

29 January 2010

CESAJ-RD-SP (1145b)  
SAJ-2000-02373(IP-LAO)

## MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Project Specific Record of Decision/Statement of Findings (Cemex-FEC ROD/SOF) for the Cemex FEC Quarry (Permit Application# SAJ-2000-02373(IP-LAO)) issued in association with the Lake Belt Regional Record of Decision and Statement of Findings (Lake Belt ROD) to affirm the project specific findings and permit requirements.

1. Applicant: Cemex Materials of Florida - FEC Quarry  
c/o Matt Mouncey  
1501 Belvedere Rd.  
West Palm Beach, FL 33406

2. Location, Project Description, Existing Conditions:

2.1. Location: The FEC Quarry is located between Okeechobee Road to the northeast, NW 130<sup>th</sup> Street to the south, and Florida's Turnpike to the east (Sections 10, 14, 15, 21-23, 26, and 28, Township 52 South, Range 39 East), within the Lake Belt Region in Miami-Dade County, Florida. The site is bordered by the Tarmac Quarry to the south, the Miami Canal to the north, Pennsuco Wetlands to the west, and Cemex FEC's existing mining lakes or staging areas to the east. Overall the site is located within the Lake Belt Area separating Miami-Dade County's urban development area to the east and the Pennsuco Wetlands and Water Conservation Area 3B to the west. The site lies to the north of the North West Wellfield (NWWF).

2.2. Background: In 2002, a Department of the Army (DA) permit authorized Cemex to discharge dredged or fill material associated with limestone mining into 1,427 acres of Waters of the United States (WOTUS). Because the WOTUS are largely freshwater wetlands, they shall be referred to as wetlands throughout the rest of this document. In May 2007, Cemex requested authorization for additional discharges into 1,280 acres of wetlands within an expanded mining area. In January 2009, the 2002 DA permit was set aside by a Federal Court order and the discharge of dredged material and the associated mining was halted. Thus, this Record of Decision/Statement of Findings (ROD/SOF) in association with the Lake Belt Record of Decision and Statement of Findings for the entire Lake Belt Region (the Lake Belt ROD) addresses the discharge of dredged or fill material into 2,707 acres of wetlands.

To more effectively characterize the extent of the discharge being evaluated under this authorization, new wetland jurisdictional determinations were performed to identify the wetland boundaries within the mining areas. Given that the 2002 DA permit had been set-aside, a February 2002 baseline was utilized to allow for characterization

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of any after-the-fact authorization under the now set-aside permits. Aerial photographs from February 2002 were utilized for the analysis and these jurisdictional determinations are Attachment A of the DA permit. In order to help verify the accuracy of the jurisdictional determinations, data is presented by land 'Sections' from the Public Land Survey System which are roughly one-square mile areas consisting of approximately 640 acres. Because some quarry lakes cross or will cross section lines, sections are grouped together for comparative purposes. Table 1 identifies the acres lakes, fill (or wetland acres filled in accordance with permits issued prior to 2002), and undisturbed wetlands existing as of February 2002 in the Cemex FEC Mining Area. Of the 3,287-acres mining area, 2,492 acres were wetlands in 2002.

<b>Table 1. Lake, Filled and Wetland Area within mining Lakes (2002) (acres)</b>				
<b>Sections</b>	<b>Lake</b>	<b>Fill</b>	<b>Wetland</b>	<b>Total</b>
<b>26</b>	<b>0</b>	<b>0</b>	<b>164</b>	<b>164</b>
<b>21, 28</b>	<b>0</b>	<b>0</b>	<b>926</b>	<b>926</b>
<b>10, 14, 15, 22, 23</b>	<b>614</b>	<b>181</b>	<b>1,402</b>	<b>2,197</b>
<b>Totals</b>	<b>614</b>	<b>181</b>	<b>2,492</b>	<b>3,287</b>

2.3. Site Conditions: The wetland habitat within the mining area at the FEC Quarry consists of agricultural lands, prairie with 10-50% melaleuca, prairie with 50-75% melaleuca, disturbed prairie, dense melaleuca saplings, and dense mature melaleuca with 75% or greater coverage. As shown below in Table 2, between 2002 and January 2009, wetland habitat within the 3,287 acre mining area had decreased as a result of mining operations from 2,492 acres to 1,693 acres, a reduction of 799 acres. The lakes had expanded from 614 acres in 2002 to 1,230 acres in 2009. Based on the rates of impact area and the lake increase from 2002 to 2009, Cemex has impacted 114 acres per year and excavated 88 acres per year, providing approximately 11 million cubic yards of limestone per year.

