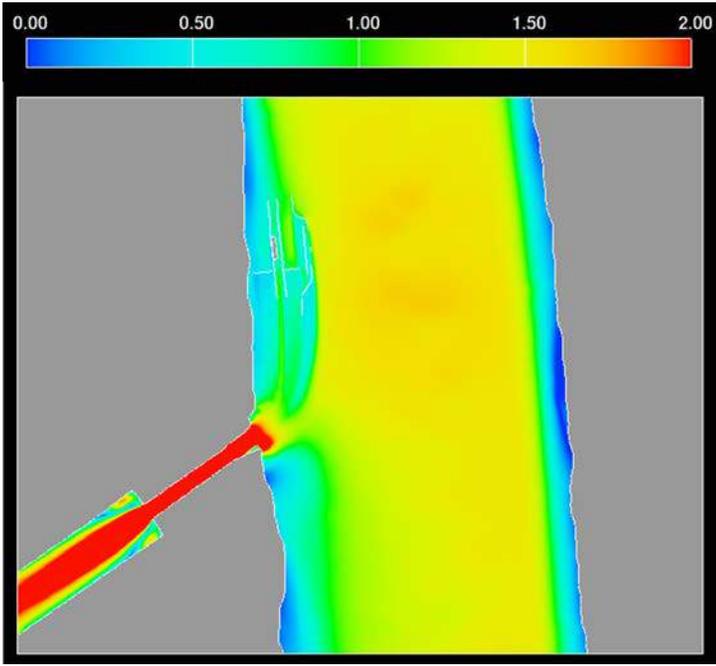


Figure 16. Run #6, Water Velocity at Elevation +4.1 Feet NAVD88.

