

# **Written Compliance Plan**

Produced by the Port of Oakland in collaboration with and approved by representatives of Citizens League for Airport Safety and Serenity (CLASS), the City of Alameda, Keep Jets Over the Bay (KJOB), and the City of San Leandro pursuant to the Amended and Restated Agreement entered into as of November 14, 2001, the Phase Two Agreement entered into as of October 8, 2002 and the Addendum to the Settlement Agreement entered into as of July 22, 2003

**March 8, 2013**

# Written Compliance Plan

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## Written Compliance Plan

### Introduction

Produced by the Port of Oakland in collaboration with and approved by representatives of Citizens League for Airport Safety and Serenity (CLASS), the City of Alameda, Keep Jets Over the Bay (KJOB), and the City of San Leandro.

The Written Compliance Plan constitutes the written plan designed to meet certain requirements set forth by the Amended and Restated Agreement entered into as of November 14, 2001 (Phase One Agreement) and certain additional requirements set forth by the Phase Two Agreement entered into as of October 8, 2002 (Phase Two Agreement “between the Port of Oakland, the City of Alameda, CLASS, and with the Phase One Agreement, the “Agreements”) between the Port of Oakland on the one hand, and petitioners, including CLASS, on the other hand.

Section 4.4 (f) of the Phase One Agreement states that “...a written plan be provided to, and subject to the approval of, the *petitioners*, describing reasonable steps that *Port* will implement to encourage and maximize aircraft conformance, and to discourage and minimize any diminution in conformance, with its other pre-ANCA programs intended to reduce noise associated with airport operations (“*programs*”)....Such written plan shall contain, at a minimum, measures substantially identical to those described in subparagraphs 4.4(e)(1) through (e)(3)...a brief description of the *programs* is appended to this *Agreement* as Exhibit D.” (See Appendix 1)

Section 4.2 (h) and (i) of the Phase Two Agreement states the Port agrees to use its good faith, best efforts to coordinate and persuade the Federal Aviation Administration (“FAA”) to maximize use of the “Silent 7” procedure and to “take concrete and assertive actions to gain enhanced pilot, tenant, air carrier, and FAA compliance” with the provisions of the Agreement and to use its “good faith, best efforts to coordinate with and persuade FAA to educate air traffic control (ATC) personnel at the Airport.” (See Appendix 2)

Section 4 of the Addendum To Settlement Agreement entered into July 22, 2003 between the Port of Oakland and the City of San Leandro references the terms of Section 4.4 (f) of the Phase One Agreement. (See Appendix 3)

Throughout this document “Parties” refers to the City of Alameda, CLASS, KJOB, and the City of San Leandro, collectively.

### Contents of Written Compliance Plan

#### Section 1:

Describes each of the aircraft noise abatement procedures included in the Compliance Plan and the Agreements.

#### Section 2:

Provides a summarized review of the quarterly report format (*Quarterly Aircraft Noise Report*) that generally applies to each element of the report.

#### Section 3:

Provides a list of proactive or remedial actions that the Port has instituted and/or agrees to take as reasonable efforts intended to assure that aircraft operating at the Airport will comply with noise abatement procedures described in the Compliance Plan and the Agreements, to the extent permitted by applicable laws and regulations (hereafter, collectively, “applicable laws”). This section also describes the consultation process that the Parties may utilize when noise abatement procedure performance levels are unacceptable to the Parties.

#### Section 4:

Provides a glossary or definitions of the terminology utilized to describe reasons for compliance and non-compliance provided in summary form in the comment sections of the noise abatement procedure reports.

#### Section 5:

Provides detailed compliance monitoring actions and the compliance reporting formats specific to each of the aircraft noise abatement procedures to be utilized by aircraft operating at the Airport.

Appendices:

Includes a sample copy of the Quarterly Aircraft Noise Report and documents related to the Port's engine maintenance run-up program as well as a copy of subparagraphs 4.4(e)(1) through (e)(3) and Exhibit D of the Phase One Agreement, subparagraphs 4.2 (h) and (i) of the Phase Two Agreement, Addendum to Settlement Agreement entered into as of July 22, 2003, and the revised form of Tenant Acknowledgement Notice.

## **Section 1. Noise Abatement Procedure Summaries**

The following are summaries of the aircraft noise abatement procedures that are listed in Exhibit D of the Phase One Agreement. Each of these procedures shall be utilized by aircraft using the Airport, as appropriate, to the extent permitted by applicable law at the discretion of the FAA as long as the applicable procedures may be safely implemented.

### **A. Engine Maintenance Run-Up Noise Limits**

The Port maintains an aircraft engine run-up restriction policy at Oakland International Airport and regulates enforcement of the program under Operations Directive Number 616.5. The directive regulates all engine run-ups for aircraft over 12,500 pounds including all military type aircraft and specifies the location and time-of-day for this activity. In addition, the 1976 Settlement Agreement stipulates that noise levels be limited for evening and nighttime aircraft engine run-up activity. During the evening hours, from 7:00 p.m. to 10:00 p.m., engine run-up noise levels should not exceed 75 decibels and from 10:00 p.m. to 7:00 a.m. engine run-up noise levels should not exceed 70 decibels, as measured by the Port's noise measurement system in residential areas of Bay Farm Island. (See Appendices 6 and 7)

### **B. North Field VFR Aircraft Departure Procedure**

Noise abatement procedures for North Field VFR (Visual Flight Rules) aircraft departures from Runways 27R/L or 33 instruct pilots to make a right crosswind turn over San Leandro Bay until reaching I-880 (Nimitz Freeway) and continue per FAA air traffic control instructions. Whenever safely possible, pilots are requested to avoid flying over nearby residential areas. A noncompliant departure is defined as a VFR departure from Runways 27R/L or 33 that flies over Alameda residential areas when it would have been safe to follow the VFR noise abatement procedure.

