



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

**EXHIBIT
28**

AUG 31 2006

Senate Environmental Committee
601 Pennsylvania Ave.
North West #606
Washington, D.C. 20004

RE: DECISION FOR UTILIZATION of
Gentilly Landfill "Type III"
Agency Interest Number 1036
Orleans Parish

For your information and records, please note that the Louisiana Department of Environmental Quality (LDEQ) issued the attached Administrative Order (AO) and Decisional Document concerning the above-referenced facility. These documents were issued as partial fulfillment of the Consent Judgment between the Louisiana Environmental Action Network (LEAN) and LDEQ.

Through the attached AO and Decisional Document, the LDEQ has increased the current allowable daily disposal rate of nineteen thousand (19,000) cubic yards a day for the subject facility. In this AO, the City of New Orleans is ordered to limit the weekly gate rate of un-compacted construction and demolition debris, accepted for disposal at Gentilly Landfill "Type III", to 210,000 cubic yards initially, and gradually increase the weekly gate rate to 280,000 cubic yards provided inclinometer readings and visual readings confirm landfill stability. Daily intake shall not exceed 50,000 cubic yards per day.

If you have any questions regarding this matter, please contact me at (225) 219-3180, or Mr. Robert Thomas at (225) 219-3056.

Sincerely,

Chuck Carr Brown, Ph. D.
Assistant Secretary

rt

attachments

ENVIRONMENTAL SERVICES

: PO BOX 4313, BATON ROUGE, LA 70821-4313

P:225-219-3181 F:225-219-3309

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DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

AUG 28 2006

CERTIFIED MAIL 7004 1160 0000 3793 7778
RETURN RECEIPT REQUESTED

Veronica Toussaint White, Director
Department of Sanitation
City of New Orleans
1340 Poydras Street, Suite 750
New Orleans, Louisiana 70112

**RE: ADMINISTRATIVE ORDER
Gentilly Landfill "Type III"
AGENCY INTEREST NO. 1036**

Dear Ms. White:

Pursuant to the Louisiana Environmental Quality Act (La. R.S. 30:2001, et seq. and particularly La. R.S. 30:2011(D)(6), (D)(14), La. R.S. 30:2033), the attached **ADMINISTRATIVE ORDER** is hereby served on City of New Orleans (Gentilly Landfill "Type III").

Any questions concerning this action should be directed to Robert Thomas at (225) 219-3056.

Sincerely,

Chuck Carr Brown, Ph.D.
Assistant Secretary

Attachment

c: Amid Metro Partnership, LLC.
Eddie Williams, FEMA
Mike Park, US Corps of Engineers

ENVIRONMENTAL SERVICES

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STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF
GENTILLY LANDFILL "TYPE III"
ORLEANS PARISH

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AGENCY INTEREST NO. 1036

PROCEEDINGS UNDER THE LOUISIANA
ENVIRONMENTAL QUALITY ACT,
La. R.S. 30:2001, ET SEQ.

ADMINISTRATIVE ORDER

The following **ADMINISTRATIVE ORDER** is issued to the City of New Orleans, concerning Gentilly Landfill "Type III", (Gentilly or the facility) by the Louisiana Department of Environmental Quality (the Department or DEQ), under the authority granted by the Louisiana Environmental Quality Act (the Act), La. R.S. 30:2001, et seq., and particularly by La. R.S. 30:2011(D)(6), (D)(14), and La. R.S. 30:2033.

FINDINGS OF FACT

I.

Gentilly is a Type III landfill as defined in LAC 33:VII.115 located at 10200 Almonaster Avenue, Orleans Parish. It is owned by the City of New Orleans and operated by Amid Metro Partnership, LLC.

II.

As a Type III landfill, Gentilly is authorized pursuant to LAC 33:Part VII to accept *construction and demolition debris*, (C&D debris) *woodwastes*, and *yard waste* as defined in LAC 33:VII.115.

III.

The Department issued a Declaration of Emergency and Administrative Order dated August 30, 2005, and subsequent amendments (6th Amendment, dated June 26, 2006) in response to the devastation caused by Hurricane Katrina. It authorized the disposal of uncontaminated construction and demolition debris in permitted Type III landfills and sites that have been authorized by the Department for such disposal. The Declaration of Emergency and Administrative Order stated that for purposes of the order, "construction and demolition debris shall be the material indicated in Appendix D of this Declaration." Appendix D allowed the following "hurricane generated materials" for disposal at a "permitted construction and demolition debris (C&D) landfill":

- Nonhazardous waste generally considered not water-soluble, including but not limited to metal, concrete, brick, asphalt, roofing materials, sheet rock, plaster, lumber from a construction or demolition project, and other building or structural materials;
- Furniture, carpet, and painted or stained lumber contained in the demolished buildings;
- The incidental admixture of construction and demolition debris with asbestos-contaminated waste (i.e., incidental asbestos-contaminated debris that cannot be extracted from the demolition debris); and

- Yard waste and other vegetative matter.

IV.

