



U.S. Department
of Transportation
**Federal Aviation
Administration**

Harrisburg Airports District Office
Eastern Region

3905 Hartzdale Drive, Suite 508
Camp Hill, PA 17011-7837
717-730-2830

June 29, 2011

Mr. Calvin Davenger, Jr., P.E.
Philadelphia International Airport
Division of Aviation
Terminal E
Philadelphia, PA 19153

RE: Philadelphia International Airport (PHL)
Runway 27R High Speed Exit Taxiway Project
Federal Environmental Action

Dear Mr. Davenger:

The Harrisburg Airports District Office has completed its review of your submittal of a Categorical Exclusion Form for the proposed project at Philadelphia International Airport, PA.

The proposed project involves the addition of a high-speed taxiway for Runway 27R and the realignment of existing Taxiway T.

Based on our review of the information provided along with guidance contained in FAA Orders 5050.4B and 1050.1E, we have determined that the subject project does not have the characteristics that require a formal NEPA environmental assessment nor does it contain the potential for causing an environmental impact. We have, therefore, determined that this project qualifies for a "Categorical Exclusion" and have executed this finding accordingly (signed 06/29/2011).

Please note that this correspondence represents the formal Federal Environmental Finding; additional coordination with the FAA may be necessary for this project with regard to an Airport Layout Plan Approval and Airspace Review.

Should you have any questions or need additional information, please call me at (717) 730-2802.

Sincerely,

Susan L. McDonald
Environmental Protection Specialist
Harrisburg Airports District Office

2011 JUN 29 10 24



FEDERAL AVIATION ADMINISTRATION
EASTERN REGION AIRPORTS DIVISION
CATEGORICAL EXCLUSION FORM

See Instructions Page Prior to Completing this Form

Airport Name: Philadelphia International Airport Airport Identifier: PHL
Project Title: Runway 27R High Speed Exit Taxiway Date: June 20, 2011

APPLICABILITY:

This Environmental Evaluation Form should be used only if the sponsor's proposed project meets the following two (2) criteria:

1. The proposed project is a federal action subject to NEPA. List applicable paragraph number from FAA Order 5050.4B, Chapter 1 para. 9g: **(1)**

And

2. The proposed project is identified as one that can be categorically excluded. List applicable category from FAA Order 1050.1E paragraphs 307 through 312. (Review Tables 6-1 and 6-2 in FAA Order 5050.4B) : **310e**

Note:

If action is listed in Table 6-1 - Complete project description, go to page 4 and sign certification. No further review necessary
If action is listed in Table 6-2 - Complete remainder of form

PROJECT DESCRIPTION - List and clearly describe **ALL** components of project proposal including all connected actions. Include summary of existing conditions at project site. (Attach site map identifying project area)

The proposed project is the addition of a high-speed exit taxiway for Runway 27R. Runway 27R is the primary arrival runway in west flow operations. The existing main high-speed exit taxiway, Taxiway K4, is located approximately 5,083 feet from the runway threshold.

Airlines operating at PHL have noted that the majority of their aircraft landing on Runway 27R cannot reduce their speed quickly enough after touchdown to safely utilize the existing high-speed exit. These aircraft must then taxi further down the runway and exit at Taxiway T, located approximately 1,940 feet from the start of the Taxiway K4 curve (refer to Figure 1: Project Location Map).

An analysis of the existing and forecast aircraft fleet mix operating at PHL confirmed that the Taxiway K4 location is not suitable for the majority of aircraft to conduct a high-speed exit from Runway 27R. Although Taxiway K4 is designed to allow aircraft to exit the runway at 60 mph, many aircraft are at or above 80 mph upon reaching Taxiway K4.

