REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

COCHRANE-PUERTO MONTT AIRSPACE MODERNIZATION PLAN PROJECT

Submission Deadline: **1:00 PM LOCAL TIME**

MONDAY, December 5, 2011

Submission Place: Sergio Gallo Rosales
Miguel Claro Nº 1314, 6º Piso, Departamento Planificación
Providencia
Santiago, Chile
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SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

SECTION 1: INTRODUCTION 3
1.1 BACKGROUND SUMMARY 3
1.2 OBJECTIVE .....
1.3 PROPOSALS TO BE SUBMITTED .....
1.4 CONTRACT FUNDED BY USTDA .....
SECTION 2: INSTRUCTIONS TO OFFERORS .....
2.1 PROJECT TITLE .....
2.2 DEFINITIONS .....
2.3 DESK STUDY REPORT .....
2.4 EXAMINATION OF DOCUMENTS .....
2.5 PROJECT FUNDING SOURCE .....
2.6 RESPONSIBILITY FOR COSTS .....
2.7 TAXES .....
2.8 CONFIDENTIALITY .....
2.9 ECONOMY OF PROPOSALS .....
2.10 OFFEROR CERTIFICATIONS .....
2.11 CONDITIONS REQUIRED FOR PARTICIPATION .....
2.12 LANGUAGE OF PROPOSAL .....
2.13 PROPOSAL SUBMISSION REQUIREMENTS .....
2.14 PACKAGING .....
2.15 AUTHORIZED SIGNATURE .....
2.16 EFFECTIVE PERIOD OF PROPOSAL .....
2.17 EXCEPTIONS .....
2.18 OFFEROR QUALIFICATIONS .....
2.19 RIGHT TO REJECT PROPOSALS .....
2.20 PRIME CONTRACTOR RESPONSIBILITY .....
2.21 AWARD .....
2.22 COMPLETE SERVICES .....
2.23 INVOICING AND PAYMENT .....
SECTION 3: PROPOSAL FORMAT AND CONTENT .....
3.1 EXECUTIVE SUMMARY .....
3.2 COMPANY INFORMATION .....
3.2.1 COMPANY PROFILE .....
3.2.2 OFFEROR'S AUTHORIZED NEGOTIATOR .....
3.2.3 NEGOTIATION PREREQUISITES .....
3.2.4 OFFEROR'S REPRESENTATIONS .....
3.2.5 SUBCONTRACTOR PROFILE
3.2.6 SUBCONTRACTOR'S REPRESENTATIONS
3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL .....
3.4 TECHNICAL APPROACH AND WORK PLAN .....
3.5 EXPERIENCE AND QUALIFICATIONS .....
SECTION 4: AWARD CRITERIA .....

ANNEX 1	FEDBIZOPPS ANNOUNCEMENT
ANNEX 2	BACKGROUND DESK STUDY REPORT
ANNEX 3	USTDA NATIONALITY REQUIREMENTS
ANNEX 4	USTDA GRANT AGREEMENT, INCLUDING MANDATORY CONTRACT CLAUSES
ANNEX 5	TERMS OF REFERENCE (FROM USTDA GRANT AGREEMENT)
ANNEX 6	COMPANY INFORMATION

Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US$623,000 to DGAC – Dirección General de Aeronáutica Civil ("Grantee") in accordance with a grant agreement dated March 10, 2011 (the "Grant Agreement"). USTDA will fund the cost of goods and services required for the preparation of a feasibility study ("Study") on the proposed Cochrane-Puerto Montt Airspace Modernization Project ("Project") in Chile ("Host Country"). The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Feasibility Study.

1.1 BACKGROUND SUMMARY

In recent years, southern Chile has experienced an increase in air traffic. The region has become a popular tourist destination with a growing fishing industry and five hydroelectric projects planned for the near future. As such, new aviation infrastructure and systems are required to support this growth and to ensure coverage in areas and altitudes where there are significant deficiencies in communications and surveillance.

Both Puerto Montt and Cochrane are located in mountainous terrain in remote areas of the Aisen and Los Lagos regions, respectively. The main facility at Puerto Montt is a commercial airport that currently handles roughly 6,000 operations a year, with traffic expected to increase at a rate of 16 percent per year until 2015.

Operations in the airspace between the areas of Puerto Montt and Cochrane are conducted under visual flight rules and visual meteorological conditions. Newer airspace technologies, however, could provide pilots and air traffic controllers with capacities lacking from current land-based systems, including up-to-date weather data in the cockpit and better overall capabilities that reduce mid-air collisions and runway incursions.

1.2 OBJECTIVE

The objective of this feasibility study is to identify the best suited technologies for the airspace between Puerto Montt and Cochrane. The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

The amount for the contract has been established by a USTDA grant of US$623,000. **The USTDA grant of US$623,000 is a fixed amount. Accordingly, COST will not be a factor in the evaluation and therefore, cost proposals should not be submitted**. Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

1.4 CONTRACT FUNDED BY USTDA

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US$623,000 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.

Section 2: INSTRUCTIONS TO OFFERORS

2.1 PROJECT TITLE

The project is called Cochrane-Puerto Montt Airspace Modernization Project.

2.2 DEFINITIONS

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal, including qualifications statement.

The term "Offeror" means the U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

2.3 DEFINITIONAL MISSION REPORT

USTDA sponsored a Definitional Mission to address technical, financial, sociopolitical, environmental and other aspects of the proposed project. A copy of the report is attached at Annex 2 for background information only. Please note that the TOR referenced in the report are included in this RFP as Annex 5.

2.4 EXAMINATION OF DOCUMENTS

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Feasibility Study.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution and completion of the Feasibility Study.

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US$623,000.

2.6 RESPONSIBILITY FOR COSTS

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal. Neither USTDA nor the Grantee assumes any obligation as a result of the issuance of this RFP, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, final selection or negotiation of a contract.

2.7 TAXES

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country.

2.8 CONFIDENTIALITY

The Grantee will preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror, to the extent permitted by the laws of the Host Country.

2.9 ECONOMY OF PROPOSALS

Proposal documents should be prepared simply and economically, providing a comprehensive yet concise description of the Offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

2.10 OFFEROR CERTIFICATIONS

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for itself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for

specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3.

2.12 LANGUAGE OF PROPOSAL

All proposal documents shall be prepared and submitted in English and Spanish. Annex 6 does not need to be translated into Spanish.

2.13 PROPOSAL SUBMISSION REQUIREMENTS

The **Cover Letter** in the proposal must be addressed to:

Sergio Gallo Rosales
Miguel Claro Nº 1314, 6º Piso, Departamento Planificación
Providencia
Santiago, Chile
Telephone: 56 (2) 439-2510

An Original in English and Spanish, and two (2) copies in English and Spanish as well as a CDROM or Flash drive with an electronic (pdf) copy of the files of your proposal must be received at the above address no later than Monday, December 5, 2011, at 1:00 pm (local time).

Proposals may be either sent by mail, overnight courier, or hand-delivered. Whether the proposal is sent by mail, courier or hand-delivered, the Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened. The Grantee will promptly notify any Offeror if its proposal was received late.

Upon timely receipt, all proposals become the property of the Grantee.

2.14 PACKAGING

The original and each copy of the proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content including "original" or "copy number x"; the original **in English and Spanish, and two (2) copies in English and Spanish as well as a CDROM or Flash drive with an electronic (pdf) copy of the files** should be collectively wrapped and sealed, and clearly labeled.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly wrapped, sealed and labeled.

2.15 AUTHORIZED SIGNATURE

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

2.16 EFFECTIVE PERIOD OF PROPOSAL

The proposal shall be binding upon the Offeror for NINETY (90) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

2.17 EXCEPTIONS

All Offerors agree by their response to this RFP announcement to abide by the procedures set forth herein. No exceptions shall be permitted.

2.18 OFFEROR QUALIFICATIONS

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory, feasibility study and/or other services similar to those required in the TOR, as applicable.

2.19 RIGHT TO REJECT PROPOSALS

The Grantee reserves the right to reject any and all proposals.

2.20 PRIME CONTRACTOR RESPONSIBILITY

Offerors have the option of subcontracting parts of the services they propose. The Offeror's proposal must include a description of any anticipated subcontracting arrangements, including the name, address, and qualifications of any subcontractors. USTDA nationality provisions apply to the use of subcontractors and are set forth in detail in Annex 3. The successful Offeror shall cause appropriate provisions of its contract, including all of the applicable USTDA Mandatory Contract Clauses, to be inserted in any subcontract funded or partially funded by USTDA grant funds.

