STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

SEAN PARNELL, GOVERNOR
610 University Avenue
Fairbanks, AK 99709-3643
PHONE: (907) 451-2192
FAX: (907) 451-5105
www.dec.state.ak.us

File: 100.26.034

June 24, 2011

Scott Marikis
Empire Airlines. Inc.
11559 N. Atlas Rd.
Hayden, Idaho 83835

Re: Decision Document; FIA – Empire Airlines
Corrective Action Complete – Institutional Controls Determination

Dear Mr. Marikis:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the FIA- Empire Airlines (#4) site located at Block 3 Lot 9 of the Fairbanks International Airport, Fairbanks, Alaska. Based on the information provided to date, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the administrative record for FIA- Empire Airlines (#4), which is located in the offices of the Alaska Department of Environmental Conservation (ADEC) in Fairbanks, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Corrective Action Complete with Institutional Controls Determination.

Introduction

Site Name and Location:
FIA- Empire Airlines (#4)
Block 3 Lot 9
Fairbanks International Airport, Fairbanks, Alaska

Name and Mailing Address of Contact Party:
Scott Marikis
Empire Airlines, Inc.
11559 N. Atlas Rd.
Hayden, Idaho 83835

Database Record Key and File Number:
ADEC Reckey: File: 1991310027003
Hazard ID:24292

Regulatory authority under which the site is being cleaned up:
18 AAC 75 and 18 AAC 78

Background
The former Empire Airlines Facility is located on Block 3, Lot 9 of the Fairbanks International Airport. The site features include an office and airplane hangar. There is no drinking water well on the site; water is trucked in to supply building needs. Depth to groundwater is approximately 12.5 feet and groundwater flow direction varies from north to northwest.

In 1991, during a 1,500 gallon gasoline regulated underground storage tank (UST) removal, hydrocarbon contamination was encountered. Fifty cubic yards of contaminated soil were excavated. Sample collection following the UST removal at the former tank area and beneath the former dispensers indicated soil contamination several orders above the 1991 cleanup levels at that time or Level A cleanup level [e.g., benzene cleanup level of 0.1 milligrams/kilograms (mg/kg) and benzene detections up to 280 mg/kg; and gasoline range organics (GRO) cleanup level of 50 mg/kg and GRO detections up to 25,000 mg/kg]. The excavation was lined with visqueen and backfilled with the impacted soil.

An additional tank removal in 1996 resulted in the excavation of an additional 150 cubic yards of contaminated soil over an area of 325 square feet. Contamination with benzene and GRO remained at the edges of the excavation above ADEC cleanup levels at that time. Impacted excavated soils were placed in a lined and bermed holding cell. Remaining contamination from both UST removals led to the installation of a soil vapor extraction system.

Characterization Activities

As a result of the 1991 UST removal, a release investigation was conducted in 1994 in which eight soil borings and three monitoring wells were installed near the former UST and dispensers. Benzene and GRO exceeded Level A cleanup levels in soil with results as high as 139 mg/kg and 7,200 mg/kg, respectively, in a soil boring near the former dispensing island. Benzene exceeded its cleanup level in groundwater also with concentrations of 1.38 mg/L in a well down gradient of the former dispensing island (MW-1).

In 1996, an abandoned 2,000 gallon regulated gasoline UST and a 500 gallon protective steel vault housing an in-line fuel filter system, and its associated piping were also removed. During the process, 150 cubic yards of contaminated soil were removed and spread on site after further sampling. Benzene concentrations in the soil at the bottom of the excavation for the gasoline UST located at the northwest corner of the building were as high as 79 mg/kg and GRO was 21,000 mg/kg.

Soil vapor extraction was the selected method to treat the remaining subsurface contamination. In 1996 a soil vapor extraction system was installed at the site. The system ran for approximately 3 ½ years. The stack exhaust was monitored as well as the groundwater during this time.

In 2004, a 500-gallon heating oil tank was removed from the property. DRO, GRO, and BTEX were not detected in any of the soil samples.