### **C. Silent 7 Departure Procedure**

The Silent 7 departure procedure is a FAA instrument departure procedure at Oakland International Airport designed to reduce noise from turbojet and turbofan aircraft departures between 10:00 p.m. and 7:00 a.m.. The Silent 7 departure procedure is described as a turbojet aircraft take-off from Runway 29 that turns left on a heading of 270 degrees to intercept and proceed via the SFO R-342 (the San Francisco International Airport radial heading of 342 degrees).

### **D. North Field Quiet Hours Procedures**

The Quiet Hours procedure is intended to minimize noise from 10:00 p.m. to 6:00 a.m. on residents living near Oakland International Airport's North Field. To achieve this goal a variety of noise abatement departure and arrival procedures have been developed for the North Field. These procedures are described in Section 5.4 below.

### **E. Preferential Runway Use Procedures (24 hour program)**

The North Field Preferential Runway Use noise abatement procedure states that the aircraft listed below should not depart at any time of the day from Runways 27R/L or land on Runways 09R/L, except during emergencies or when Runway 11/29 is not available. Pilots are requested to use Runway 11/29 whenever possible.

- Turbo-jet and turbo-fan powered aircraft.
- Turbo-prop aircraft over 17,000 pounds.
- Four-engine reciprocating powered aircraft.
- Surplus military aircraft over 12,500 pounds.

## Section 2. Quarterly Report Format

Section 4.4(e)(1) of the Phase One Agreement references a “quarterly written report” that the Port is to provide that identifies certain North Field operations or engine run-up events that do not conform with applicable noise abatement procedures, “...identifying the persons responsible, explaining the reason for the *deviation*, describing the efforts taken by the Port to notify the responsible persons of the *deviation* and prevent future *deviations* by such persons, summarizing any response received by the Port, and appending a copy of any such written notification and response.” The Port fulfills the quarterly written report requirement by producing the **Quarterly Aircraft Noise Report**, which shall be published four times per year following each calendar quarter. (See Appendix 5)

Following is a description of the prescribed format for the **Quarterly Aircraft Noise Report**. The report provides introductory statements regarding roles and responsibilities, safety concerns and a general disclaimer. Specifically, the report shall include:

1. A summary description of each noise abatement procedure.
2. An explanation in the description section identifying the actions Port staff shall take for non-compliant activity in any particular noise abatement procedure.
3. A glossary of the terms or classifications that are utilized to explain the differences between compliant and non-compliant aircraft operations and pilot or air traffic controller actions. All exempted actions that apply to any particular procedure will also be identified and described.
4. A compliance summary table for each noise abatement procedure which identifies statistical information on relevant aircraft operations and the number of compliant versus non-compliant operations. A performance value shall be provided in terms of the percentage of activity that conformed with the requirements of a particular procedure.
5. A list of all non-compliant or exempt aircraft operations for each procedure along with a summarized explanation for any non-compliant or exempt activity. The information shall include the date and time of the activity, aircraft type, flight number and/or aircraft registration number, runway used, aircraft owner/operator, a flight's origin and destination, and in the case of general aviation, an identification of fixed based operators vs. itinerant operators as available within the integrated databases of the noise and operations management system (NOMS). Exempted aircraft operations shall include an explanation as to why the flight was exempted from a noise abatement procedure.
6. The Port will indicate when communication was made with aircraft operators who may be responsible for any non-compliant activity and a summary of the communications. The Port will maintain records documenting any written or verbal communications made with any aircraft owner/operator or the FAA of a non-compliant aircraft event. The Parties may review the communication documentation upon request.
7. A summary of noise office activities including:
  - a. Port's staffing level during the previous quarter;
  - b. Number of outreach activities (e.g. pilot or tenant orientation meetings);
  - c. Number of brochures distributed;
  - d. Number of DVD's distributed; and
  - e. Radio communications review rate per non-compliant events.

### **Section 3. Port of Oakland Reasonable Efforts**

Following is a list of proactive or remedial actions that the Port has instituted and/or will take that demonstrate the Port's reasonable and good faith, best efforts in accordance with the Agreements that aircraft operating at the Airport will comply, to the extent permitted by applicable laws, with noise abatement procedures described in the Agreements and as set forth in this Compliance Plan. These efforts will apply to all aircraft noise abatement procedures as outlined in the Agreements. Any effort, in terms of proactive or remedial actions, that may be taken by the Port that is procedure specific is identified and described under the individual procedures presented below. The Parties will have the option to engage in a consultation process with the Port, as described below, when noise abatement procedure performance levels are unacceptable to the Parties.