2.21 AWARD

The Grantee shall make an award resulting from this RFP to the best qualified Offeror, on the basis of the evaluation factors set forth herein. The Grantee reserves the right to reject any and all proposals received and, in all cases, the Grantee will be the judge as to whether a proposal has or has not satisfactorily met the requirements of this RFP.

2.22 COMPLETE SERVICES

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR if such support is not provided by the Grantee; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

2.23 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee's approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA's Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.

Section 3: PROPOSAL FORMAT AND CONTENT

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US$623,000, which is a fixed amount.

Offerors shall submit **one (1) original in English and Spanish, and two (2) copies in English and Spanish as well as a CDROM or Flash drive with an electronic (pdf) copy of the files** of the proposal. Proposals received by fax cannot be accepted.

Each proposal must include the following:

Transmittal Letter,
Cover/Title Page,
Table of Contents,
Executive Summary,
Company Information,
Organizational Structure, Management Plan, and Key Personnel,
Technical Approach and Work Plan, and
Experience and Qualifications.

Detailed requirements and directions for the preparation of the proposal are presented below.

3.1 EXECUTIVE SUMMARY

An Executive Summary should be prepared describing the major elements of the proposal, including any conclusions, assumptions, and general recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

3.2 COMPANY INFORMATION

For convenience, the information required in this Section 3.2 may be submitted in the form attached in Annex 6 hereto.

3.2.1 Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), the information requested in sections 3.2.5 and 3.2.6 below must be provided for each subcontractor.

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

3. Type of ownership (e.g. public, private or closely held).

4. If private or closely held company, provide list of shareholders and the percentage of their ownership.

5. List of directors and principal officers (President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer; provide full names including first, middle and last). Please place an asterisk (*) next to the names of those principal officers who will be involved in the Feasibility Study.

6. If Offeror is a subsidiary, indicate if Offeror is a wholly-owned or partially-owned subsidiary. Provide the information requested in items 1 through 5 above for the Offeror's parent(s).

7. Project Manager's name, address, telephone number, e-mail address and fax number.

3.2.2 Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

3.2.3 Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Feasibility Study as proposed and reflect such impact within the project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

3.2.4 Offeror's Representations

If any of the following representations cannot be made, or if there are exceptions, the Offeror must provide an explanation.

1. Offeror is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Feasibility Study. The Offeror is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. The Offeror has included, with this proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____. The Offeror commits to notify USTDA and the Grantee if they become aware of any change in their status in the state in which they are incorporated. USTDA retains the right to request an updated certificate of good standing.

3. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

4. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.

5. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

6. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee.

3.2.5 Subcontractor Profile

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

3.2.6 Subcontractor's Representations

If any of the following representations cannot be made, or if there are exceptions, the Subcontractor must provide an explanation.

1. Subcontractor is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the Offeror is selected, to execute and deliver a subcontract to the Offeror for the performance of the Feasibility Study and to perform the Feasibility Study. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. Neither the subcontractor nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.

4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected subcontractor shall notify the Offeror, Grantee and USTDA if any of the representations included in this proposal are no longer true and correct at the time of the Offeror's entry into a contract with the Grantee.

3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

Describe the Offeror's proposed project organizational structure. Discuss how the project will be managed including the principal and key staff assignments for this Feasibility Study. Identify the Project Manager who will be the individual responsible for this project. The Project Manager shall have the responsibility and authority to act on behalf of the Offeror in all matters related to the Feasibility Study.

Provide a listing of personnel (including subcontractors) to be engaged in the project, including both U.S. and local subcontractors, with the following information for key staff: position in the project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the Offeror shall describe the organizational relationship, if any, between the Offeror and the subcontractor.

A manpower schedule and the level of effort for the project period, by activities and tasks, as detailed under the Technical Approach and Work Plan shall be submitted. A statement confirming the availability of the proposed project manager and key staff over the duration of the project must be included in the proposal.

3.4 TECHNICAL APPROACH AND WORK PLAN

Describe in detail the proposed Technical Approach and Work Plan (the "Work Plan"). Discuss the Offeror's methodology for completing the project requirements. Include a brief narrative of the Offeror's methodology for completing the tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Work Plan, including periodic reporting or review points, incremental delivery dates, and other project milestones.

Based on the Work Plan, and previous project experience, describe any support that the Offeror will require from the Grantee. Detail the amount of staff time required by the Grantee or other participating agencies and any work space or facilities needed to complete the Feasibility Study.

3.5 EXPERIENCE AND QUALIFICATIONS

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Feasibility Study. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project. The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided for each of the Offeror and any subcontractor, including the following information:

Project name,
Name and address of client (indicate if joint venture),
Client contact person (name/ position/ current phone and fax numbers),
Period of Contract,
Description of services provided,
Dollar amount of Contract, and
Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to or larger in scope than the Feasibility Study as described in this RFP.

Section 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of qualified Offerors. The Grantee will notify USTDA of the best qualified Offeror, and upon receipt of USTDA's no-objection letter, the Grantee shall promptly notify all Offerors of the award and negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations may then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria:

Technical Qualifications (40 points):

- Proven record in the development of surveillance and in general of CNS/ATM systems and procedures (i.e. radar, ADS-B, WAM, LAAS, etc…);
- Prior experience working on projects for navigational aids, communications systems, instrument landing systems (ILS) and navigation equipment;
- Although not required, previous experience with the Alaska Capstone Program would be beneficial.

The technical capacity of the contractor should be demonstrated though previous project experience, resumes of key staff and other relevant information

Work Plan and Methodology (30 points): Adequacy of the proposed work plan and suggested overall approach in responding to the Terms of Reference. Soundness and thoroughness of the technical approach and work plan sections of the proposal, and overall quality of the proposal presentation will be evaluated. The proposal should also provide an organization chart of key personnel with their qualifications, and a staffing schedule for each activity.

Regional Experience (20 points): Firm and team's familiarity with the aviation sector in Chile and Latin America and experience in working with local authorities, as well as familiarity with local regulations.

Financial Experience (10 points): Firm and team's experience in project financing, cost estimating, and development for airspace and airport development programs.

Proposals that do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

ANNEX 1

Sergio Gallo Rosales, DGAC, Miguel Claro, N° 1314, 6° Piso, Departamento Planificación, Providencia, Santiago, Chile, Phone: 011 56 (2) 439-2510

B – Chile: Cochrane-Puerto Montt Airspace Modernization Project

POC: Robin Yavuz, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009. COCHRANE-PUERTO MONTT AIRSPACE MODERNIZATION PROJECT. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study to identify the best suited technologies for the airspace between Puerto Montt and Cochrane.. The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5.

The U.S. firm selected will be paid in U.S. dollars from a $623,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission/desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: https://www.ustda.gov/businessopps/rfpform.asp. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English and Spanish directly to the Grantee by 1:00 pm (Local time), December 5, 2011 at the above address. Evaluation

criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

ANNEX 2

EXECUTIVE SUMMARY

In June 2010, KED Group was selected by the U.S. Trade and Development Agency (USTDA) to conduct a desk study aimed at assessing a request for funding submitted by the Dirección General de Aviación Civil (DGAC) de Chile. The objective of the proposed feasibility study is to address the implementation of the most efficient technology, or combination of technologies, to provide surveillance for the airspace between Puerto Montt and Cochrane and to prepare a development plan for the Cochrane airport that would allow the DGAC to conduct sound surveillance and air traffic control operations at this facility. This could require the relocation of the airport to a new location more suitable for the implementation of NAVAIDS.

Chile is one of the largest aviation markets in Latin America with over nine million users annually and a growth rate between eight to ten percent per year. It is anticipated that this accelerated growth will continue well into the future and will provide great opportunities for U.S. companies and suppliers. As a relatively emerging market, the southern portion of Chile, especially those remote regions in Aisen, are experiencing increased traffic of a number of commercial and general aviation users, as well as helicopter operations. Some of these areas are touristic regions or have seen increased economic development from the fishing industry and, most recently, from several planned hydroelectric projects. However, new infrastructure and systems are required in order to ensure coverage in areas and altitudes where there are significant deficiencies in communications and surveillance.

At the present time, operations in the airspace between Puerto Montt and Cochrane are conducted under Visual Flight Rules (VFR) and Visual Meteorological Conditions (VMC). The low ceiling and frequent marginal meteorological conditions require the implementation of a surveillance system for this area. In addition, the current facilities at the Cochrane aerodrome have capacity limited to small aircraft, general aviation and corporate aircraft and helicopters. The International Civil Aviation Organization (ICAO) reference for the airport is 2B (runway length between 800 meters to 1200 meters and aircraft with wingspans smaller than 24 meters). The DGAC demand and capacity projections for the aerodrome support the expansion of the runway to at least 1500 meters to allow operation of C-type aircraft for 70 passengers or less; therefore, targeting the future aerodrome to an ICAO code of 3C. The DGAC is also focusing its efforts in ensuring that a precision instrument approach can be implemented at this facility, as well as expanding passenger terminal and cargo areas based on projected demand.