In 2006 additional site characterization was performed to determine the status of the soil and groundwater contamination and develop a conceptual site model for the site. Characterization involved the installation, screening, and sampling of four 15-foot deep soil borings in the areas where contamination had been previously identified (gasoline UST on the northwestern corner of building and former gasoline dispenser islands). Samples were analyzed for DRO. GRO, BTEX and polycyclic aromatic hydrocarbons (PAH's). Groundwater was also sampled at this time from the monitoring wells and the former soil vapor extraction wells (these had been converted to monitoring wells several years prior). Groundwater samples were analyzed for GRO, DRO, and BTEX. None of the soil samples had GRO above its 18 AAC 75.341 most stringent MGW soil cleanup level (300 mg/kg). However, in two of the soil borings, one located east of the former gasoline UST location on the east side of the building (B06-3 on the attached figure) and the other located northeast of the former gasoline dispenser (B06-2 on the attached figure); DRO and benzene exceeded the MGW cleanup level. In boring B06-3 at a depth of 5-7 feet a soil sample had DRO of 319 mg/kg and benzene exceeded its 0.025 mg/kg MGW cleanup level with a concentration of 0.0843 mg/kg. A sample at a depth of 12.5-14.5 feet from boring B06-2 exceeded the benzene MGW cleanup level with a concentration of 0.0314 mg/kg. No PAHs were detected above their respective MGW cleanup levels in soil. DRO was detected in groundwater below its 1.5 mg/L cleanup level. GRO exceeded its 2.2 mg/L groundwater cleanup level in one of the six wells sampled (4.42 mg/L in well SVE-3). Benzene also exceeded its 0.005 mg/L cleanup level in four (SVE-1 through SVE-4) of the six wells. The maximum benzene concentration found in groundwater was 0.218 mg/L in well SVE-3.

A Mann-Kendall trend analysis for the SVE exhaust's benzene concentration completed in 2006 using monitoring data collected quarterly from 1996 to 1999 and using a 95 % confidence level, established that there was a significant decreasing trend. The trend analysis also indicated that a decreasing long term trend in the benzene in groundwater was present in 4 of the 6 wells sampled. In one of the other two wells the trend was visible but it had no statistical significance. Not enough data was available to perform a trend assessment on the last well because it was sampled only 3 times at the time the statistical analysis was performed.

In 2008, additional groundwater assessment along the northwest boundary of the subject property, which is down gradient of the sources of the contamination, was performed. Two temporary wells were installed and samples were collected and analyzed for GRO, DRO, and BTEX. Only DRO was detected in the samples at

concentrations below their respective 18 AAC 75.345 groundwater cleanup levels. These findings suggest that any remaining groundwater contamination is not migrating off the subject property.

In 2010, an additional groundwater monitoring event was performed. Wells MW-1, MW-2, and SVE-1 through SVE-4 were sampled and analyzed for GRO, DRO, BTEX , ethylene dibromide (EDB) and 1,2- dichloroethane (EDC). All contaminants were below their respective 18 AAC 75.345 cleanup levels in all the wells with the exception of benzene which was detected in wells SVE-2 and SVE-4 at 0.006 and 0.007 mg/L.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for diesel range organics (DRO); gasoline range organics (GRO); benzene, toluene, ethylbenzene, and xylenes (BTEX), lead, and polycyclic aromatic hydrocarbons (PAH). Groundwater samples were analyzed for DRO; GRO; BTEX, and lead scavengers (ethylene dibromide and 1,2- dichloroethane). Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Gasoline Range Organics (GRO)
- Benzene
- Diesel Range Organics (DRO)

Cleanup

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, Migration to Groundwater.

Contaminant	Site Cleanup Level (mg/kg)
GRO	300
Benzene	0.025
DRO	250

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

Contaminant	Site Cleanup Level (mg/L)
GRO	2.2
Benzene	0.005

Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De

Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-minimis exposure	Contamination is the result from leaking underground storage tanks, there is no known surface contamination. Site is mostly paved, thus reducing potential exposure.
Sub-Surface Soil Contact	De-minimis exposure	Contamination remains in the subsurface, but it is below the human health based levels.
Inhalation – Outdoor Air	De-minimis exposure	Contamination remains in the subsurface, but it is below the human health based levels.
Inhalation – Indoor Air (vapor intrusion)	De-minimis exposure	Remaining contamination in groundwater (0.006 mg/L and 0.007 mg/L benzene in wells SVE-2 and SVE-4) is below the target level for further vapor intrusion evaluation.
Groundwater Ingestion	De-minimis exposure	Although concentrations of benzene are above the groundwater cleanup level (0.006 and 0.007 mg/L), no receptors are on site and no off- property migration is occurring. Data indicates that the plume is shrinking.
Surface Water Ingestion	Pathway Incomplete	Contamination is not migrating off- the subject property.
Wild Foods Ingestion	Pathway Incomplete	Site is within the Fairbanks International Airport, no exposures through this pathway expected.
Exposure to Ecological Receptors	Pathway Incomplete	Site is within the Fairbanks International Airport, no exposures through this pathway expected.