As a result of Hurricane Katrina, it is estimated that 55 million cubic yards of debris has been generated in the Katrina impacted parishes. In response to the volume of debris generated, it is anticipated that the amount of hurricane generated materials to be directed to Gentilly may exceed the rate of disposal generally associated with C&D landfills and originally anticipated for this landfill.

V.

The Department and Louisiana Environmental Action Network (LEAN) have entered into a Consent Judgment, dated March 16, 2006, to settle East Baton Rouge Parish Suit Number 537,649, filed by LEAN challenging the Department's decision to utilize Gentilly Landfill for disposal of hurricane-generated debris.

VI.

The Consent Judgment provides that the Department shall limit daily intake at the Gentilly Landfill to 19,000 cubic yards per day during the time preceding the issuance of a decisional document and require an adequate number of spotters to be present on the working face of the landfill during operation of the facility. The Department also agreed to fashion a plan for groundwater monitoring and require the facility to develop a surface water monitoring or sampling plan. To implement these Consent Judgment provisions, the Department issued Administrative Order Number dated April 3, 2006 (AO) to the City of New Orleans concerning the Gentilly landfill.

VII.

The facility submitted a groundwater monitoring plan in response to the Department's AO; the plan is attached hereto. The plan provided the location of monitor wells, well details, sampling procedures and frequencies, analytical parameters, monitoring data evaluation, and reporting procedures for site groundwater.

VIII.

The AO also required the facility to make a determination whether groundwater makes contact with a surface water body. If it was determined that groundwater related to the facility operations discharges into surface water, Gentilly was required to submit a plan for monitoring discharges of groundwater into the surface water. The plan was submitted, consisting of three surface water sampling ports, screened between three feet to eight feet below the ground surface, which will intercept the shallow perched water at the site.

IX.

To comply with other provisions of the Consent Judgment, a third party investigator was contracted by the Department to evaluate slope stability of the south face of the final landfill elevation and determine any effect on the Mississippi River Gulf Outlet (MRGO) levee. The attached report "Slope Stability Analysis – Gentilly Landfill," determined the safe slope configuration for various waste height and loading rates.

ADMINISTRATIVE ORDER

Based on the foregoing, the City of New Orleans, Gentilly Type III Landfill is hereby
Ordered to:

I.

Install inclinometers along the southern slope of the landfill in accordance with the attached groundwater monitoring plan.

II.

Limit the weekly gate rate of un-compacted C&D waste accepted for disposal at Gentilly to 210,000 cubic yards initially, and gradually increase the weekly gate rate to 280,000 cubic yards provided inclinometer readings and visual readings confirm landfill stability. Daily intake shall not exceed 50,000 cubic yards per day.

III.

Apply waste in the landfill by lifts that do not exceed a thickness of twenty –five (25) feet over the entire disposal area, prior to the placement of succeeding lifts.

IV.

Implement the attached Groundwater Monitoring Plan providing the location of monitor wells, well details, sampling procedures and frequencies, analytical parameters, monitoring data evaluation, and reporting procedures for site groundwater.

V.

Implement the attached Surface Water Monitoring /Sampling Plan consisting of three surface water sampling ports which will intercept the shallow perched water at the site.

VI.

The Department shall have the authority to halt, conduct or direct any tasks required by this Administrative Order and/or any response actions or portions thereof when conditions present an immediate risk to public health or welfare or the environment. To the maximum extent feasible, the Department shall allow the Gentilly to take any response action required pursuant to this clause.

VII.

Gentilly shall submit all correspondence and other documents to be submitted pursuant to this Administrative Order (including work plan[s] and report[s]) to the following addresses or to such other addresses as the Department hereafter may designate in writing:

Mr. Bijan Sharafkhani, P.E., Administrator
Waste Permits Division
Department of Environmental Quality
P.O. Box 4313
Baton Rouge, Louisiana 70821-4314

VIII.

Gentilly shall be excused from performing the activities called for in the Work Plan(s), within the time limits and in the manner specified in the schedules included in the work plan(s), if such performance is prevented or delayed by circumstances which constitute *force majeure*, as determined by the Department. For purposes of this Administrative Order, *force majeure* is any circumstance including weather, acts of God, and other circumstances arising from causes beyond Gentilly's reasonable control despite Gentilly's due diligence and good faith efforts. In the event of *force majeure*, the time for performance of any activity delayed by the *force majeure* shall be extended for the time period of the delay attributable to the *force majeure* event and the time for performance of any activity dependent upon the delayed activity shall be similarly extended. Gentilly shall notify the Department in writing as soon as reasonably possible but not later than fifteen (15) calendar days after Gentilly becomes aware of a circumstance which may delay or prevent (or has delayed or prevented) performance of any activity under the Work Plan(s). The notice shall state the cause and anticipated length of the delay, the measures taken by Gentilly to prevent or minimize such delay, and a timetable outlining when such measures were or will be taken.

IX.

Except for Paragraphs II, III and IV, the requirements of Administrative Order dated April 3, 2006 are revoked.

X.

This **ADMINISTRATIVE ORDER** is effective upon receipt.