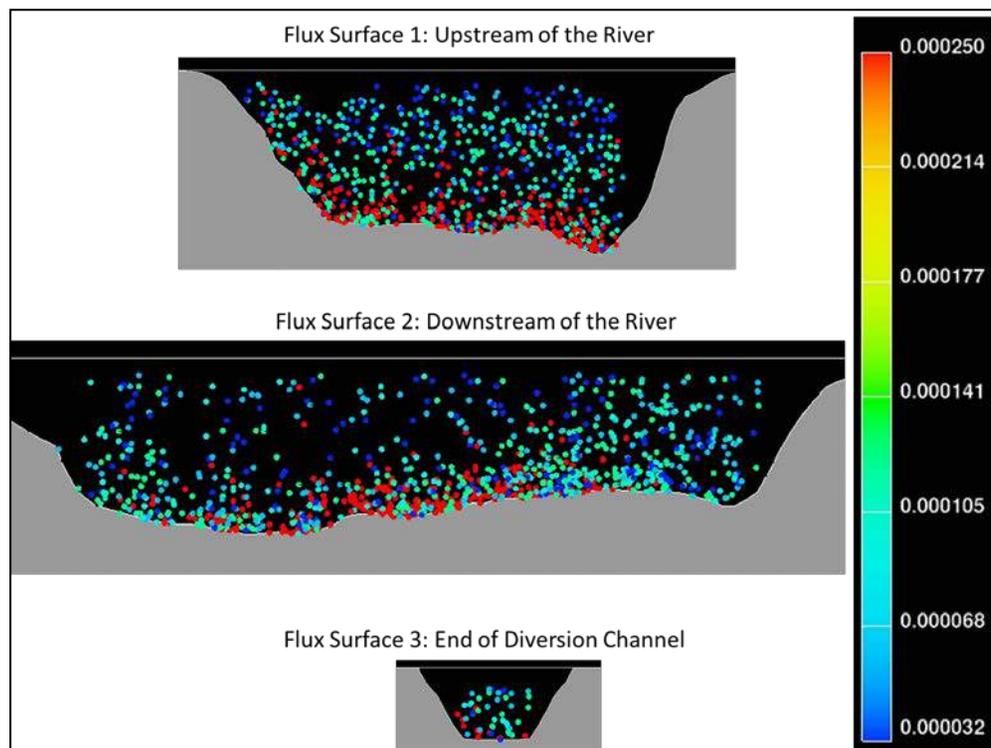
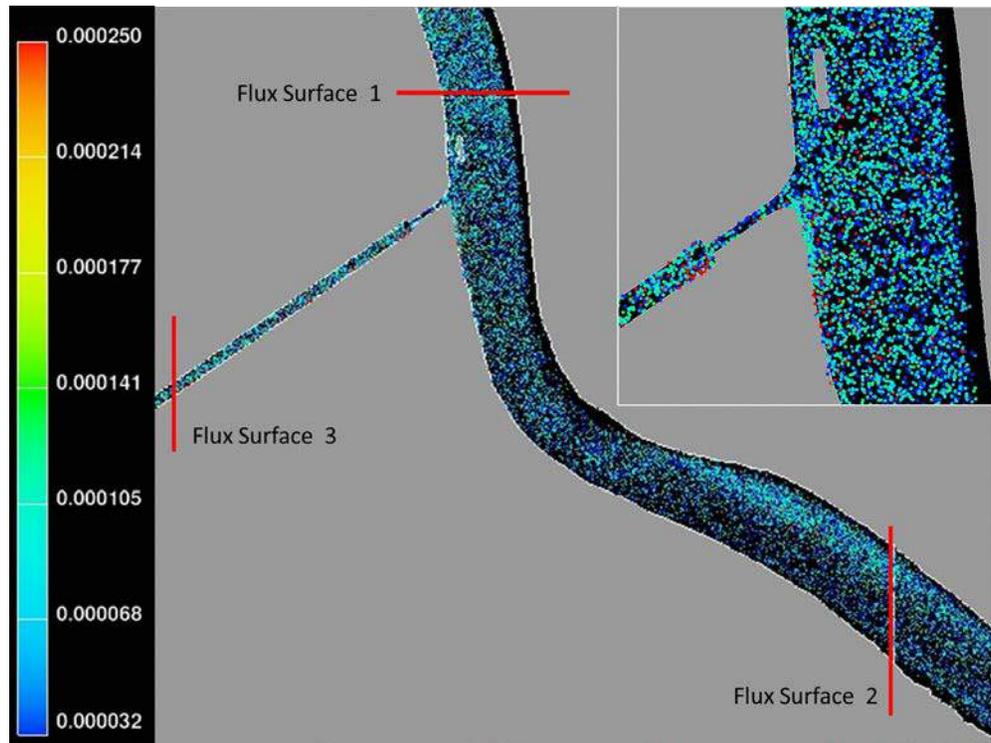


Figure 17. Run #3, Particles Distribution.