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<b>Table 2. Lake, Filled and Wetland Area within mining Lakes (2009) (acres)</b>				
<b>Sections</b>	<b>Lake</b>	<b>Fill</b>	<b>Wetland</b>	<b>Total</b>
<b>26</b>	<b>93</b>	<b>58</b>	<b>13</b>	<b>164</b>
<b>21, 28</b>	<b>0</b>	<b>0</b>	<b>926</b>	<b>926</b>
<b>10, 14, 15, 22, 23</b>	<b>1,137</b>	<b>306</b>	<b>754</b>	<b>2,197</b>
<b>Totals</b>	<b>1,230</b>	<b>364</b>	<b>1,693</b>	<b>3,287</b>

2.4. Calculating Project Impacts: Table 3 illustrates the land covers after completion of all authorized mining within the FEC Quarry. Lakes will increase to 2,800 acres of the mining area (1,570 acres increase over 2009 quantities). Littoral zones will be restored and cover 109 acres; road easements, which will be returned to wetland grade, but will not have wetland soils restored, will cover 31 acres. These three cover types (lake, littoral zone, and road easements) will be included in the impact calculations as dredge or fill material will be discharged to these areas and they will lose all wetland function while the mining activities are ongoing. Littoral shelves, which will be restored to a type of emergent wetland habitat, will be credited as mitigation at a future date after the actual construction of that habitat.

The other land coverages are not going to be impacted in the current project description. A 38-acre mitigation area within Section 14 will remain and impact to this previously required mitigation area is not authorized. In Section 15, there is a 59-acre parcel which is under Cemex ownership, but is not proposed or authorized for mining. Another 250 acres within Sections 21 and 28 are within the required 1,500-foot Exclusion Area, set aside in perpetuity to minimize seepage, avoidance secondary impacts to adjacent wetlands, and decrease the project's impacts on endangered species as described in the Lake Belt ROD. Total Cemex-FEC Quarry property within the 1,500-foot Exclusion Area is 250 acres.

<b>Sections</b>	<b>Lake</b>	<b>Littoral Zone</b>	<b>County Road Easement</b>	<b>Other Mitigation</b>	<b>1,500-foot Exclusion Area</b>	<b>Wetlands not Impacted</b>	<b>Total</b>
<b>26</b>	<b>143</b>	<b>12</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>164</b>
<b>21, 28</b>	<b>646</b>	<b>26</b>	<b>4</b>	<b>0</b>	<b>250</b>	<b>0</b>	<b>926</b>
<b>10, 14, 15, 22, 23</b>	<b>2,011</b>	<b>71</b>	<b>18</b>	<b>38</b>	<b>0</b>	<b>59</b>	<b>2,197</b>
<b>Totals</b>	<b>2,800</b>	<b>109</b>	<b>31</b>	<b>38</b>	<b>250</b>	<b>59</b>	<b>3,287</b>

The calculation of the full project impacts are shown in Table 4. The total impacted cover types from can be calculated by adding together the impacted cover types (lakes, littoral zones, and road easements) from *Table 3. Land Covers at the End of Authorized Mining* and subtracting the coverages previously impacted prior to February 2002 from *Table 1. Lake, Filled, and Wetland Acreages within Mining Area (2002)*. Between February 2002 and the DA permit expiration (twenty years from the permit issuance date), 2,145 acres of wetland habitat types will be impacted by the discharge of dredged or fill material into wetlands. As previously stated, 799 acres of impacts have already occurred between February 2002 and January 2009. Subtracting this after the fact acreage (799 acres) from the total wetland impacts will give the quantity of impacts that are authorized from the permit issuance date to the end of the mining period Therefore, future authorized impacts will cover 1,346 acres of wetlands.