Baton Rouge, Louisiana, this 28th day of August, 2006.



Chuck Carr Brown, Ph.D.
Assistant Secretary
Office of Environmental Services

Copies of correspondence should be sent to:

Louisiana Department of Environmental Quality
Office of Environmental Services
Waste Permits Division
P.O. Box 4313
Baton Rouge, LA 70821- 4313
Attention: Mr. Bijan Sharafkhani, P.E.



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

AUG 28 2006

CERTIFIED MAIL 7004 1160 0001 9950 5273
RETURN RECEIPT REQUESTED

Veronica Toussaint White, Director
Department of Sanitation
City of New Orleans
1340 Poydras Street, Suite 750
New Orleans, Louisiana 70112

RE: DECISION FOR UTILIZATION of
Gentilly Landfill "Type III"
Agency Interest Number 1036
Orleans Parish

Dear Ms. White:

Pursuant to the Louisiana Environmental Quality Act (La. R.S. 30:2001, et seq. and particularly La. R.S. 30:2011(D)(6), (D)(14), and La. R.S. 30:2033), the attached Decision for Utilization of Gentilly Landfill "Type III" for the disposal of hurricane generated Construction and Demolition debris is hereby served on the City of New Orleans.

Any questions concerning this action should be directed to Robert Thomas at (225) 219-3056.

Sincerely,

Chuck Carr Brown, Ph.D.
Assistant Secretary

Attachment

c: Amid Metro Partnership, LLC.
Eddie Williams, FEMA
Mike Park, US Corps of Engineers

ENVIRONMENTAL SERVICES

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STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

IN THE MATTER OF

GENTILLY LANDFILL "TYPE III"
AI# 1036 / D-071-0264 / P-0375
ORLEANS PARISH

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* **DECISION FOR**
* **UTILIZATION OF GENTILLY**
* **LANDFILL "TYPE III" FOR THE**
* **DISPOSAL OF HURRICANE**
* **GENERATED DEBRIS**

PROCEEDINGS UNDER THE LOUISIANA
ENVIRONMENTAL QUALITY ACT,
La. R.S. 30:2001 et seq.

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This document provides the Louisiana Department of Environmental Quality's (LDEQ or Department) justification for authorizing the continued operation and utilization of the Gentilly Landfill "Type III" (Gentilly or facility) in Orleans Parish, Louisiana for the disposal of hurricane generated construction and demolition (C&D) debris. An "IT" Analysis is not required for issuance of emergency authorization. This document fulfills the necessary requirements of Article IX, Section 1 of the Louisiana Constitution and as required by the Consent Judgment in Suit # 537,649 filed in the 19th Judicial District Court for the Parish of East Baton Rouge. The

LDEQ will provide public notice of this decision and an opportunity for public comment. In accordance with the Consent Judgment, the public comment period will be not less than 30 days. The LDEQ will review and consider the public comment and may revise the final decision in light of such comments.

I. GENERAL BACKGROUND

On August 29, 2005, Hurricane Katrina struck Louisiana, causing widespread damage within numerous parishes, including Orleans Parish. By State of Louisiana Proclamation No. 48 KBB 2005, the Governor declared on August 26, 2005, that a state of emergency exists in Louisiana, as Hurricane Katrina posed an imminent threat, carrying severe storms, high winds and torrential rain that may cause flooding and damage to private property and public facilities and threatened the safety and security of the citizens of the state of Louisiana. By State of Louisiana Proclamation No. 54 KBB 2005, the Governor extended the state of emergency due to the extreme damage caused by Hurricane Katrina and the continuing disaster and emergency conditions in the affected areas. On August 29, 2005, the Federal Emergency Management Agency (FEMA) issued a Disaster Declaration, FEMA-1603-DR, covering south Louisiana.

On August 30, 2005, the Secretary of the LDEQ exercised the legal authority granted to him pursuant to the provisions of Louisiana Revised Statutes 30:2001 *et seq.*, and particularly La. R.S. 30:2033 and 2011(D)(6), and issued a Declaration of Emergency and Administrative Order wherein he declared that an emergency exists, and that certain measures were necessary to prevent irreparable damage to the environment and serious threat to life or safety throughout the designated emergency areas, including Orleans Parish. This Emergency Declaration was amended on September 3, 2005; November 2, 2005; November 17, 2005; January 13, 2006; March 31, 2006; and more recently on June 29, 2006. Each Emergency Declaration contains

certain measures specifically authorized by the LDEQ and determined necessary to respond to the emergency.

To address the unprecedented disaster, federal, state and local agencies engaged in formalizing a process to enable the State of Louisiana, the United States Army Corps of Engineers (Corps) and the Federal Emergency Management Agency (FEMA) to comprehensively manage large scale and complex debris clearance, management and disposal. The Emergency Declaration provided that disposal or processing of any solid waste in or at unpermitted facilities or sites, may be authorized by the Department on a case-by-case basis. Parish and municipal governments identified and requested the use of potential debris management sites. The LDEQ evaluated the sites, and if satisfactory, authorized them as temporary debris management sites. The sites were designated for specific purposes: woodwaste burning operations; woodwaste and C&D grinding; construction and demolition debris staging or disposal; staging of boats, vehicles, and/or white goods; and the staging of household hazardous waste.