The Port has included in this Compliance Plan the program recommendations described in the Corporate Jet Noise Abatement Study (June 2009) (the "June Study") to demonstrate the Port's reasonable and good faith, best efforts to enhance program effectiveness. Appropriate actions determined to be cost effective by the Port will be taken by the Port to:

1. Continue to prioritize noise program staffing to provide for adequate pilot outreach needs and timely compliance monitoring.
2. Perform a major NOMS upgrade during calendar years 2010 and 2011 that is intended to maximize the automation of system functionality and provide Port staff with optimized tools to enhance noise abatement procedure compliance monitoring and program management efficiencies. The system enhancements will be designed to address the recommendations of the June Study.
3. Continue to use and upgrade NOMS as necessary to automate the process of identifying noncompliant aircraft to the greatest extent possible. (Version upgrades are provided annually by the system vendor under the normal maintenance agreement.)
4. Improve and/or maintain the quality of the operator identification database by maintaining a service subscription for registered aircraft operators from a vendor such as JetNet or PASSUR and integrate such database with NOMS. The Port has subscribed to the PASSUR service and the database integration of this service and/or other services will be required in the NOMS upgrade program.
5. Evaluate and improve the Port's pilot-controller communications recording system so that all necessary radio frequencies can be tracked and played back for compliance monitoring of noise abatement procedures. Furthermore these recordings will be integrated with the NOMS. These enhancements will be performed under the NOMS upgrade program and additional radio frequencies may be required.

#### **A. Program non-compliance notification procedures**

The Port will take specific actions when any aircraft activities at the Airport are not in compliance with the Port's aircraft noise abatement procedures. Most actions will consist of written communication (e-mails or letters) to FAA air traffic control management or the owner/operator of the aircraft involved with any non-compliant operations in order to provide notification of non-compliance, as well as to provide educational material. At times, Port staff may contact FAA air traffic control management representatives or aircraft owners and operators orally in cases of non-compliance with noise abatement procedures. The actions taken by the Port may vary according to the nature of the noise abatement procedure and/or the level of attention required for the most desirable results. These actions will be taken by the Port for each of the aircraft noise abatement procedures unless the Port determines that additional unique steps are required. Any actions unique to a specific noise abatement procedure will be described individually under each procedure section below.

Furthermore, the Port has included the program recommendations described in the June Study, which recommended implementation of standard operating procedures for the noise office staff and to update these as needed. The Port's standard operating procedures will include the following elements:

1. Continued use of NOMS and other data to produce a daily report of non-compliant aircraft and follow-up communications for non-compliant activity. The Port recognizes that timely communications with pilots, operators and air traffic controllers is essential to the success of the program and will act promptly to initiate communications: within two business days if at all possible.

2. Review of audio files regularly to determine cause for any spike in noncompliance, particularly for noncompliance during periods when the Southeast Plan is in effect.
3. Expedited communications by use of e-mails to notify aircraft operators and owners of non-compliant flights whenever possible to reduce the period of time between the occurrence of non-compliant activity and the receipt of the notification of non-compliance.

#### **B. Communications with the Federal Aviation Administration**

In accordance with Section 4.4 of the Phase One Agreement and Section 4.2 of the Phase Two Agreement, the Port shall take the following steps with respect to the Port's communications and interactions with the FAA:

1. Sponsor Northern California TRACON Tours in coordination with the NorCal TRACON for accommodation; a minimum of two tours will be scheduled annually as long as there is interest and participation by the Noise Forum or with an airfield research group or community members.
2. Issue periodic reminders to FAA air traffic control management to encourage implementation of noise abatement procedures on Southeast Plan operations.
3. Communicate with FAA promptly via e-mails or phone calls as problems with compliance with the noise abatement procedures are identified or arise.
4. Maintain monthly Airport Operations Manager meetings with local Air Traffic Control Tower (ATCT) Management.
5. Request and/or encourage FAA air traffic control representation at airport research group and Noise Forum Meetings.
6. Offer educational sessions to air traffic controllers on an annual basis to heighten awareness of the aircraft noise abatement program and the importance of and reasons to support the program, and encourage their suggestions regarding implementation of noise abatement procedures.

#### **C. Distribution of noise abatement brochure and poster to fixed base operators and flight schools**

Routinely, but no less than annually, update and distribute as needed the aircraft noise abatement procedure brochure (or airman's manual insert) to all fixed base operators and flight schools at Oakland International Airport. In these materials, the Port, subject to the limitations of applicable laws, shall urge each such operator to use its good faith, best efforts to comply with these procedures. The Port will provide and maintain other educational materials, including posters, at FBO facilities as needed.

#### **D. Request signed acknowledgments from all existing and future lessees**

Following the Phase One Agreement, Port staff conducted a year-long program in 2002 to acquire signed acknowledgements from tenants of the receipt of the notification from the Port, urging aircraft operators, subject to the limitations of applicable laws, to use their good faith, best efforts to comply with the noise abatement procedures. The Port has developed an updated acknowledgement form and shall distribute it to existing and future tenants in accordance with the provisions of Section 4.4(e)(2) of the Phase One Agreement. A copy of this Notice is attached as Appendix 8.

In addition, the Port will schedule briefings with all new corporate tenants who operate aircraft or flight service enterprises to review the Port's aircraft noise abatement procedures.

#### **E. Education & outreach programs**

The Port shall conduct routine educational meetings with pilots, FAA ACTC staff, FBOs and other flight service providers operating at the Airport to increase compliance with noise abatement procedures. The following provisions shall apply to education and outreach programs:

1. Pilot and/or airport user educational outreach programs will be conducted two times per year. A schedule of meeting dates will be proposed to the Parties and Research Group members as soon as practicable at the beginning of each calendar year.
2. The Port will extend invitations to the Parties and other interested parties, such as the North Field and South Field Research Groups, to any outreach meeting with airport pilots or tenants conducted to promote or support the aircraft noise abatement procedures.
3. Education and outreach meetings will be structured to promote awareness of applicable aircraft noise abatement procedures and include an agenda.