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Based on the rate of lake excavation from 2002 to 2009, (88 acres/year) the time period of excavation proposed for the entire mining project would take approximately 18 years (1,570 acre increase in lakes divided by 88 acres per year). The Corps has determined that the mining within Section I will likely be completed within 8 to 12 years depending on how many acres of the currently filled area is also excavated during that time period

Sections	Impacted cover types at the end of mining project				2002 Baseline			Impacted Wetlands
	Lake	Littoral Zone	County Road Easement	Total Impacted Cover types	2002 Lake	2002 Fill	Total Pre-2002 Impacts	2002 to end of Mining
26	143	12	9	164	0	0	0	164
21, 28	646	26	4	676	0	0	0	676
10, 14, 15, 22, 23	2,011	71	18	2,100	614	181	795	1,305
<b>Totals</b>	<b>2,800</b>	<b>109</b>	<b>31</b>	<b>2,940</b>	<b>250</b>	<b>59</b>	<b>795</b>	<b>2,145</b>

2.5. Authorized Project Description: The permit authorizes the after-the-fact authorization of discharges of dredged or fill material into 799 acres of wetlands that took place between February 2002 and January 2009 and the discharge of dredged or fill material into 1,346 acres of wetlands that will take place between the issuance date of the permit and the close of the permit's construction window twenty years after permit issuance. The 1,346 acres of freshwater wetlands into which dredged or fill material is proposed to be discharged has been divided into two geographic areas: Section I (670 acres) and Section II (676 acres). Mining within Section II is approved conditionally such that this mining will occur only after the following requirements are met:

2.5.1. Completion of an effective seepage mitigation/management project (SM/MP);

2.5.2. Completion of successful Five-Year Interagency Review reflecting that the SM/MP is proceeding as required in permit conditions, that the water quality monitoring program is in full compliance without actionable water quality

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violations by the State or Local agencies, and that the Lake Belt Mitigation Program is current and proceeding according to permit requirements;

2.5.3. Completion of an updated Biological Opinion that provides renewed support that mining and its associated discharges of dredged or fill material in Section II will not jeopardize the wood stork or other listed species;

2.5.4. Submittal of an updated mitigation plan that takes into account any changed circumstances and identifies sufficient mitigation credits to fully offset all impacts under Section II;

2.5.5. Cemex shall record in public records all required conservation easements over its land parcels within the Pennsuco wetlands (1,708 acres) and the 1,500-foot Exclusion Area (250 acres), and for the areas where mining is completed within the Land Preservation Areas (post mining quarries) or enter into a legally binding agreement with a state or county governmental entity for the transfer of fee simple title for the land;

2.5.6. The permittee can document that it has reached full mining capacity within their Section I parcels to the Corps' satisfaction.

2.5.7. The Corps has confirmed in writing that Cemex has met these conditions, that the Lake Belt region-wide conditions for seepage and mitigation have been met, and that the record has been supplemented to reflect the Corps analysis documenting these determinations.

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<b>Sections</b>	<b>2002-2009 After the fact</b>	<b>Section I Proposed</b>	<b>Section II Proposed</b>	<b>Total 2010-2030 Impacts</b>	<b>Total Authorized Impacts</b>
<b>26</b>	<b>151</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>164</b>
<b>21, 28</b>	<b>0</b>	<b>0</b>	<b>676</b>	<b>676</b>	<b>676</b>
<b>10, 14, 15, 22, 23</b>	<b>648</b>	<b>657</b>	<b>0</b>	<b>657</b>	<b>1,305</b>
<b>Totals</b>	<b>799</b>	<b>670</b>	<b>676</b>	<b>1,346</b>	<b>2,145</b>

3. Project Purpose:

3.1. Basic: The basic project purpose is to recover limestone, specifically aggregate material. This is not a water-dependent activity.

3.2. Overall: The overall project purpose is to provide affordable, high-quality construction-grade aggregate that satisfies the public need for such material within peninsular Florida, defined as geographically comprising Florida Department of Transportation (FDOT) Districts 1, 2, 4, 5, 6, and 7.