Based upon Corps situation reports (as of July 24, 2006), there remains to be processed approximately 3.5 million cubic yards of vegetative debris and 5.6 million cubic yards of demolition debris in Orleans Parish. Additional debris not yet included in the Corps situation reports is also expected. The City of New Orleans (City) has identified approximately 15,000 structures that are slated to be demolished. ("red tagged"). Another eighty thousand (80,000) structures have been "yellow tagged" (identified by the City as flooded) in Orleans Parish. FEMA recently published updated flood elevation maps. As a result of these maps, most of the yellow tagged structures may need to be raised by an average of three feet in order to meet the new base flood elevation requirements. LDEQ estimates that for economic reasons, 50% of

those eighty thousand (80,000) structures will be demolished then rebuilt, rather than raising them to the new standards. A typical structure generates 300-350 cubic yards of debris when demolished. Accordingly, the Department conservatively estimates that an "additional" twenty million (20,000,000) cubic yards of demolition debris will be generated for disposal in Orleans parish before rebuilding can begin. It is also estimated that another 15,000 structures in St. Bernard Parish will be demolished.

In the LDEQ's experience, a C&D facility can safely dispose of up to fifty-thousand (50,000) cubic yards a day. Once that threshold is exceeded, landfill operations are subject to safety concerns. The gravity of the emergency situation created by Hurricane Katrina has required regulatory flexibility and a consideration of the timeframe for debris removal. With the authorization of Gentilly Landfill combined with the existing Highway 90 Landfill, the LDEQ's estimated timeframe for completion of debris removal is as follows: using 50,000 cubic yards a day (one landfill) would require 14 months to dispose of the debris generated by the demolition of the structures. With the use of two landfills, the time frame would be essentially halved to 7 months. Therefore, to expedite the removal and disposal of the remaining C & D hurricane-generated and demolition debris associated with demolition activities in the area in and around Orleans Parish and particularly in the New Orleans East and Ninth Ward Areas, the continued availability of Gentilly Landfill is essential to the cleanup effort.

In order to provide for a more efficient disposal of the exceptional volume of hurricane debris, the Emergency Declaration and Order(s) issued by the LDEQ expanded the scope of the definition of C&D debris. Appendix D of the Emergency Declaration and Order listed material to be considered as C&D debris:

- Nonhazardous waste generally considered not water-soluble, including but not limited to metal, concrete, brick, asphalt, roofing materials, sheet rock, plaster, lumber from a construction or demolition project, and other building or structural materials;
- Furniture, carpet, and painted or stained lumber contained in the demolished buildings;
- The incidental admixture of construction and demolition debris with asbestos-contaminated waste. (i.e., incidental asbestos-contaminated debris that cannot be extracted from the demolition debris); and
- Yard waste and other vegetative matter.

Although the Emergency Declaration and Order has expanded the scope of C&D debris for hurricane generated debris, the material otherwise included is not considered to be a threat to the environment.

II. GENTILLY LANDFILL

In June of 2002, the LDEQ received a permit application from the City of New Orleans to construct and operate the Gentilly landfill for the disposal of Construction & Demolition debris and woodwaste. The site is approximately 200 acres and is located at 10200 Almonaster Avenue in New Orleans, Louisiana. After determining that the permit application was technically complete and complied with the requirements of the Solid Waste Regulations, a public notice was published noting the technical completeness of the application and inviting the public to comment on the application. Although the public notice was published in both the *Times Picayune* and *The Advocate*, the LDEQ received no public comments or requests for hearing on the application.

On December 28, 2004, the LDEQ Assistant Secretary of the Office of Environmental Services, issued Standard Permit P-0375 to the City of New Orleans for the construction and operation of the Gentilly landfill. The landfill is designated as a Type III landfill; Type III landfills are authorized for the disposal of C&D debris and woodwaste. The Gentilly landfill

was constructed over a previously closed municipal landfill. This "piggyback" concept, i.e., the placement of one landfill on top of another, has been practiced not only in Louisiana but also throughout the country. The goal behind this technique is to fully maximize the utilization of the area that has already been disturbed for disposal of waste, thus preserving pristine areas. Under the "piggyback" concept, the existing cover system over the closed landfill acts as a liner system for the landfill on top.

The Solid Waste Regulations require that construction and demolition debris landfills be constructed over an area with low permeable soils. The existing cover system of the closed municipal landfill at Gentilly, meets this requirement. In fact, during the consideration of Standard Permit P-0375, the department did not receive any public comment that placement of waste on top of the closed landfill would cause any adverse environmental impact.