The proposed action entails the construction of a new high-speed exit taxiway to be named Taxiway K5 (see Figure 2: Runway 27R Proposed High Speed Exit Taxiway). Construction will involve:

- Removing topsoil and excavating full strength pavement areas down to the sub-grade
- Removing asphalt from the pavement demolition areas
- Constructing the taxiway exit with crushed aggregate base course and bituminous pavement
- Re-spreading topsoil in the pavement demolition areas
- Line striping

A connected action is the realignment of existing Taxiway T, south of the proposed high-speed exit taxiway, which will also help to improve the safety of airside operations (see Figure 2: Runway 27R Proposed High Speed Exit Taxiway). Basically, realigning Taxiway T will eliminate the current 'S' turn required to cross Runway 9L-27R.

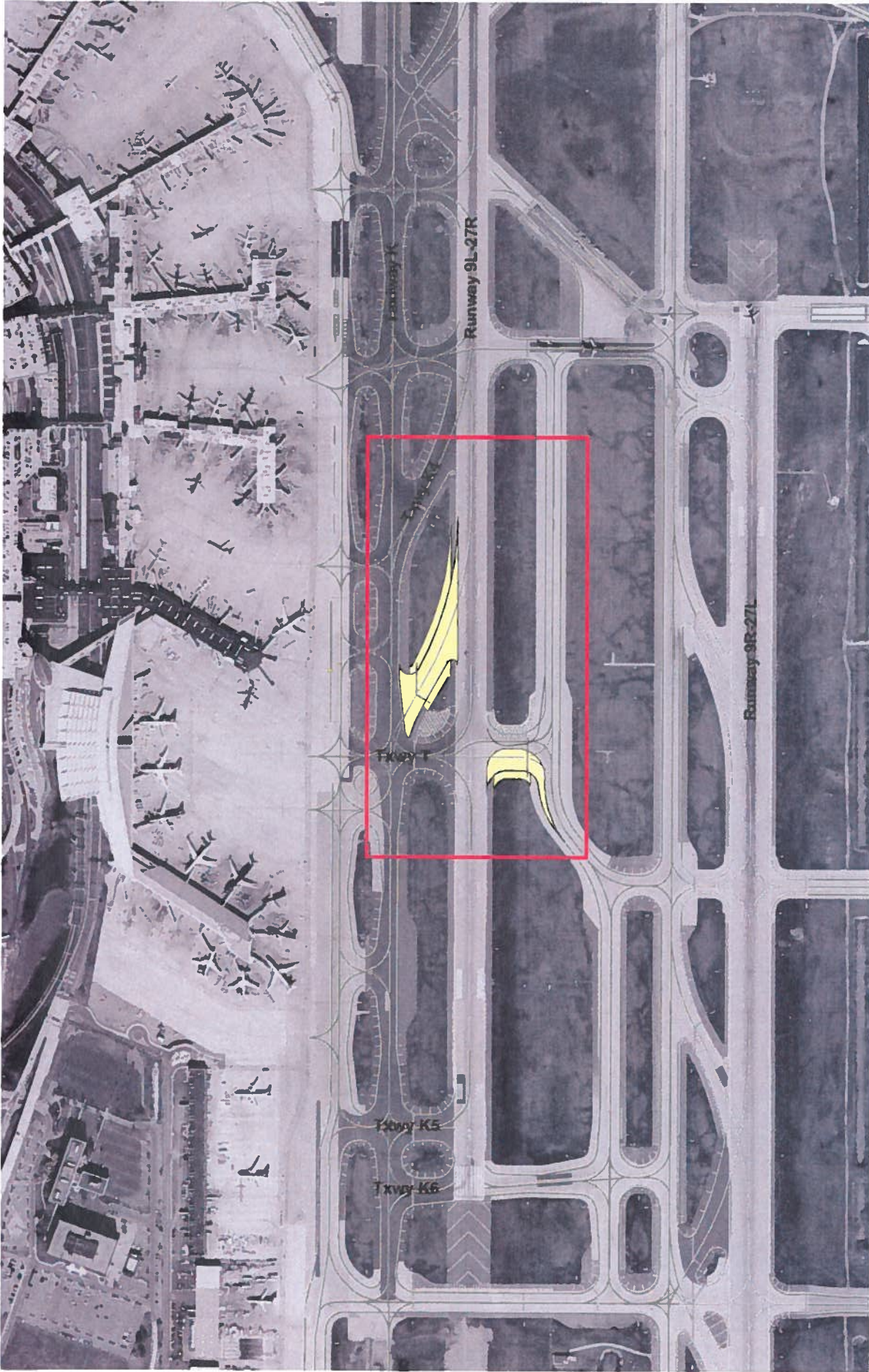
The realignment of this taxiway section entails:

- Removing topsoil and excavating full strength pavement areas down to the sub-grade
- Removing asphalt from pavement demolition areas
- Constructing the taxiway with crushed aggregate base course and bituminous pavement
- Relocating taxiway centerline lights
- Re-spreading topsoil in pavement demolition areas
- Line striping

The existing site is comprised of previously disturbed land; paved areas and upland grasses which are maintained through regular mowing. The project vicinity is void of any wetlands, waters, or habitats.

Approximately 2 acres of impervious surface will be introduced to this area. All permit requirements necessitated for the proposed action will be coordinated through Tinicum Township.

It is expected that construction of this project will be coordinated with the Runway 9L-27R rehabilitation project so as to minimize construction effects on airfield operations. A formal Federal Environmental Finding for the Runway 9L-27R rehabilitation project via a Categorical Exclusion Evaluation was signed on August 3, 2010.



LEGEND

- Project Area
- Proposed Pavement

Figure 1
Project Location Map

1. AIR QUALITY* (Contact air quality agencies as appropriate)

- (a) Is the proposed project located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act and does it result in direct emissions? If Yes go to (b), No go to (d) Yes No
- (b) Is the proposed project an "exempted action," under the General Conformity Rule? If Yes cite exemption _____ go to (d), No go to (c) Yes No
- or presumed to conform (PTC) under FAA rules? (See FRN vol.72 no. 145 pg 41565) If Yes cite PTC category _____ go to (d), No go to (c) Yes No
- (c) Would the proposed project result in a net total of direct and indirect emissions that exceed the threshold levels of the regulated air pollutants for which the project area is in non-attainment or maintenance? (attach emissions inventory) If Yes consult ADO, No go to (d) Yes No
- (d) Is the airport's activity levels below FAA thresholds for requiring a NAAQS analysis? If Yes go to Item 2, No go to (e) Yes No
- (e) Do pollutant concentrations exceed NAAQS thresholds? (attach emissions inventory) Yes No
- (f) Is an air quality analysis needed with regard to state indirect source review? Yes No

2. COASTAL*

- (a) Would the proposed project occur in a coastal zone, or affect the use of a coastal resource, as defined by your state's Coastal Zone Management Plan (CZMP)? Yes No
- (b) If "yes," is the project consistent with the State's CZMP? Yes No
(If applicable, attach the sponsor's consistency certification and the state's concurrence of that certification)
- (c) Is the location of the proposed project within the Coastal Barrier Resources System? Yes No
(If yes, and the project would receive federal funding, coordinate with the FWS and attach FWS exemption).

3. COMMUNITY DISRUPTION (Compatible Land Use)

- (a) Is the proposed project inconsistent with plans, goals, policies, or controls that have been adopted for the area in which the airport is located? Yes No
- (b) Would the proposed project lead to disruption or dividing of communities? Yes No
- (c) Would the proposed project cause relocation of any people, homes or businesses? Yes No

4. CUMULATIVE IMPACTS (consider past, present and reasonably foreseeable development on and off airport)

- (a) Is the proposed project likely to cumulatively cause significant impacts? Yes No
- (b) Is the proposed project likely to cause a significant lighting impact on residential areas or commercial use of business properties? Yes No
- (c) Is it likely to cause a significant impact on the visual nature of surrounding land? Yes No