4. Scope of Analysis: The scope of analysis for direct and indirect project impacts includes the entire 51,600 acre Lake Belt region and the adjacent surrounding natural areas, including an eastern border of Everglades National Park (ENP) and the associated Water Conservations Areas (WCAs) potentially affected by secondary impacts caused by mining. These WCAs and the ENP have substantial federal interest under the Comprehensive Everglades Restoration Plan (CERP). The project wetlands are bounded by canals including both traditional navigable waters and relatively permanent waters. The wetlands within Lake Belt are adjacent or abutting these canal systems and are, therefore, considered Waters of the U. S.

5. Statutory Authority: Section 404 of the Clean Water Act (33 U.S.C. 1344).

6. Other Federal, State, and Local Authorizations Obtained or Required and Pending:

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6.1. State Permit/Certification: The Department of Environmental Protection (DEP) permit number 175244-004 was issued on 27 October 2009. Issuance of the permit was contingent upon the inclusion of several special conditions for the project. These conditions will be attached to and become a part of the Corps' permit.

6.2. Coastal Zone Management (CZM) consistency/permit: Issuance of the DEP permit constitutes a finding of consistency with Florida's CZM program.

6.3. Other Authorizations: The project will require permitting from Miami-Dade County, but these permits have not yet been issued.

## 7. Date of Public Notice and Summary of Comments

7.1. Important dates: A history of mining within Lake Belt and of the regulatory review over projects within the area can be found in Chapter 1 of the Lake Belt SEIS. The Corps issued public notices on 5 February 2008 for each application and sent these notices to all interested parties including appropriate State and Federal agencies. In association with the publication of the Lake Belt SEIS on 8 May 2009, the Corps issued a public notice the same date in order to solicit the full reach of public comments possible on all potential alternatives for Lake Belt mining. On 27 October 2009, the FDEP issued an Environmental Resource Permit that contained several project-specific special conditions for the project and a conditioned Water Quality Certification. These conditions will be attached to and become a part of the Corps' permit. The Lake Belt ROD, issued on 25 January 2010, is a region-wide Record of Decision and Statement of Findings for the Lake Belt Region as a whole. The Lake Belt ROD describes the Corps' evaluation and determination of the least environmentally damaging practicable alternative based on the Lake Belt FSEIS. The determinations and findings for the region-wide mining will apply to any DA permit issued within the Lake Belt Region and details the required region-wide special conditions that will not vary across the region. Like the FDEP special conditions for water quality, the required region-wide conditions from the Lake Belt ROD will be included and become a part of this evaluation and permit.

7.2. All project comments received for the Lake Belt FSEIS have been reviewed and are summarized in the Lake Belt ROD. Comments and concerns that relate to the Cemex FEC quarry specifically are reviewed and addressed within this ROD and SOF.

7.3. Corps analysis of project and additional Corps comments: The Lake Belt ROD contains an extensive list of permit conditions that shall apply to all Lake Belt

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permittees. There are other conditions that would apply specifically to certain mines due to their locations or site specific details. There are multiple issues associated with Lake Belt mining that apply specifically to the Cemex FEC Quarry including specific mitigation requirements, water quality monitoring requirements, and seepage mitigation requirements. These issues and the justifications for specific conditions associated with these issues are summarized below:

7.3.1. Mitigation requirements: Approximately 8.7 million cubic yards of dredge or fill material will be discharged into 1,346 acres of Waters of the United States followed by the excavation of 168 million cubic yards of limestone. Approximately 5.2 million cubic yards has been discharged into another 799 acres followed by the excavation of 100 million cubic yards between February 2002 and January 2009. To provide for the mitigation of wetland resources lost to mining, the applicant will participate in a required wetland mitigation program as detailed in the attached Lake Belt Mitigation and Monitoring Plan. The Corps recognizes that Cemex also participates in the fee-per-ton program established by Florida legislation to facilitate wetland mitigation. The Fee-per-ton program is under the direction of the interagency Lake Belt Mitigation Committee, which utilizes the fee to acquire, restore and manage lands within the Pennsuco wetlands and other locations.