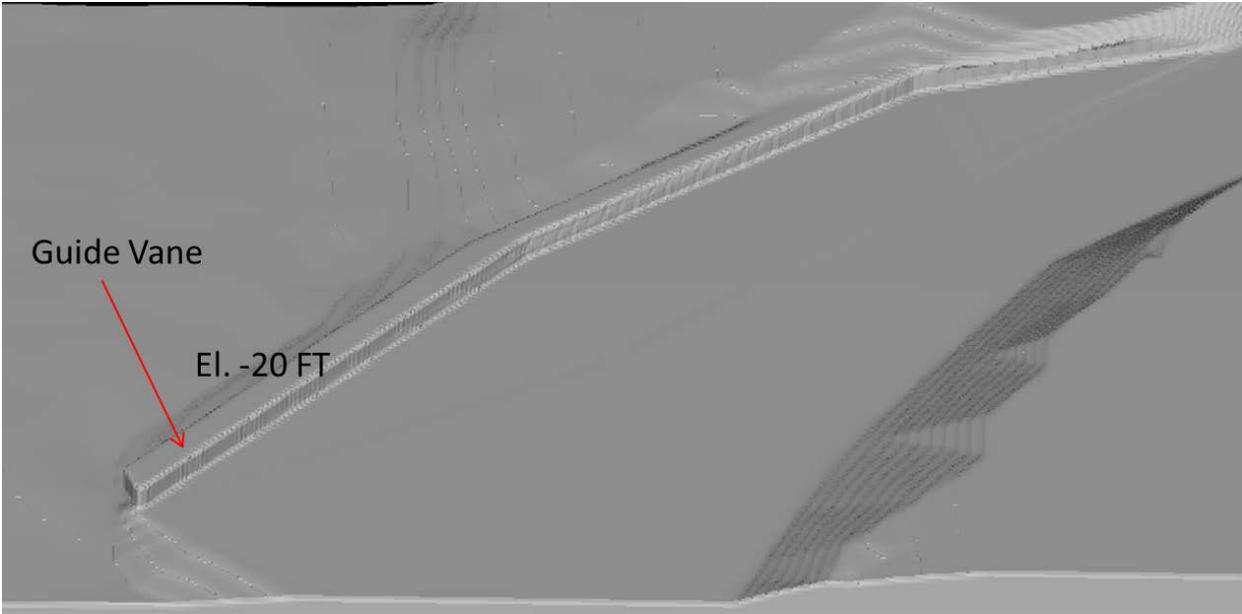


Figure 18. Proposed Guide Vane at the Entrance of the Diversion.

5. Tables

Table 1. Porous jump properties¹.

Porous Jump (Baffle in FLOW-3D)	Porosity	Linear Loss Coefficient ¹
1	0.95	0.78
2	0.95	0.78
3	0.95	0.78
4	0.95	0.78
5	0.95	0.78
6	0.95	0.78
7	0.95	0.78
8	0.95	0.78
9	0.95	0.78
10	0.95	0.78
11	0.95	0.78
12	0.95	0.78

¹ Blevins, Robert D., Applied Fluid Dynamics Handbook, Table 10-19, No. 23.

Table 2: Summary of Sediment Calculations

	Mississippi River	Run-No1 Base	Run-No2 Vessels Only	Run-No3 Vessels (loaded) & Facility	Run-No4 Vessels (empty) & Facility	Run-No5 Vessels (loaded) & Facility & Vane	Run-No6 Barges & Facility (no Ship)
Water Discharge (m3/s)	19,821	1,824	1,815	1,776	1,788	1,785	1,843
Water Discharge (CFS)	700,000	64,406	64,091	62,720	63,155	63,021	65,100
Sediment Load (metric tons/d) - 32 Micron							
	233,539	25,084	24,877	23,819	23,464	25,220	25,040
Sediment Load (metric tons/d) - 63 Micron							
	10,839	1,172	1,124	1,086	1,063	1,132	1,194
Sediment Load (metric tons/d) - 96 Micron							
	21,816	2,398	2,227	2,152	2,233	2,191	2,397
Sediment Load (metric tons/d) - 125 Micron							
	34,437	3,892	3,480	3,309	3,567	3,543	3,805
Sediment Load (metric tons/d) - 250 Micron							
	23,460	2,404	1,568	1,664	2,116	1,800	2,205
Total 63 - 250 Micron Load (metric ton/d)							
	90,554	9,867	8,398	8,211	8,979	8,667	9,601
Sediment/Water Ratio							
		1.184	1.013	1.012	1.099	1.063	1.140
Percent Reduction in Sediment/Water Ratio							
			15	17	9	12	3
Tons of Sand lost per day							
			1,469	1,656	888	1,200	266
Tons of Sand lost per year							
			44,056	49,687	26,631	36,009	7,969
Tons of Sand lost per decade							
			440,559	496,874	266,311	360,089	79,688

Attachment F



LANIER & ASSOCIATES
CONSULTING ENGINEERS, INC.

Excellence By Design. . . Since 1974

May 29, 2015

Ms. Nicole Dandurand
Office of Coastal Management
Department of Natural Resources
State of Louisiana
PO Box 44487
Baton Rouge, LA 70804

Re: RAM Terminals
Proposed Coal Export Facility
Response Letter
Application No. P20120190
L&A Job No. 8733-2

Dear Ms. Dandurand:

On behalf of our client, RAM Terminals, LLC, we are hereby submitting to your office this report, prepared by Providence Engineering and Environmental Group, LLC in response to your office's request letter dated March 13, 2015. Specifically, this report addresses the all-inclusive Category Three alternatives assessment along with a complex justification analysis based on the Industrial Development section of the Office of Coastal Management Needs, Alternatives & Justification Guidance Document. In addition, a coal spillage contingency plan has also been included for your review.