5. ENDANGERED SPECIES* (Fish, Wildlife and Plants)

- (a) Would the proposed project impact any federally or state-listed or proposed endangered or threatened species (ESA) of flora and fauna, or impact critical habitat? (Attach record of consultation with federal and state agencies as appropriate) Yes No
- (b) Would the proposed project affect species protected under the Migratory Bird Act? Yes No
- (c) Would the proposed project affect other biotic communities or habitat not ESA protected? Yes No

6. FARMLANDS CONVERSION*

- Does the project involve acquisition of farmland, or use of farmland, that would be converted to non-agricultural use and is protected by the Federal Farmland Protection Policy Act (FPPA)? Yes No
(If yes, attach record of coordination with the Natural Resources Conservation Service (NRCS), including form AD-1006.)

7. FLOODPLAINS*

- Would the proposed project cause an encroachment or impacts to the natural, ecological or scenic resources to the 100-year base floodplain? (If yes, opportunity for public review is required) Yes No

8. HAZARDOUS MATERIALS*

- Would the proposed project involve existing hazardous materials or cause potential contamination from hazardous materials?(If yes, attach record of consultation with EPA) Yes No

9. HIGHLY CONTROVERSIAL ACTION

Is the proposed project likely to be highly controversial on environmental grounds?

Yes No

10. HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL OR CULTURAL PROPERTY*

Would the proposed project impact any historic or cultural property or resources protected by the National Historic Preservation Act? (Consult with FAA, and contact State and/or Tribal Historic Preservation Officer. Attach record of consultation)

Yes No

11. INCONSISTENCY WITH APPLICABLE LAWS

Is the proposed project likely to be inconsistent with any federal, state, local, or tribal law relating to the environmental aspects of project?

Yes No

12. NOISE *

(a) Does the proposal have the potential to increase noise (e.g., would the proposed project increase aircraft operations or surface traffic)?

Yes No

(b) If "yes," will the proposed project have an impact on noise levels over noise sensitive areas within the DNL 65 dBA noise contour (Attach explanation)

Yes No

13. SECTION 4(F)*

Does the proposed project have an impact on any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or an historic site of national, state, or local significance? (If yes, contact FAA, contact appropriate agency and attach record of consultation)

Yes No

14. TRAFFIC CONGESTION

Would the proposed project cause an alteration in surface traffic patterns, or cause a noticeable increase in surface traffic congestion or decrease Level of Service?

Yes No

15. US WATERS/WETLANDS*

(a) Does the proposed project involve federal or state regulated (Contact USFW or state agency if protected resources are affected) or non-jurisdictional wetlands?

Yes No

(b) If yes, does the project qualify for an Army Corps of Engineers General permit (If yes, attach record of consultation . If no, project is not eligible for CATEX)

Yes No

16. WATER QUALITY*

(a) Does the proposed project have the potential to impact water quality, including ground water, surface water bodies, and public water supply system or federal, state or tribal water quality standards? (If yes, contact appropriate agency)

Yes No

(b) Is the project to be located over a designated Sole Source Aquifer (If yes, attach record of consultation with EPA)

Yes No

17. WILD AND SCENIC RIVERS*

Would the proposed project affect a river segment that is listed in the Wild and Scenic River System or National Rivers Inventory? (If yes, coordinate with the jurisdictional agency and attach record of consultation)

Yes No

18. ENERGY, NATURAL RESOURCES AND SOLID WASTE

(a) Would the project have a significant impact on energy or other natural resource consumption?

Yes No

(b) Would the operation and/or construction of the project generate significant amounts of solid waste?

Yes No

19. Other Categories

(a) Would the proposed project be located near or create a wildlife hazard as defined in FAA Advisory Circular 150/5200-33, "Wildlife Hazards on and Near Airports"?

Yes No

(b) Reviewing the above categories, would the project affect:

Environmental Justice *

Yes No

Children's Health and Safety *


Yes No

Project Title/Airport Identifier

Runway 27R High Speed Exit Taxiway / PHL

PREPARER CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct.


