MEMORANDUM

Agenda Item No. 8(A)(3)

TO:	Honorable Chairman Jean Monestime and Members, Board of County Commissioners	**DATE:**	May 17, 2016
FROM:	Abigail Price-Williams County Attorney	**SUBJECT:**	Resolution authorizing the County Mayor to execute a Covenant Running with the land requiring institutional and engineering controls at former Building 1034, Miami International Airport

The accompanying resolution was prepared by the Aviation Department and placed on the agenda at the request of Prime Sponsor Commissioner Jose "Pepe" Diaz.

Abigail Price-Williams
County Attorney

APW/lmp

Memorandum

Date: May 17, 2016

To: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor

Subject: Execution and Recording of a Covenant Running with the Land Requiring Institutional and Engineering Controls at Miami International Airport's Former Building 1034

Recommendation

It is recommended that the Board of County Commissioners (Board) approve the attached resolution authorizing the execution and recording of the Covenant Running with the Land requiring Institutional & Engineering Controls at Miami International Airport's (MIA) former Building 1034.

Scope

MIA is located primarily within District 6, which is represented by Commissioner Rebeca Sosa; however, the impact of this agenda item is countywide as MIA is a regional asset.

Fiscal Impact/Funding Source

The Covenant will be recorded for a fee of $150.00 for one (1) year or $1,000.00 for 10 years. The fees will be paid from the Miami-Dade Aviation Department's (MDAD) budget.

Track Record/Monitor

The MDAD Environmental Engineering System Section Chief Gustavo Leal, within the Facilities Development Division, will comply with the permit and covenant conditions.

Background

The former Building 1034 was occupied by various aircraft and ground support equipment maintenance facilities prior to its demolition in 1998. During the construction of the North Runway 8L-26R in 2001, an underground storage tank was discovered at the former building location. Soil and groundwater contamination was documented and remains on-site under the runway footprint. As a result, remediation is not feasible and MDAD requested a No Further Action with Conditions (NFAC) pursuant to Chapter 24 of the Code of Miami-Dade County, and this request was approved on January 21, 2014, by the Department of Regulatory and Economic Resources Division of Environmental Resources Management. The NFAC requires the implementation of both institutional and engineering controls, and this covenant is part of those requirements.

The Florida Department of Environmental Protection (FDEP) defines institutional and engineering controls as the restriction on use of or access to a site to eliminate or minimize exposure to petroleum products' chemicals of concern, dry cleaning solvents or other contaminants. Restrictions include but are not limited to deed restrictions, restrictive

covenants or conservation easements. Other forms of institutional control include government controls such as zoning, local ordinances, permits, comprehensive land-use planning and management and FDEP consent orders.

Jack Osterholt, Deputy Mayor

MEMORANDUM

(Revised)

TO: Honorable Chairman Jean Monestime and Members, Board of County Commissioners

DATE: May 17, 2016

FROM: Abigail Price-Williams
County Attorney

SUBJECT: Agenda Item No. 8(A)(3)

Please note any items checked.

_____ "3-Day Rule" for committees applicable if raised

_____ 6 weeks required between first reading and public hearing

_____ 4 weeks notification to municipal officials required prior to public hearing

_____ Decreases revenues or increases expenditures without balancing budget

_____ Budget required

_____ Statement of fiscal impact required

_____ Statement of social equity required

_____ Ordinance creating a new board requires detailed County Mayor's report for public hearing

_____ No committee review

_____ Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve

_____ Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(A)(3)
5-17-16

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO EXECUTE A COVENANT RUNNING WITH THE LAND REQUIRING INSTITUTIONAL AND ENGINEERING CONTROLS AT FORMER BUILDING 1034, MIAMI INTERNATIONAL AIRPORT

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference; and

WHEREAS, this Board finds that the attached Covenant and related Exhibits meet the criteria for County acceptance as set forth in Section 24-44 (2)(k)(ii) of Chapter 24 of the Code of Miami-Dade County, Florida,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board hereby authorizes the County Mayor or the County Mayor's designee to execute the Covenant Running with the Land to implement institutional and engineering controls on the property located at former Building 1034, Miami International Airport, to obtain approval for a No Further Action with Conditions proposal pursuant to Section 24-44 (2)(k)(ii) of Chapter 24 of the Code of Miami-Dade County, Florida. These institutional and engineering controls afford a level of protection to human health, public safety and the environment that is equivalent to that provided by Section 24-44 (2)(f)(i) and Section 24-44 (2)(f)(ii) of Chapter 24, Code of Miami-Dade County, Florida.

The foregoing resolution was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Jean Monestime, Chairman
Esteban L. Bovo, Jr., Vice Chairman

Bruno A. Barreiro	Daniella Levine Cava
Jose "Pepe" Diaz	Audrey M. Edmonson
Sally A. Heyman	Barbara J. Jordan
Dennis C. Moss	Rebeca Sosa
Sen. Javier D. Souto	Xavier L. Suarez
Juan C. Zapata	

The Chairperson thereupon declared the resolution duly passed and adopted this 17th day of May, 2016. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this Resolution and the filing of this approval with the Clerk of the Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

David M. Murray

This instrument was prepared by:
Langan Engineering & Environmental Services
15150 NW 79th Court, Suite 200
Miami Lakes, FL 33016

COVENANT RUNNING WITH THE LAND IN FAVOR OF MIAMI-DADE COUNTY, FLORIDA, REQUIRING INSTITUTIONAL CONTROLS AND ENGINEERING CONTROLS AT REAL PROPERTY LOCATED AT Former Building 1034, Miami International Airport, Miami, MIAMI-DADE COUNTY, FLORIDA.

The Owner, Miami-Dade County, holds the fee simple title to the parcel of real property legally described as set forth in Exhibit A, attached hereto and incorporated herein by reference, and located at Miami International Airport, Miami-Dade County, Florida, and furthermore identified for ad valorem tax purposes by all or part of Folio Number 30-3025-001-0100 (hereinafter referred to as the "Property"), hereby creates a covenant pursuant to Section 24-44 (2)(k)(ii) of Chapter 24, Code of Miami-Dade County, Florida, on behalf of the Owner, heirs, successors, grantees and assigns, running with the land to and in favor of Miami-Dade County, a political subdivision of the State of Florida (hereinafter referred

to as the "County"), its successors, grantees and assigns, pursuant to Section 24-44 (2)(k)(ii) of Chapter 24 of the Code of Miami-Dade County, Florida, with respect to the Property as follows:

The Owner covenants and agrees to the following:

A. The Owner of the Property has elected to implement institutional and engineering controls on the Property to obtain approval for a No Further Action with Conditions proposal pursuant to Section 24-44 (2)(k)(ii) of Chapter 24 of the Code of Miami-Dade County, Florida. The institutional and engineering controls that are applicable to the Property have been initialed as set forth below. These institutional and engineering controls afford a level of protection to human health, public safety and the environment that is equivalent to that provided by Section 24-44 (2)(f)(i) and Section 24-44 (2)(f)(ii) of Chapter 24, Code of Miami-Dade County, Florida. The applicable institutional and engineering controls are set forth as follows:

1. _X_ The Property shall not be used for residential purposes.
2. _X_ The Property shall not be used for a children's nursery, children's day care center, children's school, children's camp, or any other similar facility.
3. _X_ Groundwater from the Property shall not be used for drinking water purposes.
4. _X_ Groundwater from the Property shall only be withdrawn for monitoring of pollution.
5. _X_ Contaminated soil, as delineated in the Site Assessment Report dated 9/11/2006 and approved by the Director of the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns, shall not be removed from the Property without prior written approval of the Miami-Dade County Department of Regulatory and Economic Resources, its

successors or its assigns. The Site Assessment report is summarized in Exhibit B, which is incorporated by reference.

6. ___ Other applicable institutional controls as set forth below:

_____

_____

_____

_____

_____

_____

7. _X_ Engineering controls, detailed in the Engineering Control Plan dated __13 November 2013_ and approved by the Director of the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns. The Engineering Control Plan is summarized in Exhibit C, which is incorporated by reference.

B. Prior to the entry into a landlord-tenant relationship with respect to the Property, the Owner agrees to notify in writing all proposed tenants of the Property of the existence and contents of this Covenant.

C. For the purpose of inspecting for compliance with the institutional and engineering controls contained herein, the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns, shall have access to the Property at reasonable times and with reasonable notice to the Owner of the Property. In the event that the Owner does not or will not be able to comply with any of the

institutional and engineering controls contained herein, the Owner shall notify in writing the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns, within three (3) calendar days.

D. This Covenant may be enforced by the Director of the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns, by permanent, temporary, prohibitory, and mandatory injunctions as well as otherwise provided for by law or ordinance.

E. The provisions of this instrument shall constitute a covenant running with the land, shall be recorded, at the Owner's expense, in the public records of Miami-Dade County and shall remain in full force and effect and be binding upon the undersigned, their heirs, legal representatives, estates, successors, grantees and assigns until a release of this Covenant is executed and recorded in the Public Records of Miami-Dade County, Florida.

F. This Covenant is to run with the land and shall be binding on all parties and all persons claiming under it for a period of thirty (30) years after the date this Covenant is recorded, after which time it shall be extended automatically for successive periods of ten (10) years each, unless the Covenant is modified or released by Miami-Dade County.

G. Upon demonstration to the satisfaction of the Director of the Department of Regulatory and Economic Resources, its successors or its assigns, that the institutional controls and engineering controls set forth in this Covenant are no longer necessary for the purposes herein intended because the criteria set forth in Section 24-44 (2)(k)(i) of

Chapter 24 of the Code of Miami-Dade County, Florida have been met, the Director of the Department of Regulatory and Economic Resources, its successors or its assigns, shall, upon written request of the Owner, release this Covenant.

H. The Owner shall notify the Director of the Miami-Dade County Department of Regulatory and Economic Resources, its successors or its assigns, within thirty (30) days of any conveyance, sale, granting or transfer of the Property or portion thereof, to any heirs, successors, assigns or grantees, including, without limitation, the conveyance of any security interest in said Property.