In response, KED has extended recommendation for a feasibility study for the Puerto Montt - Cochrane airspace, the "Cochrane-Puerto Montt Airspace and Aerodrome Modernization Program". The recommended project consists of two components: the first part of the project will address the most adequate technologies for the airspace between Puerto Montt and Cochrane. The second part of the study will focus on a preliminary expansion program for the Cochrane aerodrome, considering the feasibility of implementing a precision instrument approach at the existing facility. If this is not a feasible option, the project should recommend the relocation of the airport, along with minimum capacity requirements for the new facility.

KED believes that this project is well justified given the current lack of adequate CNS/ATM infrastructure in the area and the need to upgrade the Cochrane facility and the technologies for air traffic control as part of the DGAC's efforts to establish a IV Generation Airspace in Chile. This project would have significant impacts in terms of increased aviation safety, accident

reduction, and transfer of technology. Furthermore, the U.S. is well-positioned to take advantage of this opportunity for procurement of goods and services in the areas of airspace, airport development, NAVAIDS, training, security and others. We estimate that U.S. exports directly resulting from the study could reach $30 million, but in the case that technologies such as ADS-B are adopted as result of the study, there would also be further opportunity for indirect exports of avionics in the near future.

PROJECT BACKGROUND AND DESCRIPTION

The DGAC of Chile has requested to USTDA the funding of a study that would consider the implementation of modern airspace technologies in the area between Puerto Montt and Cochrane. The study is considered a priority to the DGAC as this area of the airspace currently lacks adequate radar coverage and there is increasing traffic both at the airport in Puerto Montt and at the airport in Cochrane. Furthermore, the entity has started an airspace modernization program, including an ADS-B/LAAS/GBAS implementation plan, for which a study was recently financed by the USTDA. The study has identified this area of the airspace (between Puerto Montt and Cochrane) to be a prime candidate for implementation of these technologies during the first phase of the program, given that it would benefit the most from enhanced safety, surveillance and communications capacity provided. It is the intent of the DGAC to assess the most adequate technologies and ensure that a short-term capacity enhancement can be achieved. At the present time, operations in the airspace between Puerto Montt and Cochrane are conducted under Visual Flight Rules (VFR) and Visual Meteorological Conditions (VMC). The low ceiling and frequent marginal meteorological conditions require the implementation of a surveillance solution for this area.

Both the airport at Puerto Montt and the Cochrane aerodrome are located in mountainous terrain in remote areas of the southern portion of Chile. The main facility at Puerto Montt, El Tepual, is a commercial airport that currently handles about 26,000 operations a year, most of them domestic. It is expected that traffic will increase an approximate rate of 16% per year until 2015. This airport has about 67% of commercial traffic, 34% of general aviation and 2% of helicopter operations. It is located in a touristic area and allows access to the Chiloe and other islands. Currently, LanChile and Sky Airlines provide routes from Santiago , Punta Arenas , Balmaceda , Concepción , Temuco and Bariloche in Argentina. In terms of navigational aids, the airport is equipped with an ILS (for Runway 35) and a VOR/DME. It can operate at VMC 45% of the time.

The aerodrome in Cochrane is a small facility that serves about 1100 operations per year, mostly domestic, and primary has general aviation and helicopter traffic. It is located in the Aisen region in a highly touristic area. Currently, about 92% of the operations are helicopters in 7% general aviation. It is expected that traffic at this facility will increase significantly in the short term as there are five major hydroelectric projects taking place in the area. However, the DGAC is concerned that the airport may not be providing the level of service and safety needed to support such operations as there are no navigational aids available at this airport at the moment.

In addition, the current facilities at the Cochrane aerodrome have capacity limited to small aircraft, general aviation and corporate aircraft and helicopters. ICAO's reference for the airport is 2B (runway length between 800 meters to 1200 meters and aircraft with

wingspans smaller than 24 meters). The DGAC demand and capacity projections for the aerodrome support the expansion of the runway to at least 1500 meters to allow operation of C-type aircraft for 70 passengers or less; hence, targeting the future aerodrome to an ICAO code of 3C.

Along with the expansion of the runway, it is also necessary to upgrade the rescue and fire fighting services (RFFS) based on ICAO requirements set forth in Annex 14, Volume 1: Aerodrome Design and Operations. It is also necessary to upgrade and modernize the passenger and cargo facilities to respond to future demand and consider the construction of a dedicated heliport within the aerodrome, harmonizing the rotorcraft and the fixed-wing operations with the proposed IFR system.

The DGAC of Chile is leading the efforts of South America to implement the most modern airspace technologies. The entity has an agreement in place with the U.S. Federal Aviation Administration (FAA) to collaborate on these issues and requested in 2007 funding from USTDA to undertake a study that would consider the implementation of ADS-B/LAAS/GBAS technologies throughout Chile, including an implementation program for Santiago. A key objective of the proposed study will be identifying, evaluating, and recommending the technology or combination of technologies that would be most adequate for optimization of the identified airspace (between Puerto Montt and Cochrane), while responding to the overall efforts to enhance airspace capacity throughout the country and allow Chile to have a "IV Generation Airspace". The new airspace configuration has been designed to respond to future air traffic growth through the modernization of communication, navigation, surveillance and air traffic management (CNS/ATM) systems. As such, the DGAC will implement in the short and medium term a number of planned upgrades to the current ground infrastructure and aircraft systems. The program will introduce the most modern technologies and procedures to enhance operational capabilities and increase the efficiency of the system. We believe that the onset of new satellite-based air navigation technologies should gradually reduce the restrictions imposed to aviation operations by weather and the roughness of the terrain in the region.

At the same time, the DGAC understands that a full optimization of the airspace capacity in this area of the country cannot be achieved without establishing a short-term modernization program for operating at Cochrane. This facility currently lacks navigational aids and the geography of the region makes it difficult to adapt an ILS system. As part of the study, it is expected that the Contractor will identify priority modernizations and improvements both for the landslide and airside at the aerodrome and establish if the current facility can be modernized in a sustainable manner given the forecasted air traffic. If this option is unfeasible, then the contractor should recommend the relocation of the airport to a new site and establish baseline facilities based on the expected level of traffic and type of operations at this aerodrome. For either option, the Contractor should focus on the implementation of an instrument precision system. As an added note, the DGAC has considered the Capstone program in Alaska as a "proxy" for this area in the country given the many similarities in geography, conditions, and types of users between these two regions. It is anticipated that the lessons learned from Capstone can be very well implemented into the Puerto Montt/Cochrane region of Chile.

Among others, the DGAC is interested in assessing the suitability of ADS-B and MLAT or a combination of systems. ADS-B is an advanced surveillance system that allows equipped aircraft to broadcast its identification data, position, velocity, and other relevant information.

Because ADS-B derives position information from Global Positioning Systems (GPS), the broadcasted information is more accurate than the information that would be obtained from a radar and is provided at near real-time. Furthermore, aircraft equipped with ADS-B technologies have the capacity to receive ADS-B messages from other ADS-B-equipped aircraft within the reception range resulting in an air-to-air and airport surface surveillance capability. ADS-B surveillance also provides air-to-ground and airport surface surveillance information for air traffic control, fleet management, security enhancement and traffic flow management. MLAT is a system that provides functionality similar to the one obtained through secondary radar and has been used in combination with ADS-B in areas with non-ADS-B equipped aircraft operated, in order to ensure will surveillance coverage. Both MLAT and ADS-B technologies are more cost-efficient than conventional radar systems and usually have lower maintenance costs. the DGAC wants to leverage on these advantages to provide a sustainable solution for the area, particularly given the age of existing radar systems throughout the country.

PROJECT SPONSOR COMMITMENT AND CAPACITY

The proposed Grantee is the Chilean Directorate General of Civil Aviation (DGAC). The DGAC is the Government of Chile's regulatory body responsible for air transportation, enforcement of civil air regulations, air safety and airworthiness standards. The DGAC has a number of responsibilities under this scope, but most importantly to this particular feasibility study is its authority to control and operate the Chilean airspace. In addition, the DGAC is responsible for the navigational aids (NAVAIDS) capabilities of all aerodromes in Chile. Under this framework the DGAC has the capacity to sponsor the proposed project. The ultimate goal of the program is for DGAC to increase the safety of the aircraft operations in the airspace between the Puerto Mont airport and the Cochrane aerodrome and also to incorporate VFR capabilities at the Cochrane aerodrome.