Signature

06/20/2011
Date

Lynn A. Keeley
Print Name

215-399-4338
Phone

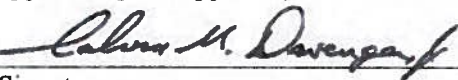
AECOM / PHL
Company/Airport

1700 Market Street, Suite 1600, Philadelphia PA 19103
Address

Email address to receive notice of FAA decision lynn.keeley@aecom.com

AIRPORT SPONSOR CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s), and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.


Signature

06/23/2011
Date

Calvin M. Davenger, Jr. P.E.
Print Name

215-937-6062
Phone

Email address to receive notice of FAA decision calvin.davenger@phl.org

If no email available, provide mailing address _____

For FAA Use Only

FAA DECISION:

Having reviewed the above information, certified by the responsible airport official, it is the FAA's decision that the proposed development project has been found to qualify for a Categorical Exclusion from preparation of a formal environmental assessment.

Project Reviewed by:


(Signature of Responsible FAA Official)

6/29/11
Date

ATTACHMENT

Extraordinary Circumstances Review:

An explanation for each "yes" response in the form is provided:

1. Air Quality

The proposed project is located in Tinicum Township, Delaware County, Pennsylvania. Regarding the National Ambient Air Quality Standards (NAAQS) criteria for air pollutants, the project is located in an area designated as a moderate nonattainment area for the 8-hour NAAQS for ozone (O3) and a nonattainment area for particulate matter less than or equal to 2.5 micrometers (PM2.5).

It is anticipated that this project will be constructed concurrent with the rehabilitation of Runway 9L/27R. The emissions from construction of the Runway rehabilitation project have been evaluated in support of a Categorical Exclusion Evaluation prepared for that action in August 2010. That emissions analysis estimated that the construction activities associated with the Runway 9L Rehabilitation will generate 3.82 tons of NOX, 0.35 tons of VOCs, and 0.78 tons of PM2.5 in 2011 and 5.72 tons of NOX, 0.52 tons of VOCs, and 2.20 tons of PM2.5 in 2012. These emissions are well below the de-minimus threshold values of 100 tons/year for NOX, 50 tons/year for VOCs, and 100 tons/year for PM2.5. Therefore, it is reasonable to conclude that the construction emissions from this smaller project (which can utilize much of the same construction equipment and which will occur within the same construction period), when taken in combination with the runway rehabilitation project, will not exceed the de-minimus thresholds and is not required to demonstrate conformity. (See attached Memorandum dated August 2, 2010 for the emissions analysis).

Potential short term impacts on air quality could include direct emissions from construction equipment and trucks, and fugitive dust emissions from site demolition. These impacts would be temporary and would only affect the immediate vicinity of the construction site. A number of regulations provide guidance for mitigating these potential temporary impacts. For instance, all work will be performed in accordance with the provisions of FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*, Change 13, Part 15637. The City of Philadelphia-Division of Aviation will comply with PA DEP regulations including the prohibition against fugitive emissions which requires that any person responsible for sources that have fugitive emissions take all reasonable actions to prevent particulate matter from becoming airborne, as described in Pennsylvania Code Title 25, Part I, Subpart C, Article III, Chapter 123.1. Additionally, best management practices such as wetting exposed earth areas, covering dust-producing materials during transport, limiting dust-producing construction activities during high wind conditions, and providing tire washes for trucks leaving the site, could be implemented in order to minimize the impacts from fugitive dust.

2. Coastal

Philadelphia International Airport is located in the coastal zone of the Delaware River Estuary which is protected under Pennsylvania's Coastal Resource Management Program (CRMP). The CRMP is designed to ensure that all pertinent activities effecting any land or water use or natural resource of Pennsylvania's coastal zones are conducted in a manner consistent with the policies of the CRMP. Given that the proposed action will not change the characteristics or functions of the current land use and is subject to established permit requirements, the proposed project is consistent with the policies in the Coastal Zone Management Program and no further action is required.