I. The term Owner shall include the Owner and its heirs, successors and assigns.

IN WITNESS WHEREOF, the undersigned, being the Owner of the Property, agrees to the provisions of this Covenant, hereby create same as a Covenant Running with the Land in favor of Miami-Dade County and set their hands and seal unto this Covenant this _____ day of _____.

WITNESSES:
sign _____
print _____
sign _____
print _____
sign _____
print _____

OWNER:
sign _____
print _____
Title _____
Address _____

STATE OF FLORIDA
COUNTY OF MIAMI-DADE

The foregoing instrument was acknowledged before me this _____ day of _____, _____ by _____, as _____ for Miami-Dade County. He or she is personally known to me or has produced _____ as identification and who did take an oath.

11

NOTARY PUBLIC:
sign _____
print _____
State of Florida at Large (Seal)
My Commission Expires: _____

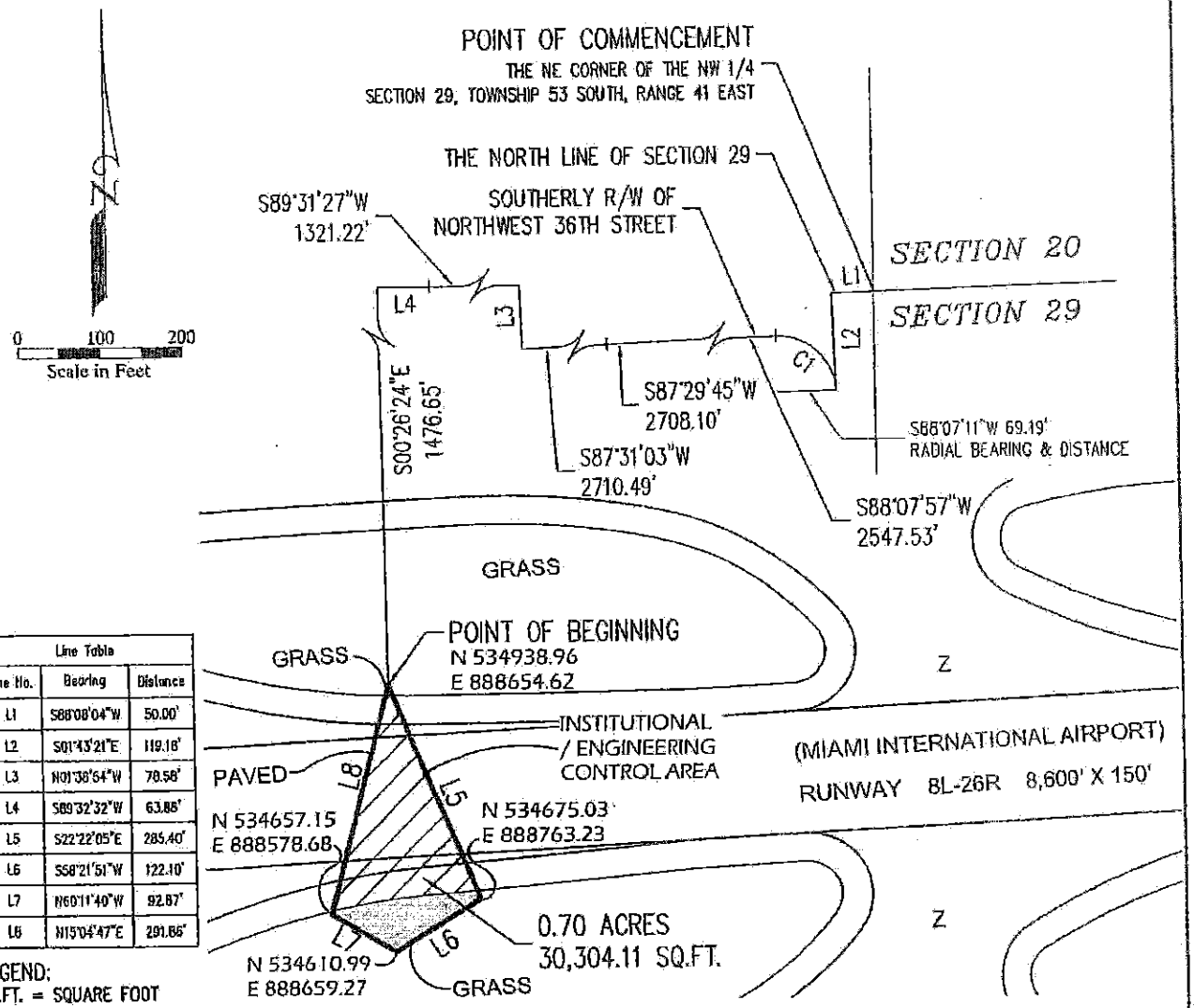
Standard Covenant Form
Former Building 1034
Miami International Airport
IW5-4217/File-3899

Exhibit A
Legal Description with Survey of Institutional Control Area

The legal description with survey of institutional control area is enclosed.

THIS IS NOT A SURVEY

REVISION: ADD COORDINATE LABELING / HATCHING, 2013/11/13, SKA



Line Table		
Line No.	Bearing	Distance
L1	S88°08'04"W	50.00'
L2	S01°43'21"E	119.18'
L3	N01°38'54"W	78.58'
L4	S89°32'32"W	63.88'
L5	S22°22'05"E	285.40'
L6	S58°21'51"W	122.10'
L7	N60°11'40"W	92.87'
L8	N15°04'47"E	291.66'

LEGEND:
SQ.FT. = SQUARE FOOT

Surveyor's Notes:
1. The sketch depicted hereon is for graphic representation only and does not reflect a field survey.
2. No instruments of record reflecting easements, rights-of-way, and or ownership were furnished to or pursued by the undersigned.
3. Unless it bears the signature and the original raised seal of a Florida Licensed Surveyor and mapper this drawing, sketch, plat or map is for informational purposes only and is not valid
4. Bearings are based on the North Line of Section 29 bearing being S88°08'04"W.

Curve Table					
Curve No.	Radius	Delta	Length	Chord Bearing	Chord Distance
C1	69.19'	89°49'40"	108.40'	N46°47'38"W	97.70'

MDAD Sketch and Legal

LANGAN

SCALE	DATE	DRAWN	CALCED	CHECKED
1" = 200'	08/15/2013	G.C.O.	T.W.S.	T.W.S.
JOB No.		SECTION	TOWNSHIP	RANGE
4918-000-001		25	53 SOUTH	40 EAST

King
ENGINEERING ASSOCIATES, INC.
4921 Memorial Highway
Tampa, FL 33634
www.Kingengineering.com
Engineering License #2610
PHONE 813-880-8881
FAX 813-880-8882
E-MAIL king@kingengineering.com

CERTIFIED AS TO SKETCH AND LEGAL DESCRIPTION

Sketch and Legal Description not valid without the signature and the original raised seal of a Florida licensed Surveyor and Mapper.

SCOTT K. ACKER
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA # L.S. 6045
CERTIFICATE OF AUTHORIZATION No. LB 2610

C:\SURVEY\4918\000\001\Legals And Sketches\Monitoring Wells Surveyed Area REV1.dwg

THIS IS NOT A SURVEY

DESCRIPTION

A parcel of land situate within Section 25, Township 53 South, Range 40 East, Miami-Dade County, Florida and being more particularly described as follows:

Commencing at the Northeast corner of the Northwest Quarter of Section 29, Township 53 South, Range 41 East, Miami-Dade County, Florida; thence S88°08'04"W along the North Line of said Northwest quarter, Section 29, a distance of 50.00 feet; thence departing the North Line of said Section 29, S01°43'21"E, a distance of 119.18 feet to the Southerly Right-of-Way of Northwest 36th Street (a variable-width Right-of-Way as currently established) and a point of cusp on a non-tangent curve to the left, of which the radius point lies S88°07'11"W, a radial distance of 69.19 feet; thence northwesterly along said Southerly Right-of-Way of Northwest 36th Street and said arc, through a central angle (Delta) of 89°49'40", a distance of 108.48 feet; thence continuing along said Southerly Right-of-Way, S88°07'57"W, a distance of 2,547.53 feet; thence S87°29'45"W, a distance of 2,708.10 feet; thence S87°31'03"W, a distance of 2,710.49 feet; thence N01°38'54"W, a distance of 78.58 feet; thence S89°31'27"W, a distance of 1,321.22 feet; thence S89°32'32"W, a distance of 63.86 feet; thence departing the Southerly Right-of-Way of said Northwest 36th Street S00°26'24"E, a distance of 1,476.65 feet to the POINT OF BEGINNING; Thence S22°22'05"E, a distance of 285.40 feet; thence S58°21'51"W, a distance of 122.10 feet; thence N60°11'40"W, a distance of 92.87 feet; thence N15°04'47"E, a distance of 291.86 feet returning to the POINT OF BEGINNING.

Containing 30,304.11 square feet or 0.70 acres, more or less.

MDAD SKETCH AND LEGAL

LANGAN

King
ENGINEERING ASSOCIATES, INC.
4921 Memorial Highway
Tampa, FL 33634
www.Kingengineering.com
Engineering License #2610
PHONE 813-880-8881
FAX 813-880-8882
E-MAIL king@kingengineering.com

Q:\SURVEY\4918\000\001\Legals And Sketches\Monitoring Wells Surveyed Area REV1.dwg

Standard Covenant Form
Former Building 1034
Miami International Airport
IW5-4217/File-3899

Exhibit B
Contamination Assessment Summary

Synopsis of the Assessment Process

During demolition for the north runway project, a 2,000-gallon underground storage tank was discovered in a swale on the south side of Runway 8-26 between swales L2 and L3. IT Corporation removed the tank and submitted a Tank Closure Assessment Report (TCAR) in August 2001, which noted elevated concentrations of petroleum hydrocarbon vapors on the excavation wall adjacent to the old service road. Shaw submitted a TCAR Addendum in February 2003, which documented benzo(a)pyrene in excavation wall samples Northwall Conf. 2 (0.863 milligram per kilogram [mg/kg]) and Northwall Conf. 3 (1.85 mg/kg) at concentrations above the Direct Exposure-Commercial/Industrial (DEC/I) Soil Cleanup Target Level (SCTL, Chapter 62-770, FAC) of 0.7 mg/kg. (Those concentrations also exceed the current benzo(a)pyrene toxic equivalency DEC/I of 0.7 mg/kg.)