The Corps recognizes the value of this Committee's work and participates in the program to approve mitigation projects. The Corps has performed an analysis of the potential mitigation projects, fee sufficiency of the Fee-per-ton program, and long term costs of the mitigation compared to available funding. The Corps has found that the Fee-per-ton program appears capable of mitigating for the wetland value and functions that would be lost by mining within the permit area. While the Corps recognizes that the program is an effective way to meet mitigation obligations, the payment of the mitigation fee alone does not satisfy the mitigation requirements as it does under the FDEP permits. The applicant remains solely responsible for offsetting the value and functions from mining of wetlands within the permit area, and therefore, must contribute to the required mitigation plan to ensure that sufficient avoidance, minimization, and compensatory mitigation are provided. Therefore, the following conditions will specifically apply to and be made a part of this permit:

7.3.1.1. Pennsuco Land Exchange and Acquisition: The permittee owns several tracts of land totaling 1,708 acres within the Pennsuco wetlands. Within ninety days of permit issuance, the permittee shall provide an access

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agreement to conduct wetland mitigation, including exotic treatment, monitoring and maintenance, within the subject parcels. Within five years of permit issuance Cemex shall record in public records an acceptable conservation easement over its land parcels within the Pennsuco wetlands, or enter into a legally binding agreement with a state or county governmental entity for the transfer of fee simple title for the land. (Special Condition # 12). The five year time frame was established to allow Cemex an opportunity to exchange the land as originally envisioned through the States' Lake Belt Plan.

7.3.1.2. 1,500-foot Exclusion Area: The permittee owns several tracts of land totaling 250 acres within a 1,500-foot Exclusion Area east of and adjacent to the Section line separating the Pennsuco Wetlands and the eastern portion of Lake Belt. Within 24 months of permit issuance the permittee shall provide an access agreement to conduct wetland mitigation, including exotic treatment, monitoring and maintenance, within the subject parcels. Within three months of permit issuance, Cemex shall provide a draft conservation easement over its 250 acres within the 1,500-ft. Exclusion Area. (Special Condition # 14).

7.3.2. Water Quality Issues:

7.3.2.1. Depth of mining: The maximum depth of mining will be approximately 85 feet below existing grade, which averages  $5\pm$  feet National Geodetic Vertical Datum (NGVD). To date the depths of the two lakes within the permitted area range from 42 feet and 75 feet NGVD for the Lake in the south half of sections 22 and 23, Township 52 south, Range 39 east and from 52 feet to 75 feet NGVD in the in the north half of sections 22 and 23 and Sections 14 and 15, Township 52 south, Range 39 east.

7.3.2.2. Water Quality monitoring: Water Quality concerns have existed in Lake Belt since the initiation of the Lake Belt Plan in the 1990s due to the location of the Northwest Well Field in the central part of Lake Belt that provides drinking water to forty percent of Miami-Dade County residents. The Corps has taken into consideration in the Lake Belt FSEIS and the Lake Belt ROD the water quality issues associated with the location of the mining lakes around the NWWF as well as the other associated water quality issues. The FDEP has issued a Conditioned Water Quality Certification that includes requirements for surface and groundwater quality monitoring, as well as monitoring before and after blasting events. This Water Quality Certification

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states that the project is in compliance with State Water Quality Standards, with the exception of oxygen levels in the deepest lake layers. The FDEP has granted a variance for depleted oxygen in the deep lake waters. The Corps has reviewed the Conditioned Water Quality Certification and finds that the certification is conclusive with respect to the water quality considerations. Therefore, the Water Quality Monitoring Program as described within the FDEP permits will be incorporated into and made a part of the Corps permit.

The Corps continues to defer to DERM's authority with respect to required wellfield protection covenants and DERM's requirements intended to protect against adverse impacts on the NWWF from activities related to rock mining. Miami-Dade County's direct authority to ensure protection of the NWWF results in a more conservative plan than the Corps would require to ensure that the project is not contrary to the public interest. The closest FEC Quarry lake is just over three miles from the nearest well in the NWWF and there are three to five surface water lakes separating the FEC Quarry from the NWWF. FDEP is requiring the following monitoring:

Groundwater Sampling - Monitoring Wells 1 & 2

- Monitoring in well 1 may be halted when mining adjacent to the area has stopped.
- Monitoring in well 2 is only required after mining begins adjacent to well 2.
- Annual monitoring for pH, sulfates, total dissolved solids, chlorides, nitrite+nitrate, total phosphorous, arsenic, cadmium, gross alpha, radium 226 and 228.