It is important to note that groundwater and soil samples were collected from the Gentilly site on November 9, 2005 and analyzed by EE&G, a Corps contractor, as a part of initial site assessment prior to use by the Corps. The data from these samples, as well as from the City's groundwater monitoring plan for Gentilly, demonstrate that there has been no adverse environmental impact from the old landfill. Additionally, as a part of the initial permit application, several borings were drilled through the waste for geotechnical analysis to determine the suitability of constructing a Type III facility on the old landfill. The data indicated that the waste has undergone biodegradation. This can be attributed with great certainty to the partial closure and the aerobic conditions in the landfill. Also, on November 11, 2005, EPA conducted a separate assessment and found no concerns regarding groundwater or any other contamination concerns.

Dr. Chuck Carr Brown, the Assistant Secretary for the Office of Environmental Services issued an Order Authorizing Commencement of Operation on September 29th, 2005 for Standard Permit P-0375. On October 31, 2005, the Louisiana Environmental Action Network (LEAN) filed a Petition for Judicial Review in the 19th Judicial District Court for the Parish of East Baton Rouge (Suit # 537,649). The petition listed several Assignments of Error and prayed that the court declare the September 29 Order to be in violation of law and remand the matter to LDEQ. On January 20, 2006, LDEQ revoked the September 29, 2005, Order to Commence and authorized the operation of Gentilly Landfill for disposal of hurricane generated construction and demolition debris pursuant to its authority under the Louisiana Environmental Quality Act and the LDEQ's Declaration of Emergency and Administrative Order. LEAN sought judicial review of this January 20, 2006 authorization. On March 16th, 2006, the parties agreed to settle the litigation and entered a Consent Judgment into the record. This Decision Document has been prepared in satisfaction of the Consent Judgment.

III. CONSTITUTIONAL CONSIDERATIONS:

The LDEQ recognizes that the concepts of alternative sites, alternative projects, and mitigative measures are closely interrelated and overlap, and each concept is addressed separately in this document for the purposes of emphasis and clarity. However, the LDEQ stresses the interrelation of the three. For example, the choice of a particular site could involve mitigative factors and possibly alternative project considerations; likewise selection of an alternative project could invoke mitigative factors and often site selection.

The Gentilly Type III landfill is appropriate for the disposal of hurricane generated C&D debris. The facility meets all the technical requirements for a Type III landfill, as demonstrated by the issuance of the permit.

In addition to the technical adequacy of the Gentilly landfill for hurricane generated construction and demolition debris disposal needs, other considerations for the LDEQ's decision to utilize the Gentilly landfill for disposal were explored. The Gentilly landfill is in close proximity to the hurricane devastated areas and the bulk of the hurricane generated construction and demolition debris. Moreover, this landfill is in a remote location. The surrounding area along Almonaster Boulevard, off of which the Gentilly landfill sits, is heavily wooded and except for some industrial development, is relatively undeveloped. As such, waste haulers have readily accessible roads to the landfill.

A. CONSIDERATION OF ALTERNATIVES:

ALTERNATE SITES:

In addition to Gentilly, two other sites were initially considered as emergency disposal sites for hurricane generated construction and demolition debris for the New Orleans area; Recovery 1, and Amid. Subsequent to the Gentilly authorization, the LDEQ also authorized the operation of a landfill located at 16600 Chef Menteur Highway.

1.) Recovery 1: The Recovery 1 landfill is a municipal solid waste landfill which was closed in the mid 1990's. The site is surrounded by water bodies on its north, east and south boundaries. The only areas available for disposal would be on the top of the landfill and an adjacent area to the west. After further evaluation, disposal on top of the landfill was rejected due to its height, landfill stability, and concern over imposition of additional loads. The area to the west is smaller than 20 acres and consequently would not provide sufficient air space for the large quantity of hurricane generated construction and demolition debris.

2.) **Amid:** According to the City of New Orleans permit application submitted to the LDEQ in 2002 for the proposed Gentilly landfill, the Gentilly landfill was intended to replace the AMID Type III construction and demolition landfill that was nearing the end of its design life and its subsequent closure. According to verbal communications with the operator of the facility, as of July 20, 2006, AMID, at its normal pre-Katrina waste acceptance rate, had only three months of air space remaining. Therefore, this facility was clearly inadequate as a disposal option for the massive amounts of hurricane generated construction and demolition debris in the area.

3.) **Chef Menteur C&D Disposal Facility (Chef):** At the request of the City of New Orleans, this facility was authorized as an emergency disaster clean-up site by the Department on April 26, 2006. However, the City of New Orleans issued a "Cease and Desist" letter to Waste Management of Louisiana L.L.C., the operator of the facility, as a result of its failure to obtain a Conditional Use Permit. The facility is no longer in operation and is not receiving waste.

ALTERNATIVE PROJECTS:

Utilizing existing landfills located in Jefferson Parish (Riverbirch and Highway 90) was also considered as an alternative ("no build" option). Riverbirch Landfill is a Type I & II landfill, while Highway 90, like Gentilly, is a Type III C&D landfill. A Type I landfill is a facility used for the disposal of industrial solid waste; a Type II landfill is a facility used for the disposal of residential or commercial solid waste. Both of these landfills are located in Jefferson Parish.