In June 2003 EA Engineering, Science, and Technology, Inc. (EA) submitted a Site Assessment Report (SAR), which documented:

- Benzo(a)pyrene in soil sample SB-1 at 1.1 mg/kg, which exceeds the DEC/I SCTL.
- Benzene in MW-1, -2, and -3 at 1.1 µg/L, which exceeds the GCTL of 1.0 µg/L.

In September 2006, Langan Engineering & Environmental Services submitted a Site Assessment Report/Natural Attenuation Monitoring (NAM) Plan, which documented:

- Isopropyl benzene in MW-4R (6.0 µg/L), which exceeds the GCTL of 0.8 µg/L
- Benzene in MW-6 at 4.62 µg/L.

The report recommended one year of groundwater monitoring and no further action without conditions for soil. The Miami-Dade Department of Environmental Resources Management (DERM) approved the NAM Plan on 23 January 2007, but stated that

> The request for no further action without conditions for soil cannot be approved at this time. The soil samples ... indicate that PAHs exceed soil cleanup target levels. Therefore, in order to achieve an unconditional closure for soils, additional soil investigation (i.e., confirmation samples) and/or source removal is required.

After one year of groundwater monitoring, benzene concentrations in MW-6 decreased to below the GCTL but isopropyl benzene concentrations in MW-4R and MW-6 continued above the GCTL and, in MW-4R in February 2008, isopropyl benzene (11.0 µg/L) exceeded the Natural Attenuation Default Concentration of 8.0 µg/L. DERM concluded that "a reduction in groundwater contaminant concentrations has not been achieved." MDAD decided to pursue conditional closure for the site. DERM stated the requirements for conditional closure:

> The groundwater sampling required once prior to closure in accordance with the January 23, 2007 monitoring only approval order shall be conducted. Provided that the boundary sample results do not exceed applicable groundwater cleanup target levels, a closure with conditions report to address soils and groundwater shall be submitted.

On 15 January 2009, Langan submitted a Soil and Groundwater Sampling Plan (SGSP) to DERM, which recommended no additional groundwater assessment at that time and additional soil sampling for conditional closure. On 24 March 2009, DERM approved the SGSP. DERM provided the following comments based on the selected remedy of closure with conditions:

1. DERM concurs that additional groundwater investigation is not required at this time.

2. Based on the information provided, excavation wall confirmation samples in addition to soil borings B-1, B-2, and B-7 define the southern, eastern, and northern extent of the vadose zone soil impacts. DERM only requires confirmation soil samples from the area represented by SB-1, SB-2, and SB-3 at this time. Therefore, re-install the referenced soil borings and sample and analyze the 2-foot interval just above the water table for VOA (including isopropylbenzene), PAH, and FL PRO. At each boring, archive each remaining 2-foot interval to the surface for analyses of the referenced parameters depending on the initial sample results. Soil boring PSB-11 and a soil boring at former location SB-6 shall be installed and each 2-foot interval from the surface to the water table shall be archived. Analyses of these additional soil borings shall only be required if additional delineation is needed based on the SB-1, 2, and 3 resample results.

3. Provide the summary table of the analytical results from soil borings B-1, B-2, and B-7 referenced above.

On 4 June 2010, Langan submitted to DERM a Supplemental Site Assessment Report (SSAR), which reported on the sampling and analysis of soil samples from SB-1, -2, and -3. The report concluded that:

> Laboratory analysis did not confirm concentrations of PAHs (or other COCs) above SCTLs in SB-1, -2, or -3. Therefore, according to Chapter 24-44(2)(k), Code of Miami-Dade County, Langan believes that the site qualifies for no further action without conditions for soil. In accordance with DERM's 2008 closure requirements, and because the ground water has not been assessed in more than one year, Langan recommends one sampling event for all monitoring wells, as a prelude to conditional closure for ground water.

DERM responded on 29 July 2010 and stated:

> DERM concurs with additional groundwater sampling; however, all monitoring wells as proposed are not required. A minimum of two additional quarterly groundwater sampling events are required from monitoring wells MW-3 and MW-2R and one additional groundwater sampling event is required from MW-7 and MW-5. Sampling shall be conducted for VOAs [volatile organic aromatics] including isopropylbenzene, and arsenic.

On 14 December 2010, DERM agreed that the wells would be sampled for volatile organic compounds and arsenic.

Langan sampled MW-2R and MW-3 on 11 March 2011. Laboratory analysis did not detect compounds of concern at concentrations above cleanup target levels. Langan sampled MW-2R, -3, and -7 on 4 August 2011. (Langan could not locate and sample MW-5. In an email dated 4 August 2011, DERM agreed to remove the sampling requirements for MW-5.) Laboratory analysis did not detect compounds of concern at concentrations above cleanup target levels. Langan recommended preparing a No Further Action with Conditions (NFAC) Plan according to Chapter 24, Code of Miami-Dade County, and DERM RBCA Guidance 7F. The Miami-Dade Department of Permitting, Environment and Regulatory Affairs (PERA, successor to DERM) approved the recommendation on 23 September 2011.

Table 1 summarizes the soil analytical data and Table 2 summarizes the groundwater analytical data.

Use of "Shaded" Soil
DERM regulations in effect at the time allowed the Miami-Dade Aviation Department (MDAD) to use contaminated ("shaded") soil excavated at other airport construction projects as backfill on airport property below an impervious surface. Such "shaded" soil was used as backfill for the 2001 and 2002 excavations.

Institutional Control
Figure 1 shows the proposed Institutional Control boundaries and the proposed Engineering Control boundaries. Figure 2 shows the sample results for the contaminated soil locations. Contaminated soil locations Northwall Conf. 2 and Northwall Conf. 3 are delineated by soil boring locations B-1, B-7, B-2, and SB-5. Figure 3 shows the contaminated groundwater plume at MW-4R and MW-6, which is delineated by MW-1R, MW-7, MW-2, and MW-3.

Table 1
Soil Analytical Summary
Miami International Airport
Former Building 1034
Miami, Florida
300029301

			Sample ID	Northwall Conf. 2	Northwall Conf. 3	SB-1		SB-2		SB-3		SB-4	SB-5	SB-6	SB-7	B-1	B-2	B-7
			Sample Interval	5-6		4-6										4-5		
			Sample Date	10/9/2002		1/13/2003	4/28/10	1/13/2003	4/28/10	1/13/2003	4/28/10	5/15/2003				7/31/06		
Parameters	**DER**	**DEC/I**	**LBGC**															
Volatile Organics																		
Chlorobenzene	120	650	1.3	0.1 U	0.1 U	**	0.0002 U	**	0.0001 U	**	0.0006 I	0.100 U	0.100 U	0.100 U	0.100 U	0.000804 U	0.00103 U	0.00102 U
Dichlorobenzene, 1,2-	880	5,000	17	0.1 U	0.1 U	**	0.0002 U	**	0.0002 U	**	0.0008 I	0.100 U	0.100 U	0.100 U	0.100 U	**	**	**
Isopropylbenzene	220	1,200	0.2	**	**	**	0.0001 U	**	0.0001 U	**	0.0005 I	**	**	**	**	**	**	**
Semivolatile Organics																		
Acenaphthylene	1,800	20,000	27	0.33 U	0.33 U	0.110 U	0.046 I	0.110 U	0.045 U	0.110 U	0.044 U	0.330 U	0.330 U	0.330 U	0.330 U	0.052 U	0.051 U	0.049 U
Acenaphthene	2,400	20,000	2.1	0.33 U	0.423	0.490	0.026 U	0.150	0.029 U	0.120	0.125 U	0.330 U	0.330 U	0.330 U	0.330 U	0.039 U	0.038 U	0.037 U
Anthracene	21,000	300,000	2,500	0.747	1.19	0.320	0.046 I	0.460	0.045 U	0.210	0.044 U	0.330 U	0.330 U	0.330 U	0.330 U	0.052 U	0.051 U	0.049 U
Benzo(a)anthracene	#	#	0.8	*1.04*	*2.40*	*1.600*	0.121	0.790	0.036 U	0.460	0.035 U	0.330 U	0.330 U	0.330 U	0.330 U	0.039 U	0.038 U	0.037 U
Benzo(a)pyrene	0.1	0.7	8	***0.863***	***1.85***	***1.100***	0.076 I	**0.580**	0.032 U	**0.360**	0.031 U	0.100 U	0.100 U	0.100 U	0.100 U	0.039 I	0.038 U	0.037 U
Benzo(b)fluoranthene	#	#	2.4	1.45	*2.99*	1.600	0.098 I	0.880	0.026 U	0.510	0.025 U	0.330 U	0.330 U	0.330 U	0.330 U	0.051 I	0.038 U	0.037 U
Benzo(g,h,i)perylene	2,500	52,000	32,000	0.33 U	0.33 U	0.720	0.046 I	0.400	0.035 U	0.280	0.034 U	0.330 U	0.330 U	0.330 U	0.330 U	0.039 U	0.038 U	0.037 U
Benzo(k)fluoranthene	#	#	24	0.483	0.33 U	0.560	0.062 I	0.270	0.043 U	0.160	0.041 U	0.330 U	0.330 U	0.330 U	0.330 U	0.040 U	0.039 U	0.037 U
Bis(2-ethylhexyl)phthalate	72,000	390	3,600	**	**	**	**	**	**	**	**	0.330 U	0.330 U	0.330 U	0.330 U	0.071 I	0.040 I	0.037 U
Chrysene	#	#	77	0.930	2.22	1.400	0.105 I	0.730	0.030 U	0.420	0.029 U	0.330 U	0.330 U	0.330 U	0.330 U	0.046 I	0.038 U	0.037 U
Dibenz(a,h)anthracene	#	#	0.7	0.1 U	0.1 U	0.220	0.032 U	0.120	0.035 U	0.067	0.034 U	0.100 U	0.100 U	0.100 U	0.100 U	0.047 U	0.046 U	0.044 U
Fluoranthene	3,200	59,000	1,200	2.46	4.63	3.900	0.262	2.000	0.049 U	1.100	0.048 U	0.330 U	0.330 U	0.330 U	0.330 U	0.062 I	0.042 U	0.040 U
Fluorene	2,600	33,000	160	0.413	0.567	0.390	0.027 U	0.160	0.030 U	0.110 U	0.125 U	0.330 U	0.330 U	0.330 U	0.330 U	0.039 U	0.038 U	0.037 U
Indeno(1,2,3-cd)pyrene	#	#	6.6	0.33 U	0.33 U	0.540	0.040 U	0.220	0.044 U	0.220	0.043 U	0.330 U	0.330 U	0.330 U	0.330 U	0.057 U	0.056 U	0.053 U
Methylnaphthalene, 1-	200	1,800	3.1	0.33 U	0.33 U	0.230	0.032 U	0.110 U	0.035 U	0.110 U	0.125 U	0.330 U	0.330 U	0.330 U	0.330 U	**	**	**
Naphthalene	55	300	1.2	0.33 U	0.33 U	0.240	0.025 U	0.110 U	0.027 U	0.110 U	0.125 U	0.330 U	0.330 U	0.330 U	0.330 U	0.042 U	0.041 U	0.039 U
Phenanthrene	2,200	36,000	250	3.16	4.53	3.400	0.166	1.700	0.041 U	0.950	0.041 U	0.330 U	0.330 U	0.330 U	0.330 U	0.039 U	0.038 U	0.037 U
Pyrene	2,400	45,000	880	2.60	5.70	3.400	0.193	1.400	0.043 U	0.950	0.043 U	0.330 U	0.330 U	0.330 U	0.330 U	0.060 I	0.043 U	0.042 U
TEQ	0.1	0.7	N/A	***1.185***	***2.46***	**0.171**	0.117	***0.905***	-	**0.548**	-	-	-	-	-	0.055	-	-
Total Recoverable Petroleum Hydrocarbons																		
TRPH	460	2,700	340	117	209	120	5.87	48	3.76 U	13	3.63 U	4.23	27.8	35.39	27.46	13.33	36.408	4.057
Total Metals																		
Arsenic	2.1	12	*	**	**	**	**	**	**	**	**	**	**	**	**	0.827	0.559 I	0.099 U
Chromium	210	470	98	**	**	**	**	**	**	**	**	**	**	**	**	6.22	4.41	0.099 U
Lead	400	1,400	*	**	**	**	**	**	**	**	**	**	**	**	**	10.5	4.71	0.977