It is important to highlight that the U.S. and Chile have strengthen ties in the aviation sector through the recently-signed aviation cooperation program between the U.S. FAA and Chile's DGAC. Furthermore, USTDA has successfully provided assistance to the DGAC in recent years.

PROJECT IMPLEMENTATION AND FINANCING

Chile is a fast growing aviation market and we estimate that project implementation will come from a combination of external and internal sources of financing. DGAC revenues for 2010 were more than $217 million. There is potential for partially funding equipment needs through these revenues. Alternatively, an internal funding scheme may be developed in order to apply both regional funds, as well as DGAC funding, similar to the Capstone program in the U.S. This would imply that DGAC requests support from regional (state) authorities in providing funding for the program. Under this scenario, regional funds allocated for the transportation sector may be combined with DGAC resources. It is our understanding that this option is being considered by the DGAC.

There are also external sources of financing including multilaterals and supplier credits. The DGAC is already discussing project funding with the World Bank and there would be private sector financing through companies as GE Capital Aviation or Alcatel Lucent Financial Services, which we recently met and stated interest in the ADS-B market. As a last resource, Chile may

want to consider a lease agreement with the private sector (with manufacturers such as ITT) such as the financial scheme being used for some of the U.S. implementation or increase of the user fees.

U.S. EXPORT POTENTIAL AND FOREIGN COMPETITION

Bilateral trade between Chile and the U.S. is close to $50 billion and Chile is a key market for U.S. aviation companies such as aircraft manufacturers, part and technology suppliers, airlines, consulting firms, etc. Boeing has signed important orders for delivery of new generation aircraft for LanChile and predicts sustainable growth in the region for years to come. Companies like SENSIS and Honeywell are currently developing programs for NextGen aviation technologies valued at over $200 million and other companies such as IBM, Pratt and Whitney and GE continue sales of parts and equipment. Continental, American Airlines, Delta are among the airlines that provide service to Chile. FedEx and UPS also have operations in the country. It is anticipated that airlines, aircraft manufacturers and avionics suppliers, MROs, flight training equipment companies and consulting firms will benefit from the results of the proposed feasibility study.

We believe that the U.S. is extremely competitive in the area of airspace and this could be a key opportunity to continue introducing U.S. technologies into the Chilean market. In this regard, the U.S. FAA started ADS-B implementation of modern airspace technologies in Alaska with the objective of providing "near-National Airspace System (NAS) quality" services to small commercial aircraft flying at low altitudes in remote areas, far beyond the reach of standard VHF communications and below the coverage of air traffic control radar. Capstone I started in 2000 around Bethel, in western Alaska, and today has more than 250 participating aircraft. U.S. companies such as Honeywell, Northrop Grumman, ITT Corporation and ERA Corporation from the U.S. are well-positioned to provide advanced aerospace systems, and have participated in this program by providing aircraft equipment, avionics and ground stations. To a limited extent, there is competition in the sector from high profile companies in Europe including Thales from France, who provides equipment for the Eurocontrol program and most recently is procuring equipment for India, GM Merc from Denmark, Indra from Spain, and Selex from Italy.

For airport equipment, there are opportunities for airport lighting, ground handling equipment, fire and rescue equipment, baggage handling equipment, security equipment; and NAVAIDS equipment. Table 1 of this Report includes sample U.S. suppliers for this equipment.

There is also great opportunity for follow-up planning, design and construction management services. There are a number of outstanding companies in this area as well.

We expect that U.S. exports for this project will come primarily from airport equipment and airspace technologies. If the modernization of the Cochrane aerodrome is suitable, we anticipate an approximate of $7 million in exports from this source; however, if as believed, the airport has to be relocated to a new site, then exports would reach between $10 and 15 million in the short-term. The exports that will come from airspace modernization will depend upon the type of system that is recommended and selected by the study, but we have anticipated exports in the range of $7 to $16 million, for total project exports of between $15 to $30 million (based on study results). Furthermore, well beyond direct exports to the DGAC (i.e. ground station equipment, avionics for test aircraft, maintenance, etc.), the implementation of new technologies

may also require equipage of the aircrafts, which could potentially result in additional exports. The following table provides a breakdown of our estimates:

Table 1. U.S. Export Potential - Cochrane Improvement Program

Potential of US Exports	Sample US Suppliers	UNIT	QUANTITY	UNIT COST	US DOLLARS
PAX TERMINAL					
Baggage Handling Systems	Rapistan, WASP, Inc., NMC Wollard, Inc.	LS	1	$100,000	$100,000
Security Screening Devices	L-3 Communications, Smiths Heimann , InVision	EACH	1	$100,000	$100,000
IT and communications equipment for the terminal	Microsoft, Com-Net Software	LS	1	$50,000	$50,000
Flight Information Display Systems	Com-Net Software, Flight Display Systems	LS	1	$20,000	$20,000
Subtotal					**$270,000**
PRECISION APPROACH INSTRUMENTS					
ILS CAT I	New Bedford Panoramex, Honeywell, IQAirport, DME, Siemens USA, Flight Light, Inc.	EACH	1	$750,000	$750,000
Glide Slope Antenna		EACH	1	$200,000	$200,000
Localizer Antenna		EACH	1	$200,000	$200,000
Outer Marker		EACH	1	$50,000	$50,000
Runway Light System		EACH	1	$400,000	$400,000
Subtotal					**$1,600,000**
AIR TRAFFIC CONTROL TOWER COMMUNICATION EQUIPMENT					
Equipment	Raytheon, Honeywell	EACH	1	$300,000	$300,000
Subtotal					**$300,000**
TAXIWAY AND PLAFTORM					
Aircraft Tugs Push Back Equipment	JBT Corporation, NMC Wollard Inc.	LS	1	$100,000	$100,000
Subtotal					**$100,000**
CARGO TERMINAL					
Refrigeration Equipment	WASP, Inc., Lift Company of America, AAR Corporation	LS	1	$100,000	$100,000
Cargo Movement Equipment		LS	1	$50,000	$50,000
IT System for Cargo Control		LS	1	$20,000	$20,000
Subtotal					**$170,000**
CRASH FIRE RESCUE EQUIPMENT					
Medium Size Trucks	Oshkosh, NMC Wollard, Inc., Emergency One	EACH	1	$360,000	$360,000
Rapid Intervention Vehicle		EACH	1	$240,000	$240,000
Water Tender		EACH	1	$180,000	$180,000
Support Vehicles		EACH	1	$50,000	$50,000
Subtotal					**$830,000**
FUEL DISTRIBUTION EQUIPMENT					
Aircraft Fueling Trucks	Emergency One, NMC Wollard, Inc., Omega Aviation	EACH	1	$230,000	$230,000
Control Equipment		LS	1	$150,000	$150,000
Fire Supresion Equipment		LS	1	$50,000	$50,000
Subtotal					**$430,000**
ENGINEERING AND CONSTRUCTION MANAGEMENT					
Engineering and Construction Management Services	Jacobs Engineering, Parsons, Louis Berger, LPA Group				$7,000,000
Total					**$10,700,000**

An estimated total project cost (for a new airport) given the projected characteristics and operations will be $40 million if the Cochrane airport could be expanded and modernized and

close to $75 million if the Cochrane airport requires a new site. The above export estimates have been developed assuming that a new airport will be build.

Table 2. U.S. Export Potential - Puerto Montt- Cochrane Airspace Optimization

Option 1: ADS-B system (no radar)

Potential of US Exports	UNIT	QTY	UNIT COST	US DOLLARS
Direct Exports				
Ground stations	each	11	$930,000	$10,230,000
System Maintenance (3 years)	each station	11	$10,000	$330,000
ADS-B Test Equipment	each	2	$30,000	$60,000
Ground vehicle equipage	each	15	$2,000	$30,000
Engineering costs / IT				$900,000
Indirect Exports				
Equipage of aircraft (general aviation and helicopters)	each	20	$12,000	$240,000
			Total	$11,790,000

Option 2: ADS-B system (with radar)

Potential of US Exports	UNIT	QTY	UNIT COST	US DOLLARS
Direct Exports				
ADS-B Ground stations	each	5	$930,000	$4,650,000
ADS-B System Maintenance (3 years)	each station	5	$10,000	$330,000
ADS-B Test Equipment	each	2	$30,000	$60,000
ADS-B Ground vehicle equipage	each	15	$2,000	$30,000
Radars	each	2	$5,500,000	$11,000,000
Radar maintenance (3 years)	each	2	$15,000	$180,000
Engineering costs / IT				$650,000
Indirect Exports				
ADS-B Equipage of aircraft (general aviation and helicopters)	each	12	$12,000	$144,000
			Total	$16,394,000

Option 3: WAM

Potential of US Exports	UNIT	QTY	UNIT COST	US DOLLARS
Direct Exports				
Trackers	each	3	$800,000	$2,400,000
Antennae stations	each	15	$180,000	$2,700,000
DC BUS & UPS equipment	each	18	$65,000	$1,170,000
IT and communication equipment to ATCT	each	18	$25,000	$450,000
			Total	$6,720,000

IMPACT ON THE ENVIRONMENT

It is not anticipated that the proposed feasibility study would have negative impacts on the environment. A majority of the feasibility study will focus on identifying, recommending and establishing the most adequate airspace technologies for the tenth and eleventh regions of Chile. These new technologies have the advantage of not only providing added operating capacity, but also to benefit the environment by allowing point-to-point routes, direct and shorter flights, reduce fuel burn them by increasing the overall safety of airspace users.