Although the LDEQ, pursuant to the Emergency Declaration, authorizes the disposal of material not technically included in the regulatory definition of construction and demolition debris, (i.e., furniture, carpet) the composition of the waste still is of minimal risk to the

environment. Notably, all Type III landfill disposal facilities are authorized to accept such waste pursuant to the Declaration of Emergency and Administrative Order.

Since C&D debris is the waste stream to be disposed at Gentilly, utilization of a Type I and II landfill for disposal of such debris would unnecessarily increase the cost of disposal. (It is generally more expensive to dispose of waste at a Type I/II facility rather than a Type III landfill). Moreover, the sheer volume of the hurricane generated C&D debris requiring disposal in the most expeditious and environmentally sound manner as possible under the circumstances, renders utilization of Type I or II landfills unfeasible. This is because placement of debris in landfills is done sequentially—one cell is constructed and used for disposal and when that cell fills up, another is constructed. Because the construction of cells for Type I and II landfills requires much more time and expense (largely because of the liner and leachate collection systems construction requirements) than the construction of Type III landfill cells, the cell construction time will be outpaced by the volume of debris received and requiring disposal. Additionally, the future capacity of Type I and Type II landfills in the greater New Orleans metropolitan area will be drastically reduced. Type I and II landfill disposal capacity should be reserved for industrial and municipal solid waste respectively.

The Highway 90 facility is also a Type III facility accepting hurricane generated C&D debris pursuant to the Emergency Declaration and Order. It is subject to the same design requirements and standards as the Gentilly landfill. Consequently, it would not provide any greater environmental protection.

However, the transportation of debris to these landfills from New Orleans East is less efficient for two primary reasons. One, being the location of the debris from the subject facilities (distance will be further discussed in another section of this document) and the other being traffic

congestion in route to these facilities. Waste transporters have confirmed that four or five trips per day can be made hauling waste to Gentilly landfill as compared with two trips per day to Jefferson Parish facilities. Thus, diverting debris to these landfills would increase waste hauling time and expense, and worsen the traffic problems in the New Orleans metropolitan area. Second, the Riverbirch and Highway 90 facilities are located in areas of Jefferson Parish that are currently populated. Not using the Gentilly landfill would significantly hinder the recovery of the City by delaying the disposal of remaining debris.

Alternatives to landfilling were considered and utilized for the management of hurricane generated debris. With respects to Orleans Parish, approximately thirty (30) sites were utilized for debris management. These sites were used for the burning of vegetative debris (open burning and air-curtain destructors), chipping / grinding of vegetative and C&D debris and the staging of white goods, woodwaste and construction and demolition debris. These methods were and are useful tools in the cleanup process for Orleans and surrounding parishes. However, when considering the scope and degree of C&D debris generated from Hurricane Katrina and associated flooding, the rate at which these projects are able to process C&D debris (the primary waste stream accepted at Gentilly), would limit their viability as the only options for debris management. These options would still ultimately require disposal of waste in a landfill. As a sole debris management option, burning and grinding of this material alone, would be impracticable, inefficient and result in extending the timeframe of the clean-up and recovery effort.

Additionally, there was opposition from citizens, environmental groups, and local and federal government concerning the burning of C&D debris. The opposition was primarily based on environmental and human health concerns relative to this method of reduction. There has not

been extensive research in the matter of burning C&D debris and the potential health and environmental risks associated with such. Further, there are National Emission Standards for Hazardous Air Pollutants (NESHAP) concerns, regarding the burning and grinding of C&D debris.

Resource recovery was considered a nonviable option on a large scale because of the massive amount of debris and the need for expedient disposal. Due to the mixed nature of the waste involved, composting was not a practical alternative. Composting is useful for vegetative debris but not C&D debris, particularly at the magnitude required. Therefore, the landfill option was chosen as a primary debris management option. The landfill option has proven to be reliable, expedient, protective of human health and welfare and the environment, and economically feasible.

B. MITIGATING MEASURES AND POTENTIAL AND REAL ADVERSE ENVIRONMENTAL EFFECTS:

As stated earlier, the Gentilly landfill permit application has undergone an extensive permitting process which included careful technical scrutiny to ensure that the facility met all applicable legal and technical requirements for permitting. The original design was based on an operational plan and sequential placement of waste to control storm water run-on/runoff. However, due to the abnormally high rate of hurricane generated construction and demolition debris transported to the site for disposal, operational changes had to be made. These changes affected the fill sequence and the construction schedule. Specifically, although temporary berms were initially constructed to control the run off, permanent berms have now been constructed around the operating area of the landfill and will be extended as the operating area expands.