This table includes only those analytes detected above method detection limits.
= Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to benzo(a)pyrene equivalents (TEQ).
* = Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.
** = not analyzed
Bold = concentration exceeds DER Soil Cleanup Target Level
Bold Italic = concentration exceeds DEC/I Soil Cleanup Target Level
Concentrations are in milligrams per kilograms
DEC/I = Direct Exposure-Commercial/Industrial Soil Cleanup Target Level (Chapter 62-777, FAC)
DER = Direct Exposure-Residential Soil Cleanup Target Level (Chapter 62-777, FAC)
I = analyte detected but could not be quantified with certainty
Italic = concentration exceeds LBGC Soil Cleanup Target Level
LBGC = Leachability Based on Groundwater Criteria Soil Cleanup Target Level (Chapter 62-777, FAC)
N/A = cleanup target level is not available
U = not detected at the method detection limit

Table 2
Groundwater Analytical Summary
2011 Quarter 1 Groundwater Monitoring Report
Former Building 1034
Miami International Airport
Miami, Florida
300029301

				MW-1R						MW-2/MW-2R				MW-3			
			Sampling Date	1/20/03	5/21/06	8/6/06	11/9/07	2/5/08	5/14/08	1/20/03	5/21/06	3/11/11	8/4/11	1/20/03	5/21/06	3/11/11	8/4/11
Parameters	Units	GCTL	NADC														
Metals																	
Arsenic	mg/L	0.01	0.10	-	0.0054 V	0.0016 I	0.0052	0.0067	-	-	0.00077 I	0.00611	0.0095	-	0.0018 I	0.0045 U	0.005 U
Barium	mg/L	2.0	20.0	-	0.014	-	-	-	-	-	0.014	-	-	-	0.018	-	-
Cadmium	mg/L	0.005	0.050	-	0.0002 U	-	-	-	-	-	0.0017 I	-	-	-	0.0002 U	-	-
Chromium	mg/L	0.1	1.0	-	0.00047 I	-	-	-	-	-	0.0029	-	-	-	0.00320	-	-
Lead	mg/L	0.015	0.15	0.005 U	0.00033 U	-	-	-	-	0.015	0.00087 I	-	-	0.005 U	0.00042 I	-	-
Polynuclear Aromatic Hydrocarbons																	
Acenaphthene	µg/L	20	200	1.0	0.021 U	-	-	-	-	1.0 U	0.059 I	-	-	1.0 U	0.021 U	-	-
Fluorene	µg/L	280	2800	1.0	0.031 U	-	-	-	-	1.0 U	0.077 I	-	-	1.0 U	0.031 U	-	-
Methylnaphthalene, 1-	µg/L	28	280	17	0.044 U	-	-	-	-	15	0.072 I	-	-	3.9	0.044 U	-	-
Methylnaphthalene, 2-	µg/L	28	280	12	0.077 U	-	-	-	-	1.0 U	0.077 U	-	-	1.0 U	0.077 U	-	-
Naphthalene	µg/L	14	140	2.9	0.023 U	-	-	-	-	1.4	0.023 U	-	-	1.0 U	0.023 U	-	-
Phenanthrene	µg/L	210	2100	3.6	0.032 U	-	-	-	-	2.1	0.11 I	-	-	1.0 U	0.032 U	-	-
Total Recoverable Petroleum Hydrocarbons																	
TRPH	mg/L	5.0	50	2.4	0.15 U	-	-	-	-	3.3	1.1	-	-	3.1	0.15 U	-	-
Volatile Organic Compounds																	
Acetone	µg/L	6,300	63,000	-	6.7 U	-	-	-	-	-	6.7 U	12.5	1.99 U	-	6.7 U	1.99 U	1.99 U
Benzene	µg/L	1.0	100	1.1	0.18 U	0.211 U	0.211 U	0.16 U	0.211 U	1.1	0.18 U	0.249 U	0.249 U	1.1	0.18 U	0.249 U	0.249 U
Butylbenzene, n-	µg/L	N/A	N/A	-	0.26 U	-	0.452 U	0.17 U	0.452 U	-	0.32 I	0.114 U	0.114 U	-	0.26 U	0.114 U	0.114 U
Butylbenzene, sec-	µg/L	N/A	N/A	-	0.24 U	-	0.327 U	0.21 U	0.327 U	-	2.2	1.21	0.00073 I	-	0.24 U	0.107 U	0.107 U
Butylbenzene, tert-	µg/L	N/A	N/A	-	0.26 U	-	0.339 U	0.18 U	0.339 U	-	0.52 I	0.25 I	0.00014 I	-	0.26 U	0.110 U	0.110 U
Chlorobenzene	µg/L	100	1000	63	0.82 I	-	1.00 U	0.15 U	0.245 U	79	6.8	4.56	2.94	37	0.23 U	0.176 U	0.176 U
Chlorotoluene, 2-	µg/L	140	1400	-	0.27 U	-	0.296 U	0.19 U	0.296 U	-	0.27 U	0.0989 U	0.0989 U	-	0.27 U	0.0989 U	0.0989 U
Ethylbenzene	µg/L	30	300	1.0 U	0.26 U	0.196 U	0.196 U	0.19 U	0.196 U	1.0 U	0.26 U	0.21 U	0.210 U	1.0 U	0.26 U	0.210 U	0.210 U
Isopropylbenzene	µg/L	0.8	8.0	-	0.19 U	0.238 U	0.238 U	0.15 U	0.238 U	-	0.32 I	0.212 U	0.212 U	-	0.19 U	0.212 U	0.212 U
Isopropyltoluene, 4-	µg/L	N/A	N/A	-	0.25 U	-	0.353 U	0.13 U	-	-	0.59	0.353 U	0.353 U	-	0.25 U	0.353 U	0.353 U
Methylene chloride	µg/L	5.0	500	5.0 U	0.41 IV	-	0.639 U	0.42 U	0.639 U	5.0 U	0.29 IV	1.27 U	1.27 U	5.0 U	0.43 IV	1.27 U	1.27 U
MTBE	µg/L	20	200	1.0 U	0.19 U	0.261 U	0.261 U	0.18 U	0.261 U	1.0 U	0.19 U	0.460 U	0.460 U	1.0 U	0.19 U	0.460 U	0.460 U
Propylbenzene, n-	µg/L	N/A	N/A	-	0.24 U	-	1.00 U	0.18 U	1.00 U	1.0 U	0.24 U	0.108 U	0.108 U	1.0 U	0.24 U	0.108 U	0.108 U
Tetrachloroethene	µg/L	3	300	2.4	0.24 U					1.0 U	0.24 U		0.0977 U	1.0 U	0.24 U		0.0977 U
Toluene	µg/L	40	400	1.0 U	0.26 U	0.247 U	0.247 U	0.14 U	0.247 U	1.0 U	0.26 U	0.201 U	0.201 U	1.0 U	0.26 U	0.201 U	0.201 U
Vinyl chloride	µg/L	1.0	100	1.0 U	0.42 I	-	0.414 U	0.19 U	1.00 U	1.0 U	0.23 U	0.192 U	0.192 U	1.0 U	0.23 U	0.192 U	0.192 U
Xylenes	µg/L	20	200	9.4	0.25 U	0.398 U	0.398 U	0.15 U	0.398 U	9.8	0.25 U	0.259 U	0.259 U	6.0	0.25 U	0.259 U	0.259 U

Table lists only compounds detected above laboratory limits. If a compound was not detected in any sample, that compound is not included in this table.
Bold = concentration exceeds the GCTL
Italic = concentration exceeds the NADC
N/A = a GCTL is not available
- = Not analyzed
I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U = The compound was analyzed for but not detected.
V = The analyte was detected in both the sample and the associated method blank.