August 2, 2010

MEMORANDUM

TO: Bryan Oscarson
FROM: Darcy Zarubiak
RE: Runway 9L Rehab Project Emissions Analysis

This memorandum provides a detailed explanation of the methodology and calculation of emissions from construction activities associated with the Runway 9L Rehabilitation Project (9L Rehab Project) at Philadelphia International Airport (the Airport). The Project is expected to begin in June 2011 and last until November 2012 and will entail removing old runway asphalt, repaving, and repainting. The Airport is located in an area designated by the United States Environmental Protection Agency's (EPA's) National Ambient Air Quality Standards as maintenance for ozone, precursors of which are oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), and non-attainment for particulate matter with an aerodynamic diameter of less than 2.5 microns (PM_{2.5}).

1.0 METHODOLOGY

In the absence of complete detailed project documentation (e.g., construction vehicle fleet mix), LeighFisher sought additional guidance from Appendix G of the 2008 Philadelphia International Airport Capacity Enhancement Program Report.¹ Data from this document were extrapolated and scaled to fit the 9L Rehab Project. It should be noted that, whenever possible, guidance from the City of Philadelphia Airport staff was used when calculating emissions.

Vehicle information was input into NONROAD2008² to generate construction emissions. NONROAD2008 is the EPA-accepted model used to calculate off-road vehicle emissions. A distribution of vehicle ages based on engine scrappage data for Delaware County (the location of Runway 9L) was assumed in preparing the emission estimates. The year 2011 was used as the episode year for the 2011 emissions estimates and 2012 was used as the episode year for 2012 emissions estimates.

¹ Philadelphia International Airport Capacity Enhancement Program Draft Air Quality Technical Report, KM Chng Environmental, Inc., 2008.

² The NONROAD2008 Model was created by United States Environmental Protection Agency. Further information can be found at <http://www.epa.gov/OMS/nonrdmdl.htm#model>

Mr. Bryan Oscarson
August 2, 2010

2.0 RUNWAY 9L REHAB PROJECT EMISSIONS

The 9L Rehab Project consists of the removal of old asphalt and the repaving and resurfacing of 3,085,210ft² of Runway 9L. Work is expected to occur daily between 12.00 p.m. and 5.00 a.m. but will be suspended between November 2011 and March 2012 because of weather-related construction restrictions. These restrictions have been factored into the emissions modeling.

The Project will last for 13 months, with five months of work occurring in 2011 (38% of the total project time) and eight months of work occurring in 2012 (62% of the total project time). Because the work is structured to not interfere with daily Airport flight operations, it was assumed that the reclamation, paving, and painting activities will be evenly distributed over the total 13-month period.

2.1 Vehicle Emissions

The estimated annual vehicle utilization times associated with the Project are shown in Table 1.

Table 1

VEHICLE UTILIZATION
Philadelphia International Airport

Equipment	2011 Work Hours	2012 Work Hours
Dump Truck	4,800	7,680
Paint Truck	225	360
Paver	450	720
Pickup Truck	2,250	3,600
Primer Truck	450	720
Reclaimer	600	960
Roller	1,350	2,160
Sweeper	900	1,440
Tack Truck	450	720
Trimmer	225	360

Source: LeighFisher, 2010.

The estimated 2011 vehicle emissions associated with the Runway 9L Rehab Project are shown in Table 2.