Miami Dade County DERM is requesting the following additional monitoring:

- A three cluster well must be sampled at shallow, intermediate and deep depths as opposed to a single sample.
- Monthly sampling for VOC, PAH, ammonia
- Quarterly sampling for TRPH, NOX-N, and chlorides

The Corps has determined that increasing the monitoring to a quarterly level and adding the parameters for VOC, PAH, ammonia, TRPH, and NOX-N as requested by the County will provide additional information to characterize the wellfield water quality and will ensure that as mining is reinitiated in these areas it is not contrary to the public interest. Samples will be required at shallow, intermediate and deep depths. If there are no exceedences of

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primary and secondary drinking water standards after a two year period, the additional monitoring (quarterly monitoring of VOC, PAH, ammonia, TRPH, NOX-N, and chlorides and the addition of the intermediate and deep depths) shall cease and the FDEP water quality monitoring shall continue.

For surface water quality monitoring (Wellfield Protection Monitoring), within mining lakes, the FDEP is requiring:

- Water samples collected at the surface whenever mining is occurring
- Quarterly sampling for VOC, PAH, TRPH, Ammonia-Nitrogen, Nitrate+Nitrite.

Water Quality Screening – At blasting locations

- Before and after blasting, the permittee shall collect water samples from the lake adjacent to the blasting location.
- The samples shall be tested for total nitrogen, nitrate-nitrite, and benzene.

DERM's additional request is for water to be sampled at the three depths (shallow, intermediate, and deep) and that sampling of VOC, PAH, and ammonia be increased to monthly. The Corps has determined that in light of the additional requirement that sampling be taken at all blasting locations, the increase of sampling frequency to monthly is not warranted to ensure that the project is not contrary to the public interest. Based on information that the mines are not well mixed, the Corps does consider sampling at shallow, intermediate and deep depths for the re-initiation stage of mining. If there are no exceedences of primary and secondary drinking water standards after a two-year period, the additional monitoring at intermediate and deep water depths shall cease and the FDEP water quality monitoring shall continue.

7.3.3. Seepage Mitigation: Cemex, as a member of the Miami-Dade Limestone Products Association, will participate in the construction of a region-wide seepage mitigation/management project. Due to the need for this seepage mitigation/management project (SM/MP) to offset unavoidable seepage impacts, mining has been divided into two geographic areas: Section I consists of 670 acres that may be mined prior to the construction of the SM/MP and Section II consists of 676 acres that are approved conditionally such that this mining will occur only after the following requirements are met:

7.3.3.1. Completion of an effective seepage mitigation/management project (SM/MP);

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7.3.3.2. Completion of successful Five-Year Interagency Review reflecting that the SM/MP is proceeding as required in permit conditions, that the water quality monitoring program is in full compliance without actionable water quality violations by the State or Local agencies, and that the Lake Belt Mitigation Program is current and proceeding according to permit requirements;

7.3.3.3. Completion of an updated Biological Opinion that provides renewed support that mining and its associated discharges of dredged or fill material in Section II will not jeopardize the wood stork or other listed species;

7.3.3.4. Submittal of an updated mitigation plan that takes into account any changed circumstances and identifies sufficient mitigation credits to fully offset all impacts under Section II;

7.3.3.5. Cemex shall record in public records all required conservation easements over its land parcels within the Pennsuco wetlands (1,708 acres) and the 1,500-foot Exclusion Area (250 acres), and for the areas where mining is completed within the Land Preservation Areas (post mining quarries) or enter into a legally binding agreement with a state or county governmental entity for the transfer fee simple title for the land;

7.3.3.6. The permittee can document that it has reached full mining capacity within their Section I parcels to the Corps' satisfaction.

7.3.3.7. The Corps has confirmed in writing that Cemex has met these conditions, that the Lake Belt region-wide conditions for seepage and mitigation have been met, and that the record has been supplemented to reflect the Corps analysis documenting these determinations.