4. The most recent quarterly noise abatement program report statistics will be presented at education and outreach meetings.
5. The Port shall coordinate with the Parties to evaluate the feasibility of implementing a ranking system for compliant operators and/or a pilot awards program to enhance compliance.
6. The Port shall develop an award program based upon performance in complying with the noise abatement procedures to commend responsible parties for their cooperation and support (including commercial operators, general aviation pilots and air traffic controllers). The award program may provide various forms of award and recognition including but not limited to "thank you" cards to operators who have maintained 100% compliance over a given period of time to reinforce the importance of the operators continued compliance.
7. The Port will take reasonable efforts to promote public awareness of the awards program e.g. by preparing and disseminating press releases, community bulletins, and the like concerning the awards program.
8. Noise abatement procedure performance data shall periodically be used for compliance trend analysis.
9. Port shall provide season-specific outreach efforts to advise corporate jet owners and operators of the likelihood of use of the Southeast Plan during periods between the months of October and March, and notice that noise abatement procedures are in effect in order to reduce potential nuisance for Alameda/Bay Farm Island residents from aircraft over-flights.
10. The Port shall evaluate the cost and effectiveness of placing notices on popular flight planning websites such as Airnav.com, FltPlan.com, and Flightaware.com to encourage compliance with the Port's noise abatement procedures. Following such evaluation, the Port shall develop a report and recommendations for implementation and changes to this Compliance Plan for discussion with the Parties. The Port subscribes to the website services called *Whispertrack – Fly The Quiet Route*. Whispertrack is a pilot-oriented website information service, which provides a full compliment of flight data on airports and navigation guides as well as focused educational materials regarding an airport's noise abatement program and flight procedures.
11. The Port shall evaluate the costs to develop a DVD with information for airport users, pilots and air traffic controllers regarding the Port's aircraft noise abatement procedures. If and when financially feasible, the Port will produce such a DVD. Although the Port recognizes the potential educational value of this project, funding for this project has not yet been identified. Within six months from the adoption of this Compliance Plan, the Port will finalize a cost evaluation report and make a recommendation with respect to development of such a DVD for discussion with the Parties.

#### **F. Research Groups and activities**

The Port shall continue to research and consider development of program enhancements or additional noise abatement procedures that may be implemented safely and in compliance with applicable laws, in cooperation with the memberships of the North and South Field Research Groups and the Noise Forum.

#### **G. Performance monitoring and trend analysis**

On an annual basis, the Port shall produce a rolling three-year trend chart for the aircraft noise abatement procedures to be presented to the Parties and other community representatives at the airport research group meetings. The trend chart will report the three-year quarterly values (number of aircraft flights and compliance percentages) and shall be utilized to measure the overall effectiveness of the actions included in this Compliance Plan. This analysis will assist the program stakeholders to determine if any further steps should be taken to improve noise abatement procedures, e.g. additional research and development. Potential additional actions may include enhanced or expanded monitoring activity as well as a discontinuation of monitoring activities in the event it is unnecessary to maintain compliance actions due to the success of a procedure or the termination of an operational activity (e.g. airlines do not perform training flights any longer at OAK).

#### **H. Optional action by the Parties**

In the event that noise abatement procedure performance levels for operations at the Airport are unacceptable to the Parties, at the request of the Parties, the Port shall schedule one or more consultation meetings with the Parties at which meetings the Port and the Parties shall consider recommendations for modifying or expanding any of the current noise abatement procedures in this Compliance Plan.

## Section 4. Definitions of Compliance Monitoring Terminology

The Noise/Environmental Compliance Office reviews flight track data and air traffic control communications' recordings, along with other data resources, to determine compliance with aircraft noise abatement procedures. This support information is reported in the various lists that document aircraft landing and departures relevant to the noise abatement procedures that are monitored for compliance. Comments are provided in these lists that summarize the circumstances or the reason that most appropriately explains the reviewer's determination as to whether or not the aircraft flight was compliant or non-compliant with noise abatement procedures. The definitions of the summarized comments or terms are described below.

**Airspace Conflict Potential:** Pilot or air traffic controller may have needed to maintain safe separation between a non-compliant aircraft and other aircraft in the vicinity of the airport. (*Separation of aircraft: some aircraft are able to decrease speed better than others or fly faster than other aircraft and reach minimum safe separation from aircraft in front or behind. These conditions, although rare, are very difficult to avoid.*) These situations may occur when aircraft depart from the North Field on a VFR flight or when jets land on Runway 11 during Southeast Plan traffic flow. In these circumstances the reviewer has made a determination, based upon visual evidence, that the flight, which would normally be considered non-compliant, is exempt for safety considerations.

**Airspace Conflict:** The reviewer has found **clear and specific** evidence that the pilot or air traffic controller was required to maintain safe separation between a non-compliant aircraft and other aircraft in the vicinity of the airport. (*Separation of aircraft: some aircraft are able to decrease speed better than others or fly faster than other aircraft and reach minimum safe separation from aircraft in front or behind. These conditions, although rare, are very difficult to avoid.*) These situations may occur, for example, when aircraft depart from the North Field on a VFR flight or when jets land on Runway 11 during Southeast Plan traffic flow and an air traffic controller diverts the jet to land on the North Field. In these circumstances the flight, which would normally be considered non-compliant, is exempt for safety considerations.

**Air Traffic Delay:** An air traffic controller may instruct a pilot to depart from Runways 27R/L to hasten a departure time in order to maintain an appropriate flow of air traffic within the navigable air routes and/or to avoid delays on the South Field during airport or airspace peak-time periods. This activity or action will be investigated to determine if the aircraft flight was in compliance with noise abatement procedures.