Analysis of Potential Impacts on Nearby Levees

A third party investigation was conducted to evaluate the slope stability of the south face of the final landfill elevation to determine any effect on the Mississippi River Gulf Outlet (MRGO) levee. This investigation resulted in a document entitled, "**Slope Stability Analysis – Gentilly Landfill**" (see attachment). The investigation included additional soil borings and laboratory analysis to determine the engineering and physical properties of the subsurface soils. This information was used to provide engineering analyses to determine the safe slope configurations for various waste height and loading rates. In the analysis, several loading rate options were considered. The first option assumed a loading rate of 6000 tons/day (in place based on the unit weight of 65 lb/cu ft) or 30,000 cubic yards/day (gate rate based on the unit weight of 13 lb/cu ft). In this option the lowest factor of safety against failure was approximately 1.35. Generally a factor of safety of greater than 1.0 represents a stable slope. The second option consisted of determining the maximum loading rate based on a factor of safety of 1.2. The analyses indicate that this factor of safety corresponds to an in place loading rate of 12,000 tons/day or 60,000 cu yd/day gate rate. The LDEQ concurs in the conclusion as contained in this document, and concludes that the operation of this facility will have no adverse effects on the MRGO levee.

Installation of Inclinometers

As an additional means of ensuring that this landfill will not impact the MRGO levee system and to detect any subsurface lateral movements, the facility has been installing inclinometers along its southern slope, paralleling the MRGO. A total of 10 inclinometers will be installed in a phased manner and in accordance with the landfill progression. The inclinometers will be placed at approximately 400 ft intervals adjacent to the highest landfill elevation and then increased to 600 – 800 ft intervals which correspond to lower elevations. These inclinometers

will be installed to a depth of approximately 80-90 ft and will be terminated in stiff, highly plastic clays. By installing this system, the lateral movements of the landfill can be monitored. In the event such movement is observed, the operator will have several options available to control or prevent further movement. These options include cessation of waste placement in the affected area or the relocation of existing waste. A copy of the inclinometer installation and monitoring plan has been provided as an attachment.

Ground Water Monitoring Plan

Gentilly submitted a Groundwater Installation and Monitoring Plan, dated July 7, 2006, to the Department for its review. This plan provides the location of the monitoring wells, well details, sampling procedures and frequencies, analytical parameters, monitoring data evaluation, and groundwater data reporting procedures for the subject facility. This plan (see attachment) requires eleven (11) monitoring wells around the perimeter of the landfill in order to provide early warnings of potential relevant chemical changes in groundwater quality at the facility.

The groundwater monitoring wells will have 10-foot long screens and will monitor the first continuous water-bearing permeable strata. Groundwater level measurements and groundwater sampling will be recorded quarterly for the first year and semi-annually thereafter. The sampling parameters will include volatiles, semi-volatiles, cations, and anions. For a specific list of parameters please see Attachment 2 of the Groundwater Monitoring Plan.

The results of the detection analysis will be compared to the background trend analysis for each sampled parameter. A report identifying any parameter(s) that exceed the upper boundary level will be provided to the Department. If the data indicates that an impact to groundwater has occurred, the facility will notify the Department as specified in the Solid Waste Rules and Regulations. The Department has carefully reviewed and approved the plan and is of

the opinion that it will add another level of security in protecting the environment relative to the subject site.

Waste Segregation

Waste segregation is conducted at the site of generation, before the debris is hauled for disposal, in order to prevent unauthorized waste from entering disposal facilities. Types of waste being segregated include household hazardous waste, asbestos containing material, electronic waste, small motorized equipment, and white goods. EPA contractors are trained to handle each stream in a manner protective of human health and the environment. Curbside waste is examined for the unauthorized waste described above, segregated from the authorized waste stream, accumulated and transported to an EPA managed collection facility. Once inside the collection facilities, environmental technicians consolidate and manifest the household hazardous waste streams for transportation to the appropriate permitted disposal facilities.

C. COST BENEFIT:

The social and economic benefits of having a disposal facility in New Orleans East outweigh the environmental-impact costs. The majority of C&D debris generated in Orleans Parish that requires disposal is located in the eastern portion of the Parish. In order to have the most efficient and expeditious clean-up effort possible, at least one disposal facility is required in this area. Gentilly Landfill meets the ideal location characteristics for this recovery effort and offers an economically feasible option, in comparison to the alternative of hauling New Orleans East debris to Jefferson Parish.

Transportation outside the metropolitan area will require expenditure of additional costs (fuel, wear and tear on vehicles and roads, driver transit time) and imposition of an additional burden on both traffic flow and the environment. Diversion of debris will give rise to increased

volume at other authorized facilities, which has the potential to increase wait time for disposal. The increased transportation costs incurred by haulers (fuel and time) may, in turn, affect the profitability of waste hauling. This may result in a decrease in number of qualified transporters / trucks, which would delay the clean-up effort. This scenario is supported and has previously been experienced by contractors engaged in the debris mission.

In addition, FEMA currently pays 100% of the FEMA eligible debris mission costs in Orleans Parish until December 31, 2006. Without Gentilly landfill, the clean-up recovery effort would certainly not be completed before this December 2006 deadline. After the deadline it is expected that the City would incur 10% of the costs associated with debris mission costs (inclusive of costs associate with C&D debris removal, hauling and disposal). This would result in an added economic hardship to the City, and perhaps the State of Louisiana.