Very truly yours,

LANIER AND ASSOCIATES
CONSULTING ENGINEERS, INC.

N. Price Lanier

cc: Charlie Wesley (RAM)

RECEIVED
2015 JUN -1 PM 2:56
OFFICE OF COASTAL MANAGEMENT

MAY 2015

**LANIER & ASSOCIATES ENGINEERS
RAM TERMINALS, LLC
PLAQUEMINES PARISH, LOUISIANA**

**LOUISIANA
DEPARTMENT OF
NATURAL RESOURCES
OFFICE OF COASTAL
MANAGEMENT
P20120190**

**ALTERNATIVES AND
JUSTIFICATION
ANALYSIS**

Prepared By:

**Providence Engineering and
Environmental Group, LLC**

1201 Main Street

Baton Rouge, Louisiana 70802

(225) 766-7400

www.providenceeng.com

Project Numbers 1061-001



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3a-3e	Alternative Sites 3, 4 & 5
4a-4e	Current Project Site

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Attachment

A	Memorandum of Agreement: State of Louisiana and RAM Terminals, LLC
B	Jurisdictional Determination MVN 2011-02552-SY
C	United States Coal Exports: National And State Economic Contributions
D	U. S. Coal Supply & Demand: 2010 Year In Review
E	Global Thermal Coal: Long Term Market Trends
F	The Changing Role Of U.S. Energy Trade Report

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1.0 INTRODUCTION

1.1 Purpose and Scope

The purpose of this report is to address the Louisiana Department of Natural Resources Office of Coastal Management's (OCM's) request for an all-inclusive Category 3 alternatives assessment along with a complex justification analysis. This report summarizes the alternative sites investigated and the siting criteria used to ensure the site would meet the objective of the proposed project. In addition, responses to the Justification Analysis portion of OCM's guidance document are provided.

1.2 Background

In February 2012, Lanier & Associates Engineering (Lanier) on behalf of RAM Terminals, LLC (RAM) submitted a joint permit application to the Louisiana Department of Natural Resources Office of Coastal Management (OCM) and the New Orleans District of the U.S. Army Corps of Engineers (USACE) for the construction of a coal export facility in the Myrtle Grove area of Plaquemines Parish, Louisiana. On August 8, 2012, Lanier submitted an Alternatives/Justification Analysis discussing the need for the project and the alternative site analysis as well as the minimization efforts and point source pollution control. On August 20, 2013, OCM requested additional information regarding the need and alternative site analysis along with additional project details. On August 23, 2013, Lanier submitted responses to OCM's August 20th letter. Subsequently, Lanier submitted an additional response on August 29, 2013, with additional details of the site selection process. On August 30, 2013, OCM uploaded a Needs/Alternatives Review document into the permit file indicating that the information provided by the RAM/Lanier was adequate and that "the proposed site has been determined to be the most feasible site and includes only minimal direct impacts to coastal resources". The original permit was in turn issued in September 2013. A subsequent amendment to the proposed project was issued in September 2014. On January 16, 2015, Lanier was notified that the 25th Judicial District Court for the Parish of Plaquemines issued an order suspending the permit (amended). On February 2, 2015, OCM requested additional information regarding alternative sites and specific commodities for the facility. On March 4, 2015, Lanier submitted a response to that letter including information about competing facilities, existing rail transport and additional project details. On March 13, 2015, OCM requested an all-inclusive Category 3 assessment along with a complex justification analysis per the Industrial Development Section of the OCM Needs, Alternatives and Justification (NAJ) guidelines. In addition, OCM requested additional information regarding a contingency plan for spill(s) control.

1.3 Current Site Location

In 2011, RAM Terminals purchased a 600-acre site on the right descending bank of the Mississippi River at Mile Point 61 in the Myrtle Grove area in Plaquemines Parish, Louisiana. This site is directly adjacent to existing light/heavy industrial sites and is situated between LA 23 and the Mississippi River. The proposed project has been designed to minimize impacts to coastal resources and utilize only the northernmost 200 acres of the tract.