In regards to the modernization or relocation of the aerodrome at Cochrane, anticipated impacts on the environment will be low or may be mitigated. As existing facilities are expanded or modernized, the appropriate measures shall be undertaken to ensure that the environment is not negatively affected. It is our experience, however, that as facilities are modernized, those systems for disposal of waste, hazardous materials and use of fuel, for instance, are usually upgraded providing a higher level of service and safety.

If the modernization of the Cochrane airport is proved unfeasible and the airport must be relocated to a new site, the environment may be affected as new facilities are built. If this is the case, environmental issues such as noise control, waste management, air and water quantity, land use and erosion, etc., should be considered. Another important impact would be the relocation of surrounding communities and social and economic consequences of the proposed land use.

IMPACT ON U.S. LABOR

It is our opinion that the project will not cause any dislocation of U.S. jobs. It is not expected to provide any incentive or induce a business enterprise currently located in the U.S. to relocate in Chile or a foreign county, contribute to the violation of internationally-recognized worker's rights or contribute to the production of any commodity that is in surplus in the global markets.

DEVELOPMENT IMPACT

The proposed feasibility study program will result in enhanced airspace capacity for the airspace between the tenth and eleventh regions of Chile (Puerto Montt and Cochrane), as well in VFR capabilities at the existing Cochrane aerodrome, providing significant developmental impacts in terms of safety, security, productivity and human capacity building. Furthermore, it will provide internationally-accepted procedures and systems that will reduce risk for airspace users in the region and allow for timely weather updates, continuous coverage and improved communications in an area where there are severe deficiencies in communications, weather, and surveillance at varying altitudes.

We anticipate that the most significant impacts will relate to productivity enhancement and transfer of technology. Newer airspace technologies provide pilots and air traffic controllers with capacities that current terrestrial-based systems are unable to, including better "see and avoid" capabilities that reduce mid-air collisions; improved situational awareness that minimize the likelihood of runway incursions; up-to-date weather data in the cockpit aimed to reduce incidences of flying visual flight rules (VFR); air traffic control in non-radar airspace areas and; others. This translates into added safety for airspace users and decreased accident rates.

Alaska's Capstone program has resulted in an estimated 47% reduction in accidents in western Alaska and a 36% in southeast Alaska. Other important developmental impacts include:

Human Capacity Building: The proposed feasibility study will have a direct and significant impact in human resources capacity building in Chile. In regards to the airspace component of the program, it will require the training of aviation technicians, air traffic controllers, and engineering experts for the deployment and maintenance of the installed equipment. In the short-run, our conversations with the DGAC indicate that approximately sixty qualified aviation workers should be required for the implementation of the airspace and navigational aids and landing instrumentation. Moreover, the implementation of new technologies could potentially decrease the workload of existing personnel, thus allowing for increased levels of service. There will also be human capacity building impacts associated with the modernization of the existing or construction of a new airport for Cochrane, including new positions for skilled air traffic controllers, security staff, technicians and engineers. On a temporary basis the project will also open opportunities for construction workers, engineering companies, construction management companies, etc.

Market-oriented Reforms: Chile is a regional leader in the aviation sector in South America and has implemented historically many programs that have been used for replication in other parts of the continent. The current program to establish a IV Generation Airspace is consistent with these efforts and would allow Chile to be in the forefront of aviation development in the region. Furthermore, international organizations such as ICAO have recommended the implementation of ADS-B/MLAT and other technologies as part of a future surveillance infrastructure. Countries such as Canada, Australia and of course, the U.S. are already implementing these technologies for air traffic control. There are many other countries with programs in the testing or early implementation phases. We believe that the DGAC IV Generation Airspace surveillance program is consistent with regional level strategies and international harmonization initiatives.

Infrastructure Development: A direct impact infrastructure development resulting from the proposed feasibility study would be the modernization or expansion of facilities at Cochrane, or alternatively the construction of a new facility. Based on current traffic and short-term estimates of demand, we believe the cost of a new airport to be in the range of $60 million. These will a new runway system (1,500 meter-long) and a 4,000 square meter passenger terminal. For the airspace optimization, it is very probable that this program will require the installation of new ground-based stations for the recommended systems. Based on our experience the cost of each would be approximately $1 million given the conditions of the area.

Productivity Enhancement and Transfer of Technology: It is evident that the proposed program will allow safety of flight operations in this remote area of Chile. In terms of productivity, the proposed technologies usually provide advantage to one installation can replace multiple radar systems, or serve multiple runways, while at the same time provide savings both for the initial infrastructure, as well as for maintenance and operation. For instance, installation of radar usually cost between $2-$6 million, while the installation of an ADS-B station could be between $300,000 and $2 million depending on terrain conditions and desired coverage. While many countries are moving towards adopting these types of technologies, they are relatively new to the market; in these would be a perfect opportunity to transfer this technology from key U.S.

manufacturers to the Chilean market. In addition, as the U.S. will serve as the baseline for project development, increased interaction between U.S. representatives, such as FAA, will be obtained and best practices applied. This project would foster enhanced cooperation between U.S. and Chilean aviation officials and allow the implementation of U.S. best practices for satellite-based, multilateration surveillance implementation, training, certification and licensing in Chile.

JUSTIFICATION

Accelerated GDP and population growth have made Chile one the largest aviation markets in Latin America with over nine million users annually and a growth rate between eight to ten percent per year. It is anticipated that this accelerated growth will continue well into the future and will provide great opportunities for U.S. companies and suppliers. As a relatively emerging market, the southern portion of Chile, especially those remote regions in Aisen, are experiencing increased traffic of a number of commercial and general aviation users, as well as helicopter operations. Some of these areas are touristic regions or have seen increased economic development from the fishing industry and most recently from several planned hydroelectric projects. However, new infrastructure and systems are required in order to ensure coverage in areas and altitudes where there are significant deficiencies in communications and surveillance. As such, the DGAC has made it a priority to provide adequate levels of safety and security to this region and to potentially use this region to test some of the technologies that are being adopted as part of the national airspace program. This initiative will allow the technologies to be tested where coverage is needed the most and where there is the highest need for modernization. Immediate benefits from the program would be:

- Enhanced capacity for communications, navigation and surveillance in remote areas of the country
- Increased levels of safety for airspace users and potential reduction of accidents
- Testing of modern technologies that are planned for implementation in the Chilean airspace in the short and medium term
- Cost savings resulting for implementing these types of systems vis-a-vis conventional radar systems
- Modernize and expand facilities at Cochrane to ensure that adequate infrastructure is in place to respond to future demand
- Training of Chilean aviation staff in the most modern aviation technologies

The project will result in significant developmental and environmental benefits as explained in earlier sections of this report. In addition to increased operational capacity and enhanced safety, the project will reduce operational costs and fuel burn by allowing point-to-point flight routing. Transfer of technology is also expected to be significant as air traffic controllers and electronic engineers will be trained in the new systems. For the U.S., this program could translate in exports of $20-$30 million in the short term, but would also open the opportunity to expand in a growing market for avionics and satellite-based technologies. There are many companies in the U.S. that are leading efforts in the sector, including Honeywell, ITT, SENSIS, and others, and where there is limited foreign competition. There would also be the opportunity for many other aviation and airport related equipment, if the study recommends the relocation of Cochrane. Once again, the U.S. is well positioned in this area and the Latin American market is where the U.S. could be most competitive in terms of pricing, distribution and representation.

QUALIFICATIONS

Technical Qualifications (40 pts): The selected Contractor shall have experience in the following areas, at the minimum:

- Proven record in the development of surveillance and in general of CNS/ATM systems and procedures (i.e. radar, ADS-B, WAM, LAAS, etc.)
- Experience in airport planning, including in the development of feasibility studies, master plans, terminal designs, runway design, airside geometric design, airport modernization, etc.
- Prior experience working in projects for navigational aids, communications systems, navigation equipment, instrument landing systems (ILS), lighting systems for runways and taxiways, and airside markings and signage.
- Although not required, previous experience with the Alaska Capstone Program would be beneficial.