## 8. Alternatives:

8.1. Avoidance: Section 8 of the Lake Belt ROD contains an extensive and complete analysis of the alternatives evaluated for Lake Belt mining. Site specific avoidance measures for Cemex consist of the adoption of the 1,500-foot Exclusion Area. Requiring this on-site avoidance of excavation in this area will avoid the increased

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seepage and the associated indirect impact on adjacent wetlands that occurs when mining moves into the westernmost areas of Lake Belt. Additionally, Cemex may utilize this area to provide required mitigation by the enhancement of wetlands on the 250 acres that will be permanently preserved within the 1,500-foot Exclusion Area.

8.2. Minimization (modified project designs, etc.): Cemex has modified their project design by separating mining into two sections and orienting all mining within Section I on the eastern side of the FPL Right of Way in Lake Belt. Mining only the areas east of the FPL Right of Way in Section I will minimize seepage impacts to the western natural areas; seepage effects are exacerbated as mining moves closer to these areas. Reducing these effects by delaying mining in these areas until after the construction of the SM/MP (and other conditions are met as described above) ensures that the project will not be contrary to the public interest.

8.3. Compensatory Mitigation (Wetland enhancement, creations, etc.): The After-the-fact authorization for mining within the Cemex FEC Quarry covers 799 acres of wetlands. The future proposed mining covers two geographic areas: Section 1, which is 670 wetland acres, and Section II, which is 676 wetland acres. The Corps has determined that the current phase of mining will take between 8 and 12 years to complete. Therefore to offset impacts caused by the discharge of dredge and fill material into 799 acres from 2002 to 2009 and to 670 acres within Section I, for a total of 1,469 impacted wetland acres, and to support the Miami-Dade Limestone Products Association membership (MDLPA)'s group mitigation program, Cemex has committed to performing wetland enhancement and restoration of 1,708 acres of Cemex owned land within the Pennsuco Wetlands. An additional 250 acres of wetland enhancement will be performed on Cemex owned lands within the 1,500-foot Exclusion Area identified in the permit drawings. As a portion of Cemex's mining area (approximately 800 acres) was impacted prior to 2002, there were pre-2002 mitigation obligation owed that may not be counted toward mitigation for this current Lake Belt authorization. As can be seen in the Cemex-FEC Quarry memo, *Post Mining Land Cover and Littoral Shelf Obligations (Attachment x of the permits)*, the pre-2002 littoral shelf obligation was for 84.3 acres. The final cover types within the Cemex FEC Quarry show that 109 acres of littoral shelves are proposed. Of the 109 acres, 84.3 acres is required to offset pre-2002 permit requirements and will not be counted toward Lake Belt mitigation credits. The entire 250 acres within the 1,500-foot Exclusion Area can be counted toward the Lake Belt mitigation credits as can the remaining 24.7 acres of littoral shelves.

In addition to these Cemex specific mitigation requirements, the Corps will accept mitigation performed cooperatively by the MDLPA and other mining interests through

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the Lake Belt Mitigation Committee. The mitigation projects must fall within the scope of the Lake Belt Mitigation and Management Plan or its amendments and must be approved by the Corps prior to construction. While the Lake Belt Mitigation Committee may actually complete the mitigation projects necessary to offset wetland functions and values lost as a result of this authorization, Cemex remains individually responsible for providing their required mitigation. The mitigation offered by the applicant in association with the MDLPA proposed Lake Belt Mitigation and Monitoring Plan will be sufficient to offset impacts on the values and functions of the wetland resource. The permittee will be required to do the following:

8.3.1. Pennsuco Land Exchange and Acquisition as described in Section 7.3.1.2.

8.3.2. Set aside the 1,500-foot Exclusion Area as described in Section 7.3.1.3.

8.3.3. Provide mitigation associated with the Lake Belt Mitigation Committee and the payment of a Fee-per-ton mitigation program. The permittee has committed to this program along with the other Lake Belt mining interests as a method of accomplishing their region-wide mitigation obligations and objectives. The Lake Belt ROD contains a review of the Lake Belt Mitigation and Monitoring Program. While the Corps recognizes the effectiveness of this program to provide mitigation, the permittee remains responsible for offsetting all wetland value and functions lost by their direct or indirect actions. As such, the permittee will be responsible for providing appropriate mitigation with associated financial assurances in the event that the Lake Belt Mitigation and Monitoring Program does not meet the requirements of this permit.