**ATC Instructions:** Refers to an aircraft flight compliance determination investigation when the air traffic controller does not cite or improperly cites the pilot instructions to use Runway 11/29 for noise abatement. The Air Traffic Control ("ATC") audio file(s) should be used for documentation. In this event, the ATC rather than the aircraft owner or operator will be notified of non-compliance with the noise compliance procedures.

**Audio Not Available:** Refers to an aircraft flight compliance determination investigation when the ATC audio file is lost or unusable due to a recording system technical failure. In this event, the associated flight is considered not in compliance with the noise abatement procedure even though there may otherwise be a specific reason that could have exempted the flight from a determination of non-compliance.

**Audio Not Reviewed:** Refers to an aircraft flight compliance determination investigation when the ATC audio file has not been reviewed for some reason other than for a technical failure of the recording system. In this event, the associated flight is considered not in compliance with the noise abatement procedure even though there may be a specific reason that could have exempted the flight from a determination of non-compliance.

**Flight Replay Not Reviewed:** Refers to an aircraft flight compliance determination investigation when the NOMS flight replay was not employed to review the aircraft flight for airspace use or safety reasons. In this event, the associated flight is considered not in compliance with the noise abatement procedure even though there may be a specific reason that could have exempted the flight from a determination of non-compliance.

**Good Effort:** From the reviewer's perspective, the pilot appears to have made a genuine effort to avoid residential areas but the aircraft flight trajectory caused the aircraft to intersect the NOMS monitoring gate which identified the aircraft as an errant VFR departure. If the flight track is very close to the monitoring gate the reviewer may determine that a good effort was made by the pilot and the flight is considered compliant with the noise abatement procedure.

**Good Effort/Air Traffic:** There is clear visual evidence that other aircraft are flying in close vicinity, which may have required a pilot, or air traffic controller, to maintain safe separation between the non-compliant aircraft and another aircraft. From the reviewer's perspective, the pilot also appears to have made a genuine

effort to avoid residential areas but the aircraft flight trajectory caused the aircraft to intersect the NOMS monitoring gate which identified the aircraft as an errant VFR departure. If the flight track is very close to the monitoring gate the reviewer may determine that a good effort was made by the pilot and the flight is considered compliant with the noise abatement procedure.

**IFR Training:** Some aircraft are departing VFR (Visual Flight Rules apply) but the pilots or student pilots may be practicing flying IFR (Instrument Flight Rules specified by the FAA for flight under weather conditions in which visual reference cannot be made to the ground and the pilot must rely on instruments to fly and navigate) in which case the pilots navigate departing aircraft in a specific heading (i.e. 310 degrees). Based upon the aircraft departure trajectory (straight-line departure at approximately 310 degrees heading), the reviewer may judge that an aircraft flight is a potential IFR training flight. This aircraft departure will be considered compliant with noise abatement procedures.

**Law Enforcement:** An aircraft piloted by law enforcement officials may need to divert from the noise abatement procedure due to public safety concerns or to perform their law enforcement duties. Law enforcement aircraft flights over residential areas are considered exempt from noise abatement procedures due to the nature of the mission and operational necessity.

**Lifeguard Medical:** Medical operations such as organ or patient transportation are exempt from noise abatement procedures due to the nature of the mission and operational necessity.

**Pilot Request:** Although air traffic controllers normally instruct jet aircraft pilots to taxi to Runway 29 to depart for noise abatement purposes, FAA regulations allow pilots to request departure from Runways 27R/L. Also, FAA air traffic controllers at Northern California TRACON or the OAK Control Tower normally guide jet aircraft to land on Runway 11 during the Southeast Plan air traffic pattern. However, pilots may request to land on Runways 09R/L when safe conditions exist. Pilot requests are normally granted although these requests are considered not in compliance with the noise abatement procedures.

**South Field Closure/Repair:** The South Field (Runway 11/29) was closed due to construction, maintenance, Foreign Object Debris (FOD) removal, runway repair, or an emergency. Routine South Field maintenance is scheduled each Monday between 12:00 a.m. and 6:00 a.m. because there are the fewest scheduled air carrier flights during that time, which minimizes the need to use the North Field. Aircraft flights normally considered to be non-compliant would be exempt from complying with any relevant noise abatement procedures in the event of the closure of the South Field runway.

**Straight Out:** This term describes a non-compliant aircraft flight that departs with a runway heading departure from Runways 09R/L or 27R/L and flew over nearby residential areas.

**Time Buffer:** Aircraft departures from 10:00 to 10:10 p.m. and from 5:50 to 6:00 a.m. fall within the long established "buffer time period" in which an aircraft flight is not considered non-compliant with noise abatement procedures even though the flight would normally be non-compliant during the nighttime hours. These flights will be deemed exempt from the procedures as the departure was slightly delayed or slightly ahead of the scheduled time as fixed by the air traffic controller who provides clearance instructions to the pilot. Although the actual scheduled time of departure is between 6:00 a.m. and 10:00 p.m., the aircraft is released to the runway either early or too late.

**VFR Departure:** This term is used to describe an aircraft assumed to be flying under Visual Flight Rules (VFR) on departure and flew over nearby residential areas. These aircraft departures are considered to be non-compliant with noise abatement procedures unless determined to be exempt for a specific reason as judged by the reviewer.

**Wide Salad:** This term is applied by the reviewer when an aircraft flies a SALAD ONE departure turn but the turn was wide and resulted in a flight over Alameda residential areas. The reviewer would determine that this flight is non-compliant with noise abatement procedures.