The technical capacity of the contractor should be provided through previous project experience, resumes of key staff and other relevant information.

Work Plan and Methodology (30 points): Adequacy of the proposed work plan and suggested overall approach in responding to the Terms of Reference. Soundness and thoroughness of the technical approach and work plan sections of the proposal, and overall quality of proposal presentation will be evaluated. The proposal should also provide an organization chart of key personnel with their qualifications, and a staffing schedule for each key activity.

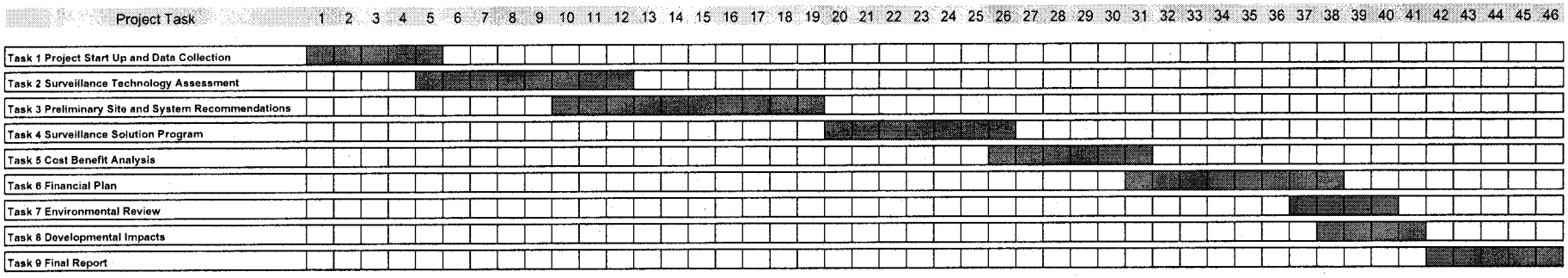
Regional Experience (20 points): Firm and team's familiarity with the aviation sector in Chile and Latin America and experience working with local authorities, as well as familiarity with local regulations.

Financial Experience (10 points): Firm and team's experience in project financing, cost estimating, and development for airspace and airport development programs.

Cochrane - Puerto Montt Airspace Program

PROJECT TASK PERFORMANCE CHART

Task Duration in Weeks



ANNEX 3

U.S. TRADE AND DEVELOPMENT AGENCY
Arlington, VA 22209-2131

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S.

subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

"Source" means the country from which shipment is made.

"Origin" means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

HC: LZ
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U.S. TRADE AND DEVELOPMENT AGENCY

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GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and the Dirección General de Aeronáutica Civil ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US$623,000 ("USTDA Grant") to fund the cost of goods and services required for the preparation of a Feasibility Study ("Feasibility Study") on the proposed Cochrane-Puerto Montt Airspace Modernization Plan ("Project") in Chile ("Host Country"). The goods and services required for the Feasibility Study are described in the attached Terms of Reference.

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the Feasibility Study ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

2. Terms of Reference

The Terms of Reference for the Feasibility Study ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The Feasibility Study will examine the technical, financial, environmental and other critical aspects of the proposed Project. The Terms of Reference shall also be included in the Contract.

3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials, and commercial entities, in their respective countries. The parties to this Grant Agreement and the Contractor shall observe these standards, which include not accepting payment of money or anything of value, directly or indirectly, from any person for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Feasibility Study.

4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space and secretarial support.

5. **USTDA as Financier**

(A) USTDA Approval of Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of contractors with advance notice of the procurement published online through *Federal Business Opportunities (www.fedbizopps.gov)*. Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

(B) USTDA Approval of Contractor Selection

The Grantee shall notify USTDA at the address of record set forth in Article 17 below upon selection of the Contractor to perform the Feasibility Study. Upon approval of this selection by USTDA, the Grantee and the Contractor shall then enter into a contract for performance of the Feasibility Study. The Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the Feasibility Study that they were not selected.

(C) USTDA Approval of Contract Between Grantee and Contractor

The Grantee and the Contractor shall enter into a contract for performance of the Feasibility Study. This contract, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing. To expedite this approval, the Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 17 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract.

(D) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the Contract and any amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report (as defined in Clause I of Annex II), and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the Feasibility Study and shall not be construed as making USTDA a party to the Contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the Contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA

from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

(E) Grant Agreement Controlling

Regardless of USTDA approval, the rights and obligations of any party to the Contract or subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and the Contract or any subcontract funded by the Grant Agreement, the Grant Agreement shall be controlling.

6. Disbursement Procedures

(A) USTDA Approval of Contract Required

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Contract.

(B) Contractor Invoice Requirements

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the Feasibility Study by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

7. Effective Date

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature. Implementation of this Grant Agreement is contingent upon Grantee receiving approval of the General Comptroller Office of the Republic of Chile (*Contraloría General de la República de Chile*) and of the Ministry of Finance of the Republic of Chile (*Ministerio de Hacienda de la República de Chile*).

8. Feasibility Study Schedule

(A) Feasibility Study Completion Date

The completion date for the Feasibility Study, which is August 31, 2012 is the date by which the parties estimate that the Feasibility Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

9. USTDA Mandatory Clauses

All contracts funded under this Grant Agreement shall include the USTDA mandatory clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA mandatory clauses, except for clauses B(1), G, H, I and J.

10. Use of U.S. Carriers

(A) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(B) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

11. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Feasibility Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Feasibility Study support (e.g., local lodging, food, and

transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

12. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

13. Cooperation Between Parties and Follow-Up

The parties will cooperate to assure that the purposes of this Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report, the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project.

14. Implementation Letters

To assist the Grantee in the implementation of the Feasibility Study, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by the Grant Agreement. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by the Grant Agreement.

15. Recordkeeping and Audit

The Grantee agrees to maintain books, records and other documents relating to the Feasibility Study and the Grant Agreement adequate to demonstrate implementation of its responsibilities under the Grant Agreement, including the selection of contractors, receipt and approval of contract deliverables and approval or disapproval of contractor invoices for payment by USTDA. Such books, records and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the Feasibility Study and the Grant Agreement.

16. Representation of Parties

For all purposes relevant to this Grant Agreement, the Government of the United States of America will be represented by the U. S. Ambassador to Host Country and Grantee will be represented by its Director. The parties hereto may, by written notice, designate additional representatives for all purposes under this Grant Agreement.

17. Addresses of Record for Parties

Any notice, request, document or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through a wire or electronic medium which produces a tangible record of the transmission, such as a telegram, cable or facsimile, and will be deemed duly given or sent when delivered to such party at the following:

To: Dirección General de Aeronáutica Civil
Miguel Claro 1314, Piso 6
Santiago, Chile

Phone: 56-2-204-7676
Fax: 56-2-209-0532

rbordali@dgac.cl

To: U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.:	11 11/1210001
Activity No.:	2011-51014A
Reservation No.:	2011128
Grant No.:	GH201151128

18. Termination

Either party may terminate this Grant Agreement by giving the other party thirty (30) days advance written notice. In addition, this Grant Agreement shall terminate immediately upon the issuance of final letters of non-approval from the General Comptroller Office of the Republic of Chile (*Contraloría General de la República de Chile*) and of the Ministry of Finance of the Republic of Chile (*Ministerio de Hacienda de la República de Chile*). The termination of this Grant Agreement will end any obligations of the parties to provide financial or other resources for the Feasibility Study, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the written notice of termination.

19. Non-waiver of Rights and Remedies

No delay in exercising any right or remedy accruing to either party in connection with this Grant Agreement shall be construed as a waiver of such right or remedy.

20. U.S. Technology and Equipment

By funding this Feasibility Study, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods and services needed for Project implementation.

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IN WITNESS WHEREOF, the Government of the United States of America and the Dirección General de Aeronáutica Civil, each acting through its duly authorized representative, have caused this Agreement to be signed in the English and Spanish language in their names and delivered as of the day and year written below. The English language version of this Grant Agreement shall govern over all other versions in any other languages.

For the Government of the United States of America

Nathan D. Youngs

By: Nathan D. Youngs

Date: 10 March 2011

Witnessed:

By: Alain Lopez

ALAIN Lopez

For the Dirección General de Aeronáutica Civil

By: _____

JAIME ALARCON PEREZ
GENERAL DE BRIGADA AEREA (A)
DIRECTOR GENERAL DE AERONAUTICA CIVIL

Dirección General de Aeronáutica Civil

Date: 10 /MARZO /2011

Witnessed:

By: _____

ALBERTO GALLO R.