Access to the current site is via East Ravenna Road off LA 23. The site is centered approximately at Latitude 29.667293°N; Longitude 89.9694° in Sections 5, 6 & 7, Township 16 South, Range 25 East.

2.0 ALTERNATIVE SITES ANALYSIS

2.1 Guidance Document Questions

1. ***Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.***

Project Objective

The objective of the proposed project is to source coal primarily from the Illinois Basin and to a lesser extent from western and central coal producers with subsequent shipping to European and Asian markets. Marine transportation is the sole mode of transportation of U.S.-mined coal to foreign markets. In the U.S., the Mississippi and Ohio Rivers along with their tributaries are the main thoroughfares used to barge coal to the Gulf of Mexico then on to foreign markets. Selecting a site that has existing rail infrastructure and has access to the Lower Mississippi (and in turn the Gulf of Mexico) is imperative in meeting the objective of the proposed project.

Project Description and Proposed Features

To meet the stated project objective, RAM Terminals, LLC (RAM) proposes to construct an approximately 200-acre coal export facility on the Lower Mississippi River. Coal from the Illinois Basin and western/central producers will be transported from mines to the proposed facility via barge and rail car. Coal will be unloaded from barges using a Continuous Barge Unloader (CBU) with a barge haul system inshore of a new ship fixed loading dock and from rail cars using a railcar receiving station within a proposed rail loop. A proposed ship dock, consisting of 450-foot long docks with four, 4-pile breasting structures and four, 4-pile mooring structures will be constructed to offload the coal. In addition, a barge dock, including a continuous fendering supported barge haul system, multi-pile winch support structures, protection structures, and platforms supporting the CBU will be constructed. The ship and barge docks will be connected by a 530-foot pile-supported approach way to allow for vehicular access. The approach way will be accessed via a new levee crossing. Several barge fleeting structures, conveyor supports and small platforms will also be constructed as part of the marine portion of the project. The coal will be temporarily stored and blended on site then transferred from ground storage to ocean going vessels for transport to foreign markets to meet growing demand. The landside portion of the project will consist of three stacks of product each approximately 230-feet-wide by 2,000-feet-long. In addition, inbound and outbound conveyors, transfer towers, conveyor supports, a 15,000 square foot maintenance shop, a multi-story office building, rail loop, access roads, settling ponds, utilities and miscellaneous additional equipment will be constructed.

Project Objective Limiting Factors (Siting Criteria)

Again, the proposed facility must have deep water and rail access to meet the stated project objectives. Coupled with deep water access, the site must also have the capacity to accommodate a large fleeting area for barge loading and offloading. Suitable area (at least 200 acres) for land-side storage with the proper zoning in place and limited exposure to sensitive receptors (e.g. schools, churches, cemeteries) are additional siting requirements. From a natural resource perspective, the site must have, to the maximum extent practicable, limited impacts to:

- Wetlands under the jurisdiction of the U.S. Army Corps of Engineers
- Coastal waters under the jurisdiction of the Louisiana Department of Natural Resources, Office of Coastal Management
- Cultural resources and sites with historic significance
- Existing and proposed Coastal Protection and Restoration Authority projects

Siting Criteria Resources:

The current zoning district for each site was determined using the Plaquemines Parish Economic Development website including existing infrastructure information. National Wetland Inventory and National Resource Conservation Service data was utilized to perform a desktop analysis of areas of potential wetlands within each site, including the current project site. Known cultural sites were identified for each site using the Department of Culture, Recreation and Tourism's LA Cultural Resources Map. LDNR's SONRIS system shows CPRA/State Project buffers. Surrounding Land Use data was compiled using GoogleMaps.

2. ***Identify, on a map, the location of each site considered for development. If less than the minimum number of sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate sites.***

See Sections 3.0 through 8.0 and Vicinity Map (Figure 1)

3. ***Describe each site considered. Include parcel size relative to development size, topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.***

See Sections 3.0 through 8.0

4. ***Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required (excluding tie-in from individual units to existing infrastructure)***