**310 Degree Heading:** This term is used to describe an aircraft that the reviewer assumed was flown under either IFR or VFR and made a turn to a 310 degree heading flying over nearby residential areas. These aircraft departures are considered to be non-compliant with noise abatement procedures unless determined to be exempt for a specific reason as judged by the reviewer.

## Section 5. Noise Abatement Procedures

### 5.1. Engine Maintenance Run-Up Noise Limits

#### A. Procedure Information

Maximum noise levels shall be reviewed at the permanent noise microphone located on Beach Road (RMT #15) adjacent to the Airport when a power engine run-up occurs between 7:00 p.m. and 7:00 a.m. daily. Aircraft engine run-up information is correlated to maximum noise level data collected from RMT 15. A non-compliant engine run-up equals or exceeds 75 dB (Lmax) between 7:00 p.m. and 10:00 p.m. and 70 dB (Lmax) between 10:00 p.m. and 7:00 a.m..

#### B. Airport Operations Directive

Airport Directive 616.5 is attached as Appendix 6.

#### C. Forms and signatures for approval

See Appendix 7.

#### D. Compliance Monitoring

Airport Operations staff are required to maintain activity reports for all engine maintenance run-ups. Port staff shall continue to review these reports and noise measurements at RMT 15 to determine if any noise events exceed the established noise level restrictions during any aircraft engine maintenance run-up that is performed during the evening and nighttime hours. Staff shall compare the engine run-up activity reports with noise measurements generated at both RMT 15 and RMT 16 (located in the Ground Run-up Enclosure (GRE)).

If a non-compliant run-up occurs, the Port staff investigates the occurrence and coordinates with Airport Operations and the aircraft operator/airline to minimize future non-compliant run-up operations. Historically noise measurements exceeding the limit are rare and those noise levels were only slightly higher than the established limit. Noise measurements above the noise limits may be caused by any number of factors, including weather conditions or conditions beyond the control of any aircraft operator, and engine run-ups have historically been a rare source of non-compliance with the noise abatement procedure.

#### E. Report Format

Engine Maintenance Run-up Procedure reports shall provide a summary table that provides the number of engine maintenance run-ups performed under the evening and nighttime procedures, individually, for each month along with the number of run-ups that created noise measurements that exceeded the maximum level allowed. The report shall provide a complete listing of all engine run-ups for the calendar quarter along with information on the operator, aircraft type, engine power levels, date and time of activity, and the location where the run-up was performed.

#### Sample Table

Engine Run-up Program Fourth Quarter 2012				
	October	November	December	Quarter
Runups - 7:00 PM to 10:00 PM	0	0	1	1
Runups Greater Than 75 dBA	0	0	0	0
Runups - 10:00 PM to 7:00 AM	5	4	5	14
Runups Greater Than 70 dBA	0	0	0	0
Total Evening and Nighttime Runups	5	4	6	15
Total Non-compliant Runups	0	0	0	0
Compliance Rate	100%	100%	100%	100%

## 5.2. North Field VFR Aircraft Departure Procedures

### A. Procedure Information

This report provides information on noncompliant VFR aircraft departures compared to all flights recorded by NOMS during the calendar quarter reported. A noncompliant departure is defined as a VFR departure from Runways 27R/L or 33 that flies over Alameda residential areas when it would have been safe to follow the VFR noise abatement procedure.

Many VFR aircraft that fly over Alameda residences on departure from the North Field may need to do so in order to maintain safe separation from other general aviation aircraft flying in the vicinity of the airport. Often aircraft on arrival flight patterns from the north and east of the airport are flying in directions opposite from those aircraft that are departing from the North Field. In these circumstances, departing VFR aircraft are considered to be in compliance with the noise abatement procedure.

### B. Compliance Monitoring

NOMS filters out any aircraft departures that fly VFR over residential areas in Alameda or Bay Farm Island. Port staff reviews each flight track for such departures, using the flight replay feature, to determine if any potential airspace conflict may have occurred resulting in a compliant aircraft departure. In any event where an aircraft is determined to be not in compliance with the noise abatement procedure, the Port will mail a letter or e-mail the aircraft owner/operator to advise them of the non-compliant flight and to provide educational material.

### C. Report Format

The report includes a table that summarizes compliance with VFR aircraft noise abatement departure procedures for the reported calendar quarter, along with similar tables for each month of the calendar quarter. The summary table also provides the number of total VFR and IFR aircraft departures and the runways used for these departures. A procedure performance percentage is provided on the compliance rate.

The report also includes a table listing all VFR aircraft departures that flew over residential areas of Alameda and identifies non-compliant aircraft departures and departures considered to be compliant. Explanatory comments are provided regarding the reason why the aircraft departure was determined to be compliant.

#### Sample Table

North Field VFR Aircraft Departure NAP Compliance Summary Fourth Quarter 2012				
	October	November	December	Total
Total VFR Departures	375	266	231	872
Total VFR Departures Over Alameda	123	73	51	247
Compliant Departures	352	253	227	832
Non-compliant Departures	23	13	4	40
Compliance Rate	94%	95%	98%	95%

## 5.3. Silent 7 Departure Procedure

### A. Procedure Information

When flying the Silent 7 departure procedure, aircraft are further from residential areas and there is less aircraft noise impact on residences than there would be when departing aircraft fly straight out over the San Francisco Bay on a runway heading. When safe to do so, the FAA air traffic controllers assign this departure procedure between 10:00 p.m. and 7:00 a.m. for turbojet aircraft departures.