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex I

Terms of Reference

Objective

The objectives of the Cochrane-Puerto Montt Airspace Modernization Plan Feasibility Study ("Study") are to assess and recommend to Chile's Dirección General de Aeronáutica Civil (DGAC) the most efficient technology, or mix of technologies, for surveillance of the airspace between the airport at Puerto Montt and the Cochrane airport in Chile, along with preliminary site selection. The Study shall provide recommendations for detailed site selection methodology, as well as cost analyses on the infrastructure, system and equipment needed at each site.

The Study tasks are as follows:

Task 1: Project Start-Up and Data Collection

Upon notification of award, the Contractor shall contact DGAC and schedule a project kick-off meeting to present, for approval, an overall schedule including projected travel times, meeting dates, deliverables and key Study milestones. The Contractor shall present, during the initial meeting with DGAC, an overall project agenda, Study goals, objectives and description, list of key contacts and responsibilities and work approach. These items shall be discussed and agreed upon before commencement of the Study. During this time, the Contractor shall also discuss with DGAC the current Automatic Dependent Surveillance-Broadcast (ADS-B), Local Area Augmentation Systems (LAAS) and NEXTGEN technology implementation programs being carried out in Chile.

Subsequently, the Contractor shall conduct a two-week visit to Chile to assess the existing airspace procedures between Puerto Montt and Cochrane, the existing surveillance system conditions and to collect, review and analyze all data that may be relevant to the development and implementation of a functional surveillance solution for the region. As part of this task, the Contractor shall conduct a site visit to the Cochrane Airport and conduct a full inspection of airport facilities, focusing on the airside characteristics, navigational aids and precision approaches available.

The Contractor shall conduct a detailed review of the cooperation agreement between the U.S. Federal Aviation Administration (FAA) and DGAC as it pertains to the implementation of LAAS and ADS-B technologies in Chile. This review is of importance as any recommendations provided as a result of this feasibility study shall comply with such agreement.

The Contractor shall conduct a data collection effort for all information relevant to the project. From DGAC's data bank, the Contractor shall, at the minimum, collect and

review the following: (Some studies may be in Spanish, and it will be the Contractor's responsibility to translate the information for its use, if needed):

- Available reports, results and recommendations arising from the recently-funded USTDA Technical Assistance for ADS-B and LAAS technologies in Chile;

- Plans, programs and studies available from DGAC that detail NEXTGEN technology applications in Chile;

- Previous studies completed regarding topographic and geo-referenced satellite surveying of the 10th and 11th regions of the Chilean terrain. The Contractor shall use these studies to determine the location of the existing communications, navigation and surveillance (CNS) equipment and their actual coverage;

- All available information concerning the coverage, military airspace restrictions and non-covered mountainous terrain for the optimization of the new airspace architecture covered by the existing radar systems and the proposed ADS-B system for the Chilean airspace;

- All available information pertaining to the Instrument Landing Systems (ILS) utilized at the airports in Chile; and the proposed LAAS system for major airports in Chile;

- Existing Environmental Impact Studies for the Puerto Montt and Cochrane airports focusing on noise restrictions, fuel fall out and dumping conditions at the airports' surrounding areas;

- All other pertaining information to substantiate the technical, economical and operational findings and recommendations of this feasibility study.

DELIVERABLE #1: As part of Task 1, the Contractor shall travel to Santiago, Chile to conduct a Study kickoff meeting and present and discuss with DGAC the Study schedule and work approach.

Task 2: Surveillance Technology Assessment and Recommendation

The Contractor shall research and evaluate the capabilities of prospective technologies and identify their applicability to the Chilean airspace. In this regard, the Contractor shall evaluate the feasibility of implementing surveillance technologies, at the minimum, considering ground-based radar, ADS-B and Wide Area Multilateration (WAM), for the area of the feasibility study. The assessment shall consider the technical and economic feasibility of implementing these technologies as a stand-alone or as a combination of systems, taking into consideration the existing ground-based surveillance infrastructure in the area; the implementation timeline for ADS-B, especially for general aviation and corporate aviation; and the terrain conditions.

The Contractor shall conduct an assessment to determine the benefits and obstacles for implementing each type of technology and recommend the most adequate system (or combination of systems) to be utilized. At the end of Task 2, the Contractor shall present a report to DGAC contrasting the available options and the benefits and obstacles of each and provide a recommendation for the option that seems most viable, given technical capacity provided, reliability and implementation cost.

In its analysis, the Contractor shall develop a solution that provides the most economical and reliable surveillance solution for the area. The solution may involve the use of one or more technologies or a combination of any of these technologies. The Contractor shall develop the solution for the existing terrain between the airport of Puerto Montt and the Cochrane aerodrome taking into account the limitations posed by mountainous terrain in the area, the weather conditions and the remoteness of the region. The Contractor shall determine new equipage requirements for each alternative and perform a comparative safety analysis of the alternatives.

DELIVERABLE #2: The Contractor shall present a report to DGAC containing an assessment of, at the minimum, three technologies (ground-based radar, ADS-B and WAM), as a stand-alone or combined system. The report shall compare and contrast each option considering the technical and economic viability of each, based on the local conditions of the Chilean airspace. In addition, the report will provide a recommendation for one of the alternatives. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the report in English and in Spanish.

Task 3: Preliminary Site and System Recommendations

Based on the recommended technologies, the Contractor shall recommend locations for potential sites where the selected/recommended technologies can be implemented and where the system can perform as designed. The site selection shall be provided so as to minimize relocation during the detailed assessments conducted by the Grantee during the implementation phase. As part of this task, the Contractor shall:

- Provide the Grantee with a methodology for detailed site selection which would be used during the implementation stage.
- Report the infrastructure (e.g. building size, electrical/communications systems), equipment and installation needs pertaining to each site proposed.
- Conduct a cost estimate for each site and corresponding systems. This cost estimate shall be as detailed as possible, considering the level of site analysis provided by the Contractor.

Task 4: Surveillance Solution Program

Upon acceptance by DGAC for the recommended surveillance option and recommended

sites, the Contractor shall develop a full program for implementation of the recommended technology(ies). DGAC must agree to the surveillance solution, in terms of the areas to be covered. This program will consist of the following:

3.1 Drawings: The Contractor shall prepare a detailed set of drawings and calculations showing:

- the locations of the proposed antennae;
- the location of the proposed communications and data processing facilities;
- the infrastructure required to support all of the proposed facilities;
- the integration of the technologies with the visualization system operating in Chile; and
- recommended redundant systems for these facilities that assure a level of availability of services compatible with the operational needs of DGAC.

3.2 Users needs: The Contractor shall determine the users' needs in terms of avionics integration, considering the type of aircraft flying in the area of this study. For this the Contractor should follow the FAA CAPSTONE as a model for the solution of air navigation in the area of this study.

3.3 Cost Estimate: For the proposed surveillance solution, the Contractor shall present a cost estimate of the proposed system, with sufficient detail to facilitate the decision making process by DGAC, including the avionic integration for the users.

3.4 Maintenance Plan: The Contractor shall also include the requirements for maintenance and certification for the proposed facilities.

3.5 Equipment Specifications: The Contractor shall compile an equipment inventory that details product specifications, uses and availability for the technologies identified, and that are compatible with DGAC.

3.6 Transition Needs: The Contractor shall identify any equipment that may be necessary to reach full implementation during a transition period, if applicable.

DELIVERABLE #3: The Contractor shall present a report containing the Surveillance Solution Program, including the recommended system siting, cost, maintenance requirements, avionic integration and equipment aspects. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the report in English and in Spanish.

Task 5: Cost-Benefit Analysis

Based on the results of Tasks 1 through 4, the Contractor shall develop a cost-benefit analysis considering operational improvements, safety enhancements and any economic gains from the project for the surveillance program. This document shall provide the justification from the technical and economical points of view to support the decisions

adopted by DGAC.

This task shall be mainly based on the results of Tasks 3 and 4; however, The Contractor shall expand these detailed cost estimates, including engineering costs and capital costs for the implementation of each task. Based on the Cost-Benefit analysis, the Contractor shall propose a capital investment program for the short, medium and long terms.

DELIVERABLE #4: The Contractor shall develop a report containing the findings of Task 5. This report shall contain the results of the cost-benefit analysis and a list of equipment selected for each task 1 through 4. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the reports in English and in Spanish.

Task 6: Develop a Financial Plan

The Contractor shall develop a preliminary financial and funding program to implement the recommended program for surveillance technologies, based on sources of funding available to DGAC. The financial plan shall include capital costs of acquiring the recommended equipment and systems, as well as construction of any supporting infrastructure needed. The financial plan shall allow for gradual implementation of technologies, thus enabling a practical transition from the existing environment for airspace users and providers.