Mr. Bryan Oscarson
August 2, 2010

Table 2

2011 VEHICLE EMISSIONS (tons)
Philadelphia International Airport

Equipment	NO _x	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}
Dump truck	1.16	0.64	0.00	0.10	0.11	0.10
Paint truck	0.44	0.16	0.00	0.03	0.02	0.02
Paver	0.15	0.05	0.00	0.01	0.01	0.01
Pickup Truck	0.43	0.23	0.00	0.04	0.04	0.04
Primer Truck	0.02	0.03	0.00	0.01	0.00	0.00
Reclaimer	0.18	0.09	0.00	0.02	0.02	0.02
Roller	1.36	0.65	0.00	0.10	0.09	0.09
Sweeper	0.05	0.05	0.00	0.01	0.01	0.01
Tack truck	0.02	0.03	0.00	0.01	0.00	0.00
Trimmer	<u>0.01</u>	<u>0.01</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Total	3.82	1.92	0.01	0.31	0.30	0.29

Source: LeighFisher, 2010.

The estimated 2012 vehicle emissions associated with the Project are shown in Table 3.

2.2 Asphalt Emissions

The Project consists of resurfacing 3,085,210ft² (286,625m²) of Runway 9L with two layers of asphalt. Based on Project scheduling, it is assumed that approximately 38% of the asphalt will be laid in 2011 and 62% in 2012. VOC emissions are estimated by multiplying the paving surface area by 298 mg/m² and the PM_{2.5} emissions are estimated by multiplying the paving surface area by 9.05 g/m².³ The estimated emissions related to asphalt paving in years 2011 and 2012 are shown in Table 4.

³ Final Report - Evaluation of Emissions from Paving Asphalts. USEPA, Office of Research and Development. EPA-600/R-94-135.

Mr. Bryan Oscarson
August 2, 2010

Table 3

2012 VEHICLE EMISSIONS (tons)
Philadelphia International Airport

Equipment	NO _x	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}
Dump truck	1.77	0.96	0.00	0.14	0.16	0.15
Paint truck	0.63	0.24	0.00	0.04	0.03	0.03
Paver	0.22	0.08	0.00	0.02	0.01	0.01
Pickup Truck	0.65	0.34	0.00	0.06	0.06	0.06
Primer Truck	0.03	0.04	0.00	0.01	0.01	0.01
Reclaimer	0.27	0.13	0.00	0.02	0.02	0.02
Roller	2.04	0.95	0.00	0.14	0.14	0.13
Sweeper	0.07	0.08	0.00	0.02	0.01	0.01
Tack truck	0.03	0.04	0.00	0.01	0.01	0.01
Trimmer	<u>0.02</u>	<u>0.02</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Total	5.72	2.85	0.01	0.46	0.44	0.43

Source: LeighFisher, 2010.

Table 4

ASPHALT EMISSIONS (tons)
Philadelphia International Airport

2011		2012	
<u>PM2.5</u>	<u>VOC</u>	<u>PM2.5</u>	<u>VOC</u>
0.49	0.04	1.77	0.06

Source: LeighFisher, 2010.

Mr. Bryan Oscarson
August 2, 2010

3.0 EMISSIONS SUMMARY

It is estimated that the construction activities associated with the Runway 9L Rehab Project will generate 3.82 tons of NO_x, 0.35 tons of VOCs, and 0.78 tons of PM_{2.5} in 2011 and 5.72 tons of NO_x, 0.52 tons of VOCs, and 2.20 tons of PM_{2.5} in 2012. The estimated total Project emissions are shown in Table 5.

Table 5

TOTAL PROJECT EMISSIONS (tons)
Philadelphia International Airport

Year	NO _x	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}
2011	3.82	1.92	0.01	0.35	0.30	0.78
2012	<u>5.72</u>	<u>2.85</u>	<u>0.01</u>	<u>0.52</u>	<u>0.44</u>	<u>2.20</u>
Total Emissions	9.54	4.77	0.02	0.87	0.74	2.98

Source: LeighFisher, 2010.

The de minimis threshold values for criteria air pollutants, provided by 40CFR93.153, are 100 tons/year for NO_x, 50 tons/year for VOCs, and 100 tons/year for PM_{2.5}. As depicted in Table 5, the estimated emissions from the proposed project are below the de minimis values for NO_x, VOCs, and PM_{2.5}, thus the project is not required to demonstrate conformity.