Although the Silent 7 departure procedure is assigned to turbojet aircraft that depart off Runway 29 between 10:00 p.m. and 7:00 a.m., a buffer zone of ten minutes is applied for monitoring performance. Turbojet aircraft departures between 10:00 p.m. and 10:10 p.m., as well as those between 6:50 a.m. and 7:00 a.m., are considered meeting the noise abatement departure procedure even if they do not fly the Silent 7 departure

procedure. These “buffer zone” departures will be identified and appear in the tables in the report in black text, while the aircraft that are identified as noncompliant will appear in red text.

The buffer zone is applied because two different air traffic controllers may be involved in directing a pilot on departure from the airport. The “clearance delivery” air traffic controller is the first controller who instructs the pilot prior to taxiing to the runway and assigns the departure procedure. The second air traffic controller is responsible for directing the aircraft onto taxiways and releasing the aircraft onto the runway for departure. Several minutes may pass between instructions from one controller to the next and aircraft normally scheduled to depart before 10:00 p.m. and are not assigned the Silent 7 departure procedure may be delayed a few minutes and depart shortly after 10:00 p.m.. In a similar situation, turbojet aircraft that are scheduled to depart after 7:00 a.m. may depart a few minutes earlier than the actual scheduled time.

## B. Compliance Monitoring

Non-compliance with the Silent 7 departure procedure occurs when a turbojet aircraft, departing from Runway 29, does not make the initial 270 degrees heading turn and/or passes over Alameda instead of following the Silent 7 departure pattern up the San Francisco Bay. NOMS filters out those aircraft deemed not to have flown the procedure as designed.

Non-compliance is reported to the FAA Air Traffic Control Tower to encourage communications that would help minimize the number of future non-compliant departures. Since the FAA is responsible for assigning the Silent 7 departure procedure to a pilot, non-compliance is not reported to the air carrier involved unless the incidence is determined to be the fault of the pilot. Note: Due to a historically consistent high compliance rate (99%) with the Silent7 Departure Procedure, the Port does not routinely communicate with the FAA ATC or the air carriers.

## C. Report Format

This report includes a summary table for nighttime Runway 29 turbojet aircraft departures and Silent 7 departure compliance performance based upon the percentage those departures that follow the Silent 7 departure procedure. The report also includes a list of all Silent 7 noncompliant departures which separately identifies any “buffer zone” departures. Flight track maps are also included displaying all Silent 7 noncompliant departures for each month during the reported calendar quarter.

### Sample Table

Silent 7 Night Departure NAP Compliance Summary 10:00 pm - 7:00 am Fourth Quarter 2012				
	October	November	December	Quarter
Runway 29 Nighttime Turbojet Departures	908	753	717	2,378
Buffer Time Departures	9	10	5	24
Compliant Departures	898	744	715	2,357
Non-compliant Departures	10	9	2	21
Compliance Rate	99%	99%	100%	99%

## 5.4. North Field Quiet Hours Procedures (10 PM to 6 AM)

### A. Procedure Information

The Quiet Hours procedures provide recommendations to pilots using the North Field on runway use and a choice of departure procedures. If the procedures are flown as intended, aircraft will avoid flying over nearby residential areas on Bay Farm Island, East End Alameda, and the Davis West/Timothy Drive area of San Leandro between the hours of 10:00 p.m. and 6:00 a.m..

Pilots are requested to avoid flying over nearby residential areas when landing or departing the North Field and to follow prescribed procedures when safety, weather and ATC instructions permit. These procedures include:

- Runways 09R and 27R being designated as the preferred departure runways.
- Left turns from Runways 09R/L are discouraged.
- Straight out Runway 09L departures are discouraged.

- All aircraft over 75,000 pounds are requested to use Runways 11/29.
- Full-length departures from the chosen North Field Runway are encouraged.

For VFR and IFR aircraft departures using Runway 09R/L, pilots may choose from the following departure procedures, wind and weather permitting:

- For Runway 09R departures, pilots are requested to use the 140-180 degree departure headings when able for E/SE-bound departures or continue to fly right turns over the airport for N/NE-bound departures when able from Runways 09R or 09L.

For nighttime landings, pilots are advised that Runway 27L is the preferred runway. For all nighttime flights, pilots are advised to fly aircraft, including helicopters, over freeways and water as much as possible to avoid flying over hotels and residential areas.

**B. Compliance Monitoring**

The NOMS filters out all aircraft departures that fly over residential areas during the Quiet Hours in Alameda, Bay Farm Island or the Davis West/Timothy Drive areas of San Leandro. Port staff reviews each flight track, using the NOMS flight replay feature, to determine if an airspace conflict may have occurred. An aircraft departure is considered compliant if there was a potential airspace conflict or if it is otherwise exempted. If the aircraft is determined to be non-compliant with the noise abatement procedure, the Port will mail a letter to or e-mail the aircraft owner/operator to advise them of the non-compliant flight and to provide educational material.

**C. Report Format**

The Quiet Hours report includes a table that summarizes compliance with the North Field Quiet Hours aircraft noise abatement procedure for the reported calendar quarter by each month. The report also includes a table listing all aircraft departures that flew over residential areas of Alameda. Explanatory comments are provided for non-compliant aircraft departures as well as for the aircraft that are exempt from the procedure to explain the reason why the aircraft departure was determined to be compliant. Flight track maps are also provided.