Notes to Table 1: "De-minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. "Pathway incomplete" means that in ADEC's judgment contamination has no potential to contact receptors. "Exposure controlled" means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

Contamination remains on site above established default cleanup levels; however ADEC has determined there is no unacceptable risk to human health or the environment. Therefore this site will be issued a Corrective Action Complete- ICs determination subject to the following:

1. Any change in use or development on the property that may impact the exposure assumptions cited in this document must be reported to DEC prior to initiating. Such changes include but are not limited to soil excavations, installation of soil borings, installation of wells for any groundwater use, construction of new buildings or additions to the existing ones, demolition of existing structures, etc. If changes on the property use or development occur, current ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore FAI –DOT&PF shall report to ADEC every time a change or development project occurs on the property and every time a new leaseholder or sub-lessee assumes the lease for this lot. Reporting shall occur as soon as FAI- DOT &PF becomes aware of the event. The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.

2. This letter will be archived in the Alaska Department of Transportation and Public Facilities Fairbanks International Airport (ADOT & PF FIA) Leasing Office identifying the nature and extent of contamination at the Block 3 Lot 9 property and any conditions that the owners and operators are subject to in accordance with this decision document.

3. Installation of groundwater wells will require approval from ADEC and the FAI DOT&PF Leasing Office.

4. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 78.600(h). A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership. (See attached site figure).

5. All groundwater monitoring wells must be decommissioned in accordance with ADEC guidance, and documented in a report submitted to ADEC. Monitoring wells must be decommissioned by August 31, 2011 and a brief report of this work be submitted to ADEC by October 1, 2011.

6. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. When the site meets the requirements for a Corrective Action Complete determination, Institutional Controls will be terminated.

This determination is in accordance with 18 AAC 78.276 (f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal
Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 -18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

Please sign and return *Attachment A* to ADEC <u>within 30 days of receipt of this letter</u>. If you have questions about this closure decision, please contact the ADEC project manager, Tamara Cardona-Marek (907)451-2192.

Approved By,

for Rich Sundet
Environmental Program Manager

Sincerely,

Tamara Cardona-Marek, PhD
Environmental Program Specialist

Enclosure: Attachment A – Cleanup Complete IC's Agreement Signature Page
Attachment B – Site Figure

cc: Rebekah Cadigan, ADOT&PF, Fairbanks International Airport
Mark Lockwood, Shannon and Wilson

*Attachment A: Cleanup Complete-ICs Agreement and Signature Page**

Scott Marikis, Empire Airlines, Inc., as the responsible party, and the ADOT & PF Leasing Officer , as the landowner, agree to the terms of this Corrective Action Complete- Institutional Controls determination as stated in this Decision Document dated **June 24, 2011** for the FIA- Empire Airlines (#4). Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 78.276(f).

SMarl CFO

Signature of Authorized Representative, Title
Scott Marikis, Empire Airlines, Inc.

SCOTT Marikis CFO

Printed Name of Authorized Representative, Title

Signature of ADOT&PF Leasing Officer

Printed Name of ADOT&PF Leasing Ofiicer

Note to Responsible Person (RP):
After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

ADEC File No. 100.26.034
Hazard ID: 24292
ADEC Project Manager: Tamara Cardona-Marek

For Internal Use Only

***Attention ADEC Administration Staff:** Please follow the procedure below after Attachment A is signed/returned to ADEC.

1. Log-in and Date Stamp *Attachment A*
2. Scan *and* Save to the appropriate electronic folder on the network Drive
3. File the hard copy in the appropriate project/site file Correspondence Folder (blue in Anchorage).

Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager so that the PM can update the CS database

Attachment B: Site Figure