The Wetland Rapid Assessment Procedure (WRAP) was used to assess the functional assessment of the proposed mitigation. The required Cemex mitigation projects in Pennsuco and the 1,500-foot Exclusion Area will provide for 491 habitat units of mitigation. While a more extensive discussion of the region-wide mitigation obligation for Lake Belt can be found in the Lake Belt ROD, taken with the already completed 1,181 habitat units of mitigation, roughly 44% of the entire 3,660 habitat unit mitigation requirement will be met within a year of permit issuance and 46% within two years.

All compensatory mitigation, including the enhancement, maintenance, and long-term preservation in addition to a requirement to maintain the preserved area in natural wetland state is required to offset the direct and indirect impacts of the project.

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8.4. Conclusions of Alternatives Analysis: This Cemex-FEC ROD/SOF and the Lake Belt ROD show that all the alternatives have been considered and it has been adequately demonstrated that the proposed alternative is the least environmentally damaging practicable alternative considering cost, existing technology and logistics.

9. Section 404(b)(1) Guidelines Evaluation:

9.1. Factual Determinations (230.11): The Lake Belt ROD contains a full analysis of the Factual Determinations for all mining within Lake Belt.

9.2. Restrictions on discharges:

9.2.1. Alternatives (See the Lake Belt FSEIS-Chapter 2 and the Lake Belt ROD-Section 8):

9.2.1.1. The activity is located in a special aquatic site (wetlands, sanctuaries and refuges, mudflats, vegetated shallows, coral reefs, riffle and pool complexes, etc.)

9.2.1.2. The activity does not need to be located in a special aquatic site to fulfill its basic purpose.

9.2.1.3. It has been demonstrated in the Lake Belt FSEIS-Chapter 2 and the Lake Belt ROD-Section 8 that there are no practicable, or less environmentally damaging alternatives that would satisfy the project's basic purpose.

9.2.2. Other program requirements:

9.2.2.1. The proposed activity will not violate applicable State water quality standards or Section 307 prohibitions or effluent standards.

9.2.2.2. The proposed activity will not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat.

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9.2.2.3. The proposed activity will not violate the requirements of a federally designated marine sanctuary.

9.2.3. The activity will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms; ecosystem diversity, productivity and stability; and recreational, esthetic, and economic values.

9.2.4. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

9.3. Findings: The proposed site for the discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the conditions outlined below in paragraph 11.

10. Public Interest Review: All comments received in response to the public notice have been considered in the public interest review and subsequent discussion found in the Lake Belt FSEIS and the Lake Belt ROD.

11. The proposed project complies with the Section 404(b)(1) Guidelines and the federal no-net loss wetland policy and is not contrary to the public interest with the inclusion of the attached special conditions.

12. Public Hearing Evaluation (If Applicable): There were no requests for a public hearing for the DA permits.

13. Determinations:

13.1. Environmental Impact Statement. A Supplemental Environmental Impact Statement was completed for this project in May 2009 due to the projects' significant impact on the human environment.

13.2. Compliance with 404(b)(1) guidelines. Having completed the evaluation in paragraph 7 above, I have determined that the proposed discharge complies with the 404(b)(1) guidelines.

13.3. Public interest determination: I find that issuance of a Department of the Army permit is not contrary to the public interest.

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

#### 13.5. Relevant Presidential Executive Orders.

13.5.1. EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians. This action has no substantial direct effect on one or more Indian tribes, but was coordinated with the areas Federally recognized Tribes. That coordination is detailed above.

13.5.2. EO 11988, Floodplain Management. Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above.

13.5.3. EO 12898, Environmental Justice. In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

13.5.4. EO 13112, Invasive Species. The evaluation above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects. Through special conditions, the permittee will be required to control the introduction and spread of exotic species.

13.5.5. EO 13212 and 13302, Energy Supply and Availability. The project is not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.

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