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Table 2
Groundwater Analytical Summary
2011 Quarter 1 Groundwater Monitoring Report
Former Building 1034
Miami International Airport
Miami, Florida
300029301

				MW-4/MW-4R								MW-5			
		Sampling Date		5/16/03	5/22/03	8/29/03	5/21/06	8/6/06	11/9/07	2/5/08	5/14/08	5/16/03	5/22/03	8/29/03	5/21/06
Parameters	Units	GCTL	NADC												
Metals															
Arsenic	mg/L	0.01	0.10	0.008 U	-	0.008 U	0.00084 I	0.0008 U	0.0016 I	0.0009 I	-	0.008 U	-	0.008 U	0.0061
Barium	mg/L	2.0	20.0		-	-	0.023	-	-	-	-	-	-	-	0.017
Cadmium	mg/L	0.005	0.050		-	-	0.0002 U	-	-	-	-	-	-	-	0.0002 U
Chromium	mg/L	0.1	1.0		-	-	0.0024	-	-	-	-	-	-	-	0.00064 I
Lead	mg/L	0.015	0.15		-	-	0.00033 U	-	-	-	-	-	-	-	0.00055 I
Polynuclear Aromatic Hydrocarbons															
Acenaphthene	µg/L	20	200	3.0 U	10 U	-	0.12 I	-	-	-	-	3.0 U	10 U	-	0.044 U
Fluorene	µg/L	280	2800	5.0 U	10 U	-	0.063 I	-	-	-	-	5.0 U	10 U	-	0.077 U
Methylnaphthalene, 1-	µg/L	28	280	5.0 U	10 U	-	2.5	-	-	-	-	5.0 U	10 U	-	0.021 U
Methylnaphthalene, 2-	µg/L	28	280	5.0 U	10 U	-	0.077 U	-	-	-	-	5.0 U	10 U	-	0.031 U
Naphthalene	µg/L	14	140	5.0 U	10 U	-	0.023 U	-	-	-	-	5.0 U	10 U	-	0.023 U
Phenanthrene	µg/L	210	2100	5.0 U	10 U	-	0.033 I	-	-	-	-	5.0 U	10 U	-	0.032 U
Total Recoverable Petroleum Hydrocarbons															
TRPH	mg/L	5.0	50	0.5 U	-	-	1.9	-	-	-	-	0.5 U	-	-	0.22 I
Volatile Organic Compounds															
Acetone	µg/L	6,300	63,000	-	100 U	100 U	6.7 U	-	-	-	-	-	100 U	100 U	6.7 U
Benzene	µg/L	1.0	100	1.0 U	1.0 U	1.0 U	0.18 U	0.211 U	0.211 U	0.16 U	0.211 U	1.0 U	1.0 U	1.0 U	0.18 U
Butylbenzene, n-	µg/L	N/A	N/A	-	1.0 U	1.0 U	0.26 U	-	0.452 U	0.17 U	0.452 U	-	1.0 U	1.0 U	0.26 U
Butylbenzene, sec-	µg/L	N/A	N/A	-	1.0 U	1.0 U	12	-	8.51	21.2	16.6	-	1.0 U	1.0 U	0.24 U
Butylbenzene, tert-	µg/L	N/A	N/A	-	1.0 U	1.0 U	4.0	-	2.67	5.45	4.47	-	1.0 U	1.0 U	0.26 U
Chlorobenzene	µg/L	100	1000	1.0 U	1.0 U	1.0 U	4.5	-	2.92	4.5	3.04	1.0 U	1.0 U	1.0 U	0.23 U
Chlorotoluene, 2-	µg/L	140	1400	1.0 U	1.0 U	1.0 U	2.9	-	0.296 U	3.04	2.01	1.0 U	1.0 U	1.0 U	0.27 U
Ethylbenzene	µg/L	30	300	1.0 U	1.0 U	1.0 U	0.26 U	0.196 U	0.196 U	0.19 U	0.196 U	1.0 U	1.0 U	1.0 U	0.26 U
Isopropylbenzene	µg/L	0.8	8.0	-	1.0 U	1.0 U	**6.0**	**6.32**	***5.38***	***11.0***	**6.98**	-	1.0 U	1.0 U	0.19 U
Isopropyltoluene, 4-	µg/L	N/A	N/A	-	1.0 U	1.0 U	0.25 U	-	0.353 U	12.1	-	-	1.0 U	1.0 U	0.25 U
Methylene chloride	µg/L	5.0	500	-	1.0 U	1.0 U	0.47 IV	-	0.639 U	0.42 U	0.639 U	-	1.0 U	1.0 U	0.4 IV
MTBE	µg/L	20	200	-	1.0 U	1.0 U	0.19 U	0.261 U	0.261 U	0.18 U	0.261 U	-	1.0 U	1.0 U	0.23 I
Propylbenzene, n-	µg/L	N/A	N/A	-	1.0 U	1.0 U	0.25 I	-	1.00 U	0.18 U	1.00 U	-	1.0 U	1.0 U	0.24 U
Tetrachloroethene	µg/L	3	300	1.0 U	1.0 U	1.0 U	0.24 U					1.0 U	1.0 U	1.0 U	0.24 U
Toluene	µg/L	40	400	1.0 U	1.0 U	1.0 U	0.26 U	0.62 I	0.247 U	0.14 U	0.247 U	1.0 U	1.0 U	1.0 U	0.31 I
Vinyl chloride	µg/L	1.0	100	1.0 U	1.0 U	1.0 U	0.23 U	-	0.414 U	0.19 U	1.00 U	1.0 U	1.0 U	1.0 U	0.23 U
Xylenes	µg/L	20	200	1.0 U	1.0 U	1.0 U	0.55 I	0.73 I	0.398 U	1.44	0.398 U	1.0 U	1.0 U	1.0 U	0.25 U

Table lists only compounds detected above laboratory limits. If a compound was not detected in any sample, that compound is not included in this table.
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Italic = concentration exceeds the NADC
N/A = a GCTL is not available
- = Not analyzed
I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U = The compound was analyzed for but not detected.
V = The analyte was detected in both the sample and the associated method blank.

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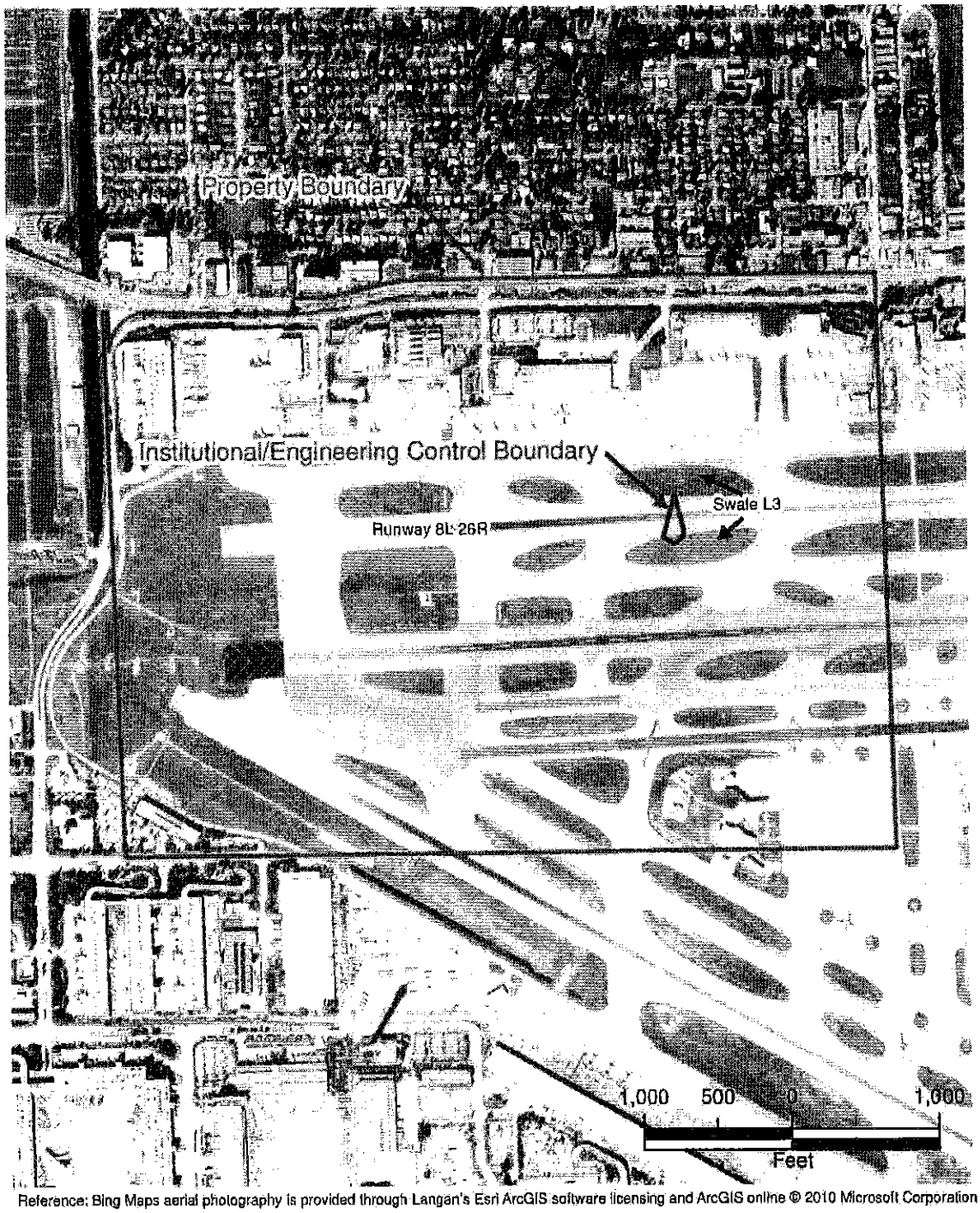
Table 2
Groundwater Analytical Summary
Former Building 1034
Miami International Airport
Miami, Florida
300029301