An increase in transportation costs will likely result in the increase of illegal dumping. Private haulers paid by the job with no disposal facility in the immediate area, may choose to illegally dump the debris. This will result in an additional drain on the LDEQ's and City's resources for increased surveillance, enforcement, and clean-up activities.

Without Gentilly landfill, debris would have to be diverted to other facilities, most likely in Jefferson Parish. In the LDEQ's experience, a C&D facility can safely dispose of up to fifty-thousand (50,000) cubic yards a day. Once that threshold is exceeded, landfill operations are subject to safety concerns. First, the increased potential for heavy truck traffic to Jefferson Parish could lead to major traffic congestion on highways, bridges, and entry and exit points at the receiving landfill, creating a nuisance and/or hazard for the general public. Second, the working face of a landfill is small, and the increased number of trucks and waste exceeding the 50 thousand cubic yards per day could endanger the spotters' safety and ability to spot and pull

out unauthorized waste. A greater number of trucks in this space would increase the risk of on-site collisions with other trucks and heavy equipment and could result in injuries to workers.

Additionally, delays in curbside pickup of solid waste currently being experienced, would increase without Gentilly landfill, and would potentially increase curbside commingling of uncollected household garbage mixed with C&D debris. This would result in an increased risk to public health and safety as the commingled material stays in-place, awaiting final disposal. The longer this material remains in an uncontrolled environment, especially during hurricane season, the greater the potential risk to the public. Expeditious disposal of all waste streams must be a priority.

Notably, in order to properly evaluate the impact of diverting debris to other landfills, LDEQ scientists utilized EPA's MOBILE6 emissions model to determine daily excess air pollutant emissions from hauling C&D debris to an alternative landfill site location in Jefferson Parish. The alternative site used was the Highway 90 C&D landfill in Jefferson Parish. The geographic centroid for construction and demolition debris was calculated to be approximately 1.0 mile west of St. Bernard northwest parish line in Orleans Parish. This point is the center most point of the total mass or volume of the hurricane generated construction and demolition debris. Gentilly landfill is approximately 8 miles from this point while Highway 90 landfill is approximately 23 miles. Thus, one round trip for hurricane generated construction and demolition debris waste haulers would be 16 miles for disposal at Gentilly as opposed to 46 miles for disposal at Highway 90. It should also be noted that as a result of the increased distance and travel time, waste haulers' truck emissions of volatile organic compounds, nitrogen oxides, carbon monoxide, particulate matter, sulfate and ammonia would increase.

IV. OTHER MATTERS

A seventeen (17) acre area of Gentilly has not been closed in accordance with regulatory requirements. Though not in operation, this area has been scheduled for final closure. The final closure cover system will include (from top to bottom), compacted Class II subgrade, a geosynthetic clay liner (GCL) and a minimum 12-inch thick vegetated granular protective layer. At the same time, this component system will serve as an alternate liner for the disposal of construction demolition debris associated with the facility. This cover system satisfies the final cover requirements of LAC 33:VII.721.D.3.a (i). In addition, this system satisfies the liner requirements of Section 719.D.2.

As an additional safety precaution, the LDEQ has required that the facility provide an adequate number of spotters at the working face of the landfill during hours of operation through an Administrative Order issued April 3, 2006.

To address financial assurance concerns, a trust fund has been established for the benefit of the Louisiana Department of Environmental Quality for the payment of the closure costs of the Gentilly Landfill. The operator of the Gentilly landfill, pursuant to a contract with the City of New Orleans, is responsible for the closure of the landfill. The operator has deposited funds in this trust, which is based upon the amount of cubic yards of waste taken in by the landfill as of May 31, 2006.

Surface Water Monitoring / Sampling Plan

Any potential discharge/impact of groundwater to surrounding surface water bodies will be monitored by three surface water sampling ports (see attached map for sampling locations). These ports will consist of eight foot long slotted PVC pipes, screened between three feet to eight feet below the ground surface which will intercept the shallow perched water at the site.

These ports will be sampled quarterly for three years for the indicator parameters in accordance with the Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category. A list of indicator parameters is provided in the attachment.

V. GENTILLY LANDFILL'S AUTHORIZATION TO OPERATE

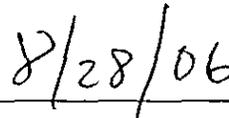
In light of Hurricane Katrina and its aftermath, and based upon the above justification, careful and deliberate review of all environmental law, relevant LDEQ emergency and administrative guidance, and specific analytical reports, groundwater plans, and site evaluation information, the LDEQ hereby authorizes operation of Gentilly landfill in accordance with the Administrative Orders dated April 3, and August 28, 2006.

VI. APPEALS OR REQUEST FOR REVIEW

In accordance with the provisions of La. R.S. 2033, any appeal or request for review of the authorization for the utilization of the Gentilly Landfill "Type III" in Orleans Parish, Louisiana for the disposal of hurricane generated Construction and Demolition debris is required to be brought in an action for injunctive relief filed in the Nineteenth Judicial District Court for the Parish of Baton Rouge.



Chuck Carr Brown, Ph.D.
Assistant Secretary



Date