**Sample Table**

North Field Quiet Hours Compliance Summary (10:00 p.m. to 6:00 a.m.) Fourth Quarter 2012				
	October	November	December	Quarterly
Total Night Departures (10:00 p.m. to 6:00 a.m.)	66	61	43	170
Compliant Night Departures	58	47	41	146
Average Compliant Departures per Night	1.9	1.5	1.3	1.6
Non-Compliant Night Departures	8	14	2	24
Average Non-Compliant Departures per Night	0.3	0.5	0.1	0.3
Night Departure Compliance Rate	88%	77%	95%	86%

**5.5. Preferential Runway Use Procedures**

**A. Procedure Information**

Neither the Airport nor the FAA Air Traffic Controllers may restrict a pilot's access to an available runway based solely on noise considerations. However, the Port will advise FAA ATCT staff and pilots and operators that turbo-jet and turbo-fan powered aircraft, four engine reciprocating powered aircraft, and turbo-prop aircraft over 17,000 pounds, and surplus military aircraft over 12,500 pounds should not, at any time, depart from Runway 27R/L or land on Runway 09R/L, except during emergency or when Runway 11/29 are not available. The Port will provide notice to the City of Alameda and CLASS of any work on Runway 11/29 that is more than minimal and that will cause Runway 11/29 to be closed; provided, however, that no notice shall be given when the Port closes Runway 11/29 after midnight on Monday mornings for routine maintenance and inspections.

## B. Compliance Monitoring

NOMS filters out any aircraft departures or landings that do not appear to meet the requirements of the preferential runway use procedure. Port staff reviews each flight track, sometimes using the flight replay feature, and the audio recordings of the ATC and pilot communications to determine the cause for the non-compliant aircraft flight. In any event where an aircraft is determined to be not in compliance with the noise abatement procedure, the Port will mail a letter to or e-mail the aircraft owner/operator or the FAA ATC to advise them of the non-compliant flight and to provide educational material.

## C. Report Format

The report includes two tables that summarize compliance with the Preferential Runway Use Procedures for the reported calendar quarter by month. One table summarizes North Field jet departure (or any other non-compliant aircraft departure) activity and provides compliance performance statistics. Another table summarizes North Field jet landing (or any other non-compliant aircraft landing) activity and provides compliance performance statistics. The compliance performance statistic will clearly be based upon the relevant aircraft operations. The report also includes a table listing all non-compliant and exempted aircraft departures or landings that flew over residential areas of Alameda along with explanatory comments.

### Sample Tables

Runway 27R/L Jet Departure Procedure Compliance Summary Fourth Quarter 2012				
	October	November	December	Quarterly
Airport-wide Corporate Jet Departures	881	811	816	2,508
Compliant Corporate Jet Departures	859	782	789	2,430
<b>Non-compliant Corporate Jet Departures</b>	<b>22</b>	<b>29</b>	<b>27</b>	<b>78</b>
Corporate Jet Departure Compliance Rate	98%	96%	97%	97%
The section below compares compliance performance to airport-wide jet departures.				
Airport-wide Jet Departures	5,607	5,310	5,573	16,490
Compliant Airport-wide Jet Departures	5,585	5,281	5,546	16,412
<b>Non-compliant Airport-wide Jet Departures</b>	<b>22</b>	<b>29</b>	<b>27</b>	<b>78</b>
Airport-wide Jet Departure Compliance Rate	100%	99%	100%	100%

Jet Aircraft Landing NAP for Runway 09R/L Compliance Summary Fourth Quarter 2012				
	October	November	December	Quarterly
Southeast (SE) Plan Corporate Jet Landings *	25	193	163	381
Compliant SE Plan Corporate Jet Landings	13	157	129	299
<b>Non-compliant SE Plan Corporate Jet Landings</b>	<b>12</b>	<b>36</b>	<b>34</b>	<b>82</b>
SE Plan Corporate Jet Landing Compliance Rate	52%	81%	79%	78%
The section below compares compliance performance to total airport-wide SE Plan jet landings.				
Airport-wide SE Plan Jet Landings	125	983	1,092	2,200
Airport-wide Compliant SE Plan Jet Landings	113	947	1,058	2,118
<b>Airport-wide Non-compliant SE Plan Landings</b>	<b>12</b>	<b>36</b>	<b>34</b>	<b>82</b>
Airport-wide Jet Landing SE Plan Compliance Rate	90%	96%	97%	96%
* Note: During Southeast Plan, business jets may land on Runways 09R/L and 11.				

IN WITNESS WHEREOF, the Port has adopted this Compliance Plan as of the date first written above.

CITY OF OAKLAND, Acting by and through its  
Board of Port Commissioners

By: \_\_\_\_\_  
Deborah Ale Flint  
Executive Director (Acting)

Approved as to Form:

\_\_\_\_\_  
Danny Wan  
Port Attorney

Date: \_\_\_\_\_

Cc: CLASS  
City of Alameda  
Berkeley Keep Jets Over The Bay  
City of San Leandro

## APPENDICES

1. **Exhibit D Amended and Restated Agreement entered into as of November 14, 2001**
2. **Subparagraphs 4.2(h) and (i) Phase Two Agreement entered into as of October 8, 2002**
3. **Addendum to Settlement Agreement entered into as of July 22, 2003**
4. **Subparagraphs 4.4(e)(1) through (e)(3) of Amended and Restated Agreement entered into as of November 14, 2001**
5. ***Copy of Quarterly Aircraft Noise Report***
6. **Airport Operations Directive - Engine Maintenance Run-ups**
7. **Copy of Engine Maintenance Report Form**
8. **Tenant Acknowledgement Notice**