				MW-6									MW-7							
			Sampling Date	5/16/03	5/22/03	6/9/03	8/27/03	5/21/06	8/6/06	11/9/07	2/5/08	5/14/08	5/16/03	5/22/03	8/29/03	8/6/06	11/9/07	2/5/08	5/14/08	8/4/11
Parameters	Units	GCTL	NADC																	
Metals																				
Arsenic	mg/L	0.01	0.10	**0.017**	-	0.009	0.04	0.002	0.002 I	0.002 I	0.800 U	-	0.008 U	-	0.008 U	0.003	0.0036	0.001 I	-	0.005 U
Barium	mg/L	2.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.005	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.1	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.015	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polynuclear Aromatic Hydrocarbons																				
1-Methylnaphthalene	µg/L	28	280	3.0 U	10 U	-	-	1.1	-	-	-	-	3.0 U	10 U	-	-	-	-	-	-
2-Methylnaphthalene	µg/L	28	280	5.0 U	10 U	-	-	0.721	-	-	-	-	5.0 U	10 U	-	-	-	-	-	-
Acenaphthene	µg/L	20	200	5.0 U	10 U	-	-	0.381	-	-	-	-	5.0 U	10 U	-	-	-	-	-	-
Fluorene	µg/L	280	2800	5.0 U	10 U	-	-	0.014 U	-	-	-	-	5.0 U	10 U	-	-	-	-	-	-
Naphthalene	µg/L	14	140	5.0 U	10 U	-	-	0.667	-	-	-	-	5.0 U	10 U	-	-	-	-	-	-
Phenanthrene	µg/L	210	2100	5.0 U	10 U	-	-	0.033 U	-	-	-	-	5.0 U	10 U	-	-	-	-	-	-
Total Recoverable Petroleum Hydrocarbons																				
TRPH	mg/L	5.0	50	0.5 U	-	-	-	0.993	-	-	-	-	0.5 U	-	-	-	-	-	-	-
Volatile Organic Compounds																				
Acetone	µg/L	6,300	63,000	-	100 U	-	100 U	6.7 U	-	-	-	-	-	100 U	100 U	-	-	-	-	1.99 U
Benzene	µg/L	1.0	100	1.0 U	1.0 U	-	1.0 U	**4.62**	0.211 U	0.211 U	0.16 U	0.211 U	1.0 U	1.0 U	1.0 U	0.211 U	0.211 U	0.001 I	0.211 U	0.249 U
Butylbenzene, n-	µg/L	N/A	N/A	-	1.0 U	-	1.0 U	1.0 U	-	0.452 U	0.17 U	0.452 U	-	1.0 U	1.0 U	-	0.452 U	0.17 U	0.452 U	0.114 U
Butylbenzene, sec-	µg/L	N/A	N/A	-	1.0 U	-	1.0 U	1.0 U	-	0.327 U	4.05	3.46	-	1.0 U	1.0 U	-	0.327 U	0.21 U	0.327 U	0.107 U
Butylbenzene, tert-	µg/L	N/A	N/A	-	1.0 U	-	1.0 U	1.0 U	-	0.339 U	1.31	0.339 U	-	1.0 U	1.0 U	-	0.339 U	0.18 U	0.339 U	0.110 U
Chlorobenzene	µg/L	100	1000	1.0 U	1.0 U	-	1.0 U	8.26	-	12	19.4	16.3	1.0 U	1.0 U	1.0 U	-	2.51	1.29	0.245 U	0.176 U
Chlorotoluene, 2-	µg/L	140	1400	1.0 U	1.0 U	-	1.0 U	1.0 U	-	3.44	7.08	5.38	1.0 U	1.0 U	1.0 U	-	0.296 U	0.19 U	0.296 U	0.0989 U
Ethylbenzene	µg/L	30	300	1.0 U	1.0 U	-	1.0 U	0.26 U	0.196 U	0.196 U	0.19 U	0.196 U	1.0 U	1.0 U	1.0 U	0.196 U	0.196 U	0.19 U	0.196 U	0.210 U
Isopropylbenzene	µg/L	0.8	8.0	-	1.0 U	-	1.0 U	0.8 U	0.59 I	**2.33**	**3.77**	**3.05**	-	1.0 U	1.0 U	0.8 U	0.238 U	0.15 U	0.238 U	0.212 U
Isopropyltoluene, 4-	µg/L	N/A	N/A	-	1.0 U	-	1.0 U	1.0 U	-	0.353 U	2.34	-	-	1.0 U	1.0 U	-	0.353 U	0.13 U	-	0.353 U
Methylene chloride	µg/L	5.0	500	-	1.0 U	-	1.0 U	1.0 U	-	0.639 U	0.42 U	0.639 U	-	1.0 U	1.0 U	-	0.639 U	0.42 U	0.639 U	1.27 U
MTBE	µg/L	20	200	-	1.0 U	-	1.0 U	1.0 U	0.261 U	0.261 U	0.18 U	0.261 U	-	1.0 U	1.0 U	0.261 U	0.261 U	0.18 U	0.261 U	0.460 U
Propylbenzene, n-	µg/L	N/A	N/A	-	1.0 U	-	1.0 U	1.0 U	-	1.00 U	1.15	1.00 U	-	1.0 U	1.0 U	-	1.00 U	0.18 U	1.00 U	0.108 U
Tetrachloroethene	µg/L	3	300	1.0 U	1.0 U	-	1.0 U	0.24 U	1.0 U				1.0 U	1.0 U	1.0 U	0.24 U				0.0977 U
Toluene	µg/L	40	400	1.0 U	1.0 U	-	1.0 U	1.0 U	0.247 U	0.247 U	0.14 U	0.247 U	1.0 U	1.0 U	1.0 U	0.247 U	0.247 U	0.14 U	0.247 U	0.201 U
Vinyl chloride	µg/L	1.0	100	1.0 U	1.0 U	-	1.0 U	1.0 U	-	0.414 U	0.19 U	1.00 U	1.0 U	1.0 U	1.0 U	-	0.414 U	0.19 U	1.00 U	0.192 U
Xylenes	µg/L	20	200	1.0 U	1.0 U	-	1.0 U	2.0 U	0.398 U	0.398 U	0.82	0.398 U	1.0 U	1.0 U	1.0 U	0.398 U	0.398 U	0.15 U	0.398 U	0.259 U

Table lists only compounds detected above laboratory limits. If a compound was not detected in any sample, that compound is not included in this table.
Bold = concentration exceeds the GCTL
N/A = a GCTL is not available
- = Not analyzed
I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U = The compound was analyzed for but not detected.
V = The analyte was detected in both the sample and the associated method blank.

22



Reference: Bing Maps aerial photography is provided through Langan's Esri ArcGIS software licensing and ArcGIS online © 2010 Microsoft Corporation

Legend

- Institutional/Engineering Control Boundary
- Property Boundary

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INSTITUTIONAL CONTROL BOUNDARY

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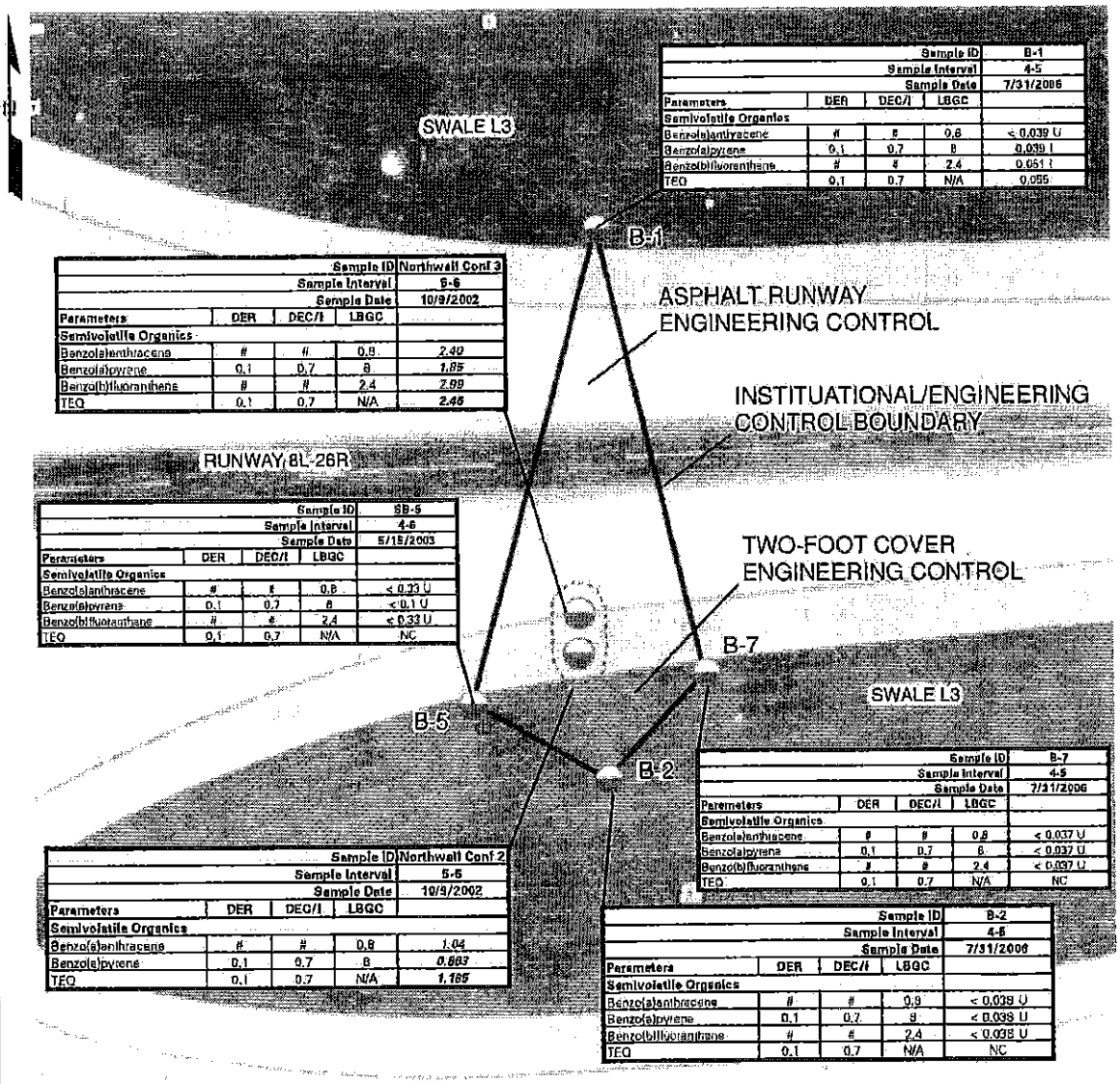

			Sample ID	B-1
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.039 U
Benzo(a)pyrene	0.1	0.7	8	0.039 I
Benzo(b)fluoranthene	#	#	2.4	0.051 I
TEQ	0.1	0.7	N/A	0.055

			Sample ID	Northwall Conf 3
			Sample Interval	5-6
			Sample Date	10/9/2002
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	*2.49*
Benzo(a)pyrene	0.1	0.7	8	*1.85*
Benzo(b)fluoranthene	#	#	2.4	*2.99*
TEQ	0.1	0.7	N/A	*2.46*

			Sample ID	SB-5
			Sample Interval	4-6
			Sample Date	5/15/2003
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.33 U
Benzo(a)pyrene	0.1	0.7	8	< 0.1 U
Benzo(b)fluoranthene	#	#	2.4	< 0.33 U
TEQ	0.1	0.7	N/A	NC

			Sample ID	B-7
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.037 U
Benzo(a)pyrene	0.1	0.7	8	< 0.037 U
Benzo(b)fluoranthene	#	#	2.4	< 0.037 U
TEQ	0.1	0.7	N/A	NC

			Sample ID	Northwall Conf 2
			Sample Interval	5-6
			Sample Date	10/9/2002
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	*1.04*
Benzo(a)pyrene	0.1	0.7	8	*0.883*
TEQ	0.1	0.7	N/A	*1.165*

			Sample ID	B-2
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.038 U
Benzo(a)pyrene	0.1	0.7	8	< 0.038 U
Benzo(b)fluoranthene	#	#	2.4	< 0.038 U
TEQ	0.1	0.7	N/A	NC

Legend

B-2 Soil Sample Location

Soil Plume

100 50 0 100

Feet

Notes

1. Bing Maps Aerial basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online © 2010 Microsoft Corporation and its data suppliers
2. Concentrations in milligrams per kilogram
3. DEC/I = Direct Exposure-Commmercial/Industrial Soil Cleanup Target Level (Chapter 62-777, FAC)
4. DER = Direct Exposure-Residential Soil Cleanup Target Level (Chapter 62-777, FAC)
5. LBGC = Leachability Based on Groundwater Criteria Soil Cleanup Target Level (Chapter 62-777, FAC)
6. # = Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to benzo(a)pyrene equivalents (TEQ)
7. **Bold** = concentration exceeds DER Soil Cleanup Target Level
8. *Italic* = concentration exceeds LBGC Soil Cleanup Target Level
9. ***Bold Italic*** = concentration exceeds DEC/I Soil Cleanup Target Level
10. < 0.038 U = Parameter was not detected and the value presented is the Method Detection Limit
11. NC = Not calculated due to PAH concentrations below detection limits

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ENGINEERING CONTROL BOUNDARY

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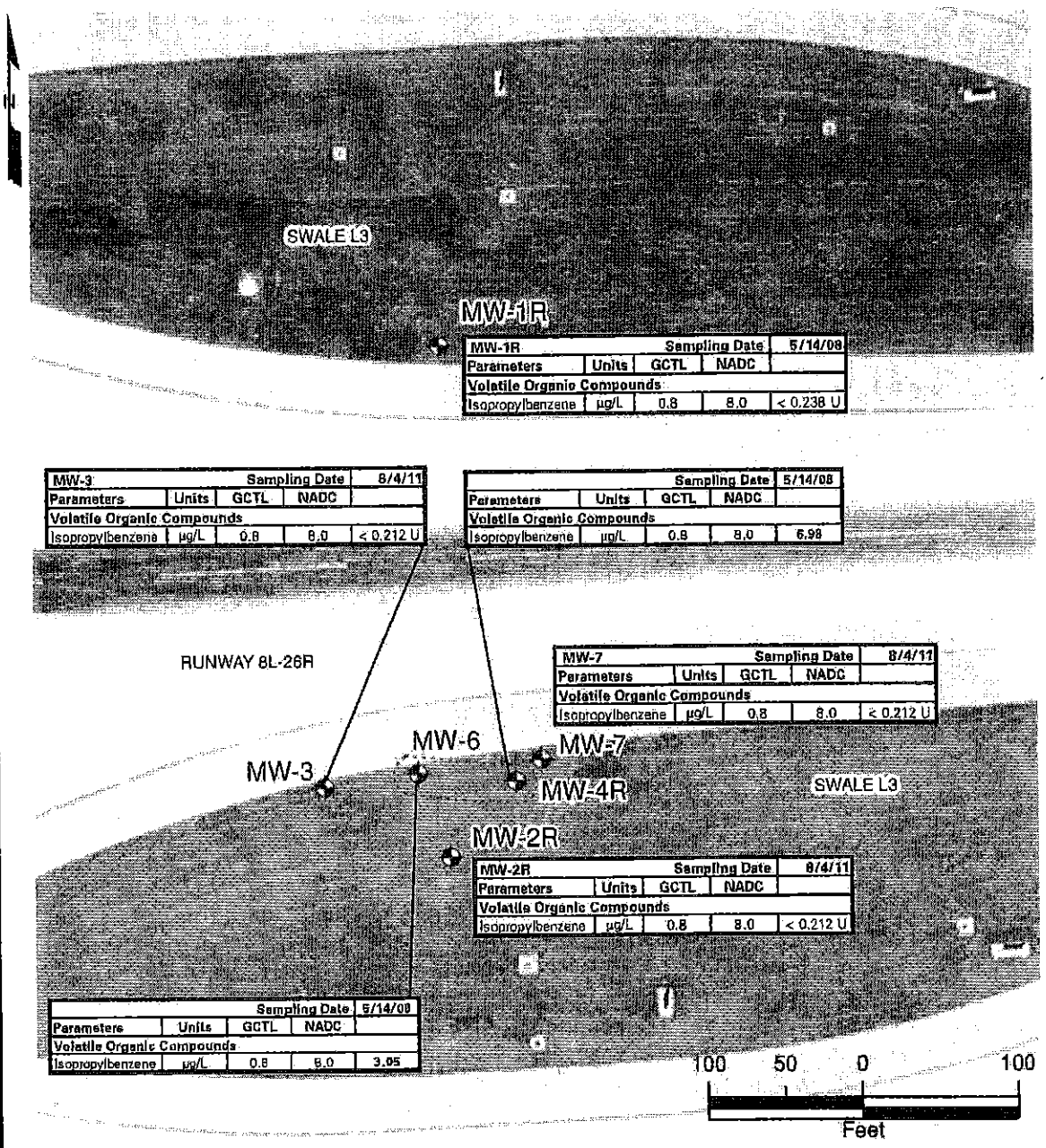

Legend

MW-2R Monitoring Well

Groundwater Plume

Notes

1. Bing Maps Aerial basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online © 2010 Microsoft Corporation and its data suppliers
2. Concentrations in micrograms per liter (µg/L)
3. GCTL = Groundwater Cleanup Target Level (Chapter 62-777, FAC)
4. NADC = Natural Attenuation Default Concentration (Chapter 62-777, FAC)
5. **Bold** = concentration exceeds DER Soil Cleanup Target Level
6. *Italic* = concentration exceeds LBGC Soil Cleanup Target Level
7. < 0.212 U = Parameter was not detected and the value presented is the Method Detection Limit

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GROUNDWATER PLUME

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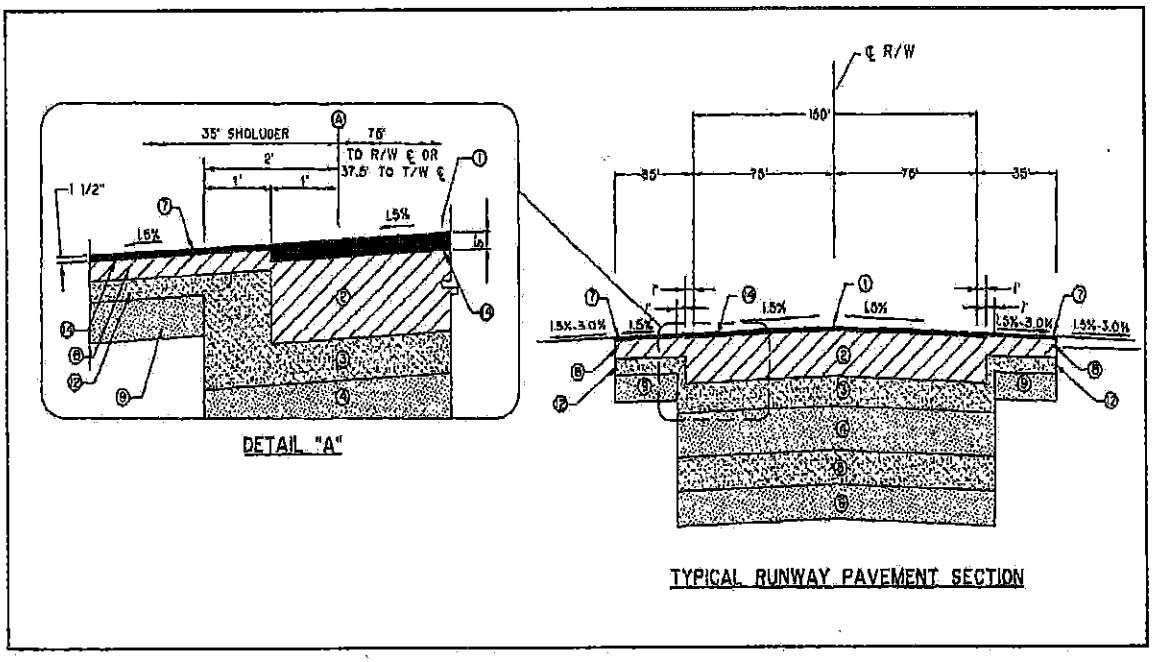
Standard Covenant Form
Former Building 1034
Miami International Airport
IW5-4217/File-3899

Exhibit C
Engineering Control Plan

The Engineering Control (EC) will comprise a portion of Runway 8L-26R and Swale L3. Figure 1 shows the EC area and the two types of EC – the asphalt pavement cap and the soil cap.

Maintenance of the Runway Pavement

The following figure[1] shows a typical runway pavement section.



Runway 8-26 consists of, from top to bottom, 5 inches of bituminous concrete pavement (1), 24 inches of limerock base course (2), 12 inches of subbase (3), and 59 inches of subgrade (4-6). The shoulder of the runway comprises, from top to bottom, 1.5 inches of bituminous concrete pavement (14), 6 inches of limerock base course (8), 6 inches of subbase (12), and 12 inches of subgrade (9). The impervious bituminous concrete pavement is separated from potentially contaminated soil by at least two feet of clean fill.

[1] Drawing AC-01 prepared by URS Corporation Southern, dated 20 July 2000, provided by MDAD Technical Section.

The rehabilitation parameters and timelines for all of Miami International Airport's pavement systems are established by an Integrated Airport Pavement Management System (IAPMS), a Federal Aviation Administration (FAA) requirement. FAA Advisory Circular 150/5380-6B (28 September 2007) requires twice-yearly inspections of all paved areas, and after severe storms "or other conditions that may adversely affect the pavement," as well as monthly drive-by inspections. Pavement distress is defined as cracking, joint seal damage, disintegration, distortion, and loss of skid resistance. The first three conditions could constitute failure of the engineering control. Because the IAPMS requires timely repair and documentation of such conditions, the IAPMS is an adequate maintenance plan for this engineering control.

The training required by the FAA of MDAD personnel who will inspect and repair the asphalt pavement EC is adequate for maintenance of the asphalt pavement EC.

Maintenance of the Soil Cap

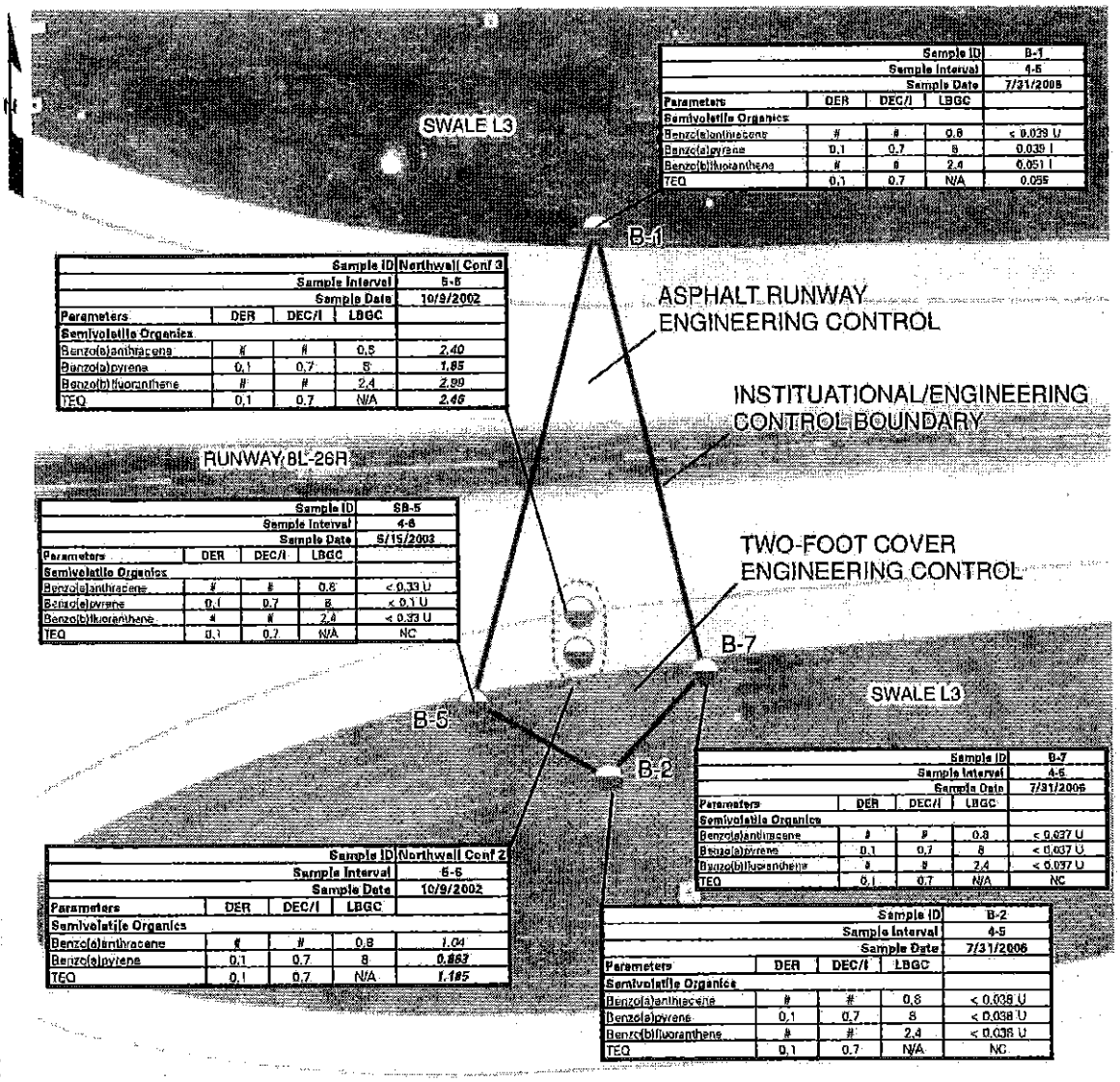
MDAD will inspect the soil cap yearly and after major weather events (e.g., hurricanes) to look for failure (gouges, pits, borings, depressions, etc.) that could provide exposure pathways to contaminated soil. MDAD will repair such failures within one month of discovery and will maintain documentation of the repairs on site for at least one year. Repairs will consist of replacing clean fill within the failure and within the immediate vicinity of the failure, as appropriate, to return the soil cap to its original condition using clean material matching the same structural qualities of the existing material.

Professional Engineer's Certification

I, Leonardo A. Rodriguez, P.E. #54858, certify that I currently hold an active license in the State of Florida in accordance with Chapter 471, Florida Statutes, and am competent through education or experience to provide the engineering service contained in this report. To the best of my knowledge, the engineering control is consistent with commonly accepted engineering practices, is appropriately designed for its intended purpose, and has been implemented. I certify that Langan Engineering and Environmental Services holds an active Florida Certificate of Authorization #6601 to provide the engineering service.

Leonardo Rodriguez, P.E.
Florida Professional Engineer License #54858

13 Nov 2013
Date



			Sample ID	B-1
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.039 U
Benzo(a)pyrene	0.1	0.7	8	0.039 I
Benzo(b)fluoranthene	#	#	2.4	0.051 I
TEQ	0.1	0.7	N/A	0.055

			Sample ID	Northwall Conf 3
			Sample Interval	5-6
			Sample Date	10/9/2002
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	*2.40*
Benzo(a)pyrene	0.1	0.7	8	***1.85***
Benzo(b)fluoranthene	#	#	2.4	*2.99*
TEQ	0.1	0.7	N/A	***2.46***

			Sample ID	SB-5
			Sample Interval	4-6
			Sample Date	5/15/2003
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.33 U
Benzo(a)pyrene	0.1	0.7	8	< 0.1 U
Benzo(b)fluoranthene	#	#	2.4	< 0.33 U
TEQ	0.1	0.7	N/A	NC

			Sample ID	B-7
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.037 U
Benzo(a)pyrene	0.1	0.7	8	< 0.037 U
Benzo(b)fluoranthene	#	#	2.4	< 0.037 U
TEQ	0.1	0.7	N/A	NC

			Sample ID	Northwall Conf 2
			Sample Interval	5-6
			Sample Date	10/9/2002
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	*1.04*
Benzo(a)pyrene	0.1	0.7	8	***0.863***
TEQ	0.1	0.7	N/A	***1.185***

			Sample ID	B-2
			Sample Interval	4-5
			Sample Date	7/31/2006
Parameters	DER	DEC/I	LBGC	
Semivolatile Organics				
Benzo(a)anthracene	#	#	0.8	< 0.038 U
Benzo(a)pyrene	0.1	0.7	8	< 0.038 U
Benzo(b)fluoranthene	#	#	2.4	< 0.038 U
TEQ	0.1	0.7	N/A	NC

Legend

B-2 Soil Sample Location

Soil Plume

100 50 0 100

Feet

Notes

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2. Concentrations in milligrams per kilogram
3. DEC/I = Direct Exposure-Commmercial/Industrial Soil Cleanup Target Level (Chapter 62-777, FAC)
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9. ***Bold Italic*** = concentration exceeds DEC/I Soil Cleanup Target Level
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