The Contractor shall identify potential funding mechanisms available for the implementation of the equipment and infrastructure expenditures identified in previous tasks. Among other sources, the Contractor shall assess funding through U.S. export credit agencies, multilateral funding, supplier credits and public funding.

The Contractor shall prepare a list of potential U.S. suppliers of equipment and services that could participate or provide the recommended technologies. The Contractor shall provide contact information for major suppliers as part of this task.

Task 7: Conduct a Preliminary Environmental Impact Assessment

The Contractor shall conduct a preliminary environmental impact study for the implementation of the Project with reference to local requirements and multi-lateral lending agencies (such as the World Bank). This review shall identify potential negative impacts of the Project. The Contractor shall briefly discuss the extent to which potential negative impacts can be mitigated, and develop plans for full environmental impact assessment or other studies in anticipation of the Project moving forward to the implementation stage, if necessary.

Task 8: Preliminary Assessment of Developmental Impacts

The Contractor shall conduct an assessment to identify significant potential development impacts of the Project in Chile. While specific focus should be paid to the immediate

impact(s) of the Project, the Contractor will include, where appropriate, any additional developmental benefits of the Project, including spin-off and demonstration effects. The Contractor shall provide estimates of the Project's potential benefits in the following areas:

(a) Infrastructure and Industry: The Contractor shall provide a generic statement on the infrastructure impact giving a brief synopsis of upgrades to the country's infrastructure.

(b) Market-Oriented Reforms: The Contractor shall provide an overview of potential changes in the market as a result of the project, focusing on increased competition and level of service.

(c) Human Capacity Building: The Contractor shall provide a brief synopsis of the type of positions that would be needed to implement, manage and operate the proposed Project and identify benefits of the proposed training program.

(d) Technology Transfer and Productivity Enhancement: The Contractor shall provide an overview of any advanced technologies that would be implemented as a result of the Project. The Contractor shall provide a brief description of any efficiency that would be gained.

(e) Other: The Contractor shall identify and present a generic statement regarding any other developmental benefits of the Project, including any spin-off or demonstration effects, such as the CNS/ATM concept.

DELIVERABLE #5: The Contractor shall develop a report containing the findings of Tasks 6-8. The Contractor shall provide two copies of the report to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the reports in English and in Spanish.

Task 9: Executive Summary and Final Report

The Contractor shall prepare and provide a comprehensive Final Report to DGAC, which shall contain the key findings, recommendations and conclusions of the Study, and shall incorporate all other documents and/or reports provided pursuant to Tasks 1 through 8 above. When the final report is complete, the Contractor shall provide a final oral presentation of the Final Executive Summary and the Final Report to DGAC and other stakeholders at the DGAC offices in Santiago, Chile.

The Contractor shall ensure that the Final Report is submitted in accordance with Clause I of Annex II of the Grant Agreement. The Final Report shall be a substantive and comprehensive report of work performed to carry out all of the tasks set forth in the Terms of Reference and shall include, among other things, an Executive Summary and all deliverables. Each task of the Terms of Reference shall form a separate chapter of the Final Report.

The Final Report shall also include a comprehensive list of suppliers, including potential sources of U.S. equipment and services, relevant to the implementation of each component of the Projects as outlined in the Study.

The Contractor shall provide five (5) hard copies and one (1) electronic version of both the confidential and public versions of the Final Report to DGAC in Spanish and one (1) hard copy of both the confidential and public versions of the Final Report in English. The Contractor shall provide copies to USTDA and the U.S. Embassy in Santiago in English in accordance with Clause I of Annex II of the Grant Agreement.

Notes:

1. The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.
2. The Contractor and DGAC shall be careful to ensure that the public version of the Final Report contains no security or confidential information.
3. The DGAC and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the approved/public Final Report that is developed under these Terms of Reference.

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this contract acknowledge that this contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and Dirección General de Aeronáutica Civil ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the Feasibility Study ("TA") for the Cochrane-Puerto Montt Airspace Modernization Plan ("Project") in Chile ("Host Country"). Notwithstanding any other provisions of this contract, the following USTDA mandatory contract clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA mandatory contract clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and any contract or subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

All contracts funded under the Grant Agreement, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the contract has been formally approved by USTDA or until the contract conforms to modifications required by USTDA during the contract review process.

(2) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this contract and amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of financing the Feasibility Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. USTDA shall seek to inform the Grantee of

any such exercise of its approval rights or discussions. Any approval or failure to approve by USTDA shall not bar the Client or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

C. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Feasibility Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Feasibility Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

D. Recordkeeping and Audit

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the contract term and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

E. U.S. Carriers

(1) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(2) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

F. Workman's Compensation Insurance

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

G. Reporting Requirements

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the Feasibility Study. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, and fax number. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.

H. Disbursement Procedures

(1) USTDA Approval of Contract

Disbursement of Grant funds will be made only after USTDA approval of this contract. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor a photocopy of an English language version of a signed contract or a final negotiated draft version to the attention of the General Counsel's office at USTDA's address listed in Clause M below.

(2) Payment Schedule Requirements

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as a mobilization payment; (2) all other payments, with the exception of the final payment, shall be based upon contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon receipt by USTDA of an approved Final Report in accordance with the specifications and quantities set forth in Clause I below. Invoicing procedures for all payments are described below.

(3) Contractor Invoice Requirements

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by

USTDA to the Contractor for performance of the contract by submitting the following to USTDA:

(a) Contractor's Invoice

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

(i) For a mobilization payment (if any):

"As a condition for this mobilization payment, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA. "

(ii) For contract performance milestone payments:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(b) Client's Approval of the Contractor's Invoice

(i) The invoice for a mobilization payment must be approved in writing by the Client.

(ii) For contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and terms and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client. "

(c) USTDA Address for Disbursement Requests

Requests for disbursement shall be submitted by courier or mail to the attention of the Finance Department at USTDA's address listed in Clause M below.

(4) Termination

In the event that the Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for reasonable and documented costs which have been incurred in performing the Terms of Reference prior to termination, as well as reasonable wind down expenses. Reimbursement for such costs shall not exceed the total amount of undisbursed Grant funds. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to mobilization payments) which exceed the reasonable and documented costs incurred in performing the Terms of Reference prior to termination.

I. USTDA Final Report

(1) Definition

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

(a) One (1) complete version of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.

and

(b) One (1) copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) copy of the Public Version of the Final Report to the Foreign Commercial Service Officer or the Economic Section of the U.S. Embassy in Host Country for informational purposes.

(3) Final Report Presentation

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, USTDA's mailing and delivery addresses. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

> "This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U. S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's mailing and delivery addresses, and USTDA's mission statement.

Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

"The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution."

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone and fax numbers shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply. Business name, point of contact, address, telephone and fax numbers shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

J. Modifications

All changes, modifications, assignments or amendments to this contract, including the appendices, shall be made only by written agreement by the parties hereto, subject to written USTDA approval.

K. Feasibility Study Schedule

(1) Feasibility Study **Completion Date**

The completion date for the Feasibility Study, which is August 31, 2012, is the date by which the parties estimate that the Feasibility Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

L. Business Practices

The Contractor agrees not to pay, promise to pay, or authorize the payment of any money or anything of value, directly or indirectly, to any person (whether a governmental official or private individual) for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Feasibility Study. The Client agrees not to receive any such payment. The Contractor and the Client agree that each will require that any agent or representative hired to represent them in connection with the Feasibility Study will comply with this paragraph and all laws which apply to activities and obligations of each party under this Contract, including but not limited to those laws and obligations dealing with improper payments as described above.

M. USTDA Address and Fiscal Data

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

Fiscal Data:

Appropriation No.:	11 11/1210001
Activity No.:	2011-51014A
Reservation No.:	2011128
Grant No.:	GH201151128

N. Definitions

All capitalized terms not otherwise defined herein shall have the meaning set forth in the Grant Agreement.

O. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country. Neither the Client nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees or other levies.

ANNEX 5

Annex I

Terms of Reference

Objective

The objectives of the Cochrane-Puerto Montt Airspace Modernization Plan Feasibility Study ("Study") are to assess and recommend to Chile's Dirección General de Aeronáutica Civil (DGAC) the most efficient technology, or mix of technologies, for surveillance of the airspace between the airport at Puerto Montt and the Cochrane airport in Chile, along with preliminary site selection. The Study shall provide recommendations for detailed site selection methodology, as well as cost analyses on the infrastructure, system and equipment needed at each site.

The Study tasks are as follows:

Task 1: Project Start-Up and Data Collection

Upon notification of award, the Contractor shall contact DGAC and schedule a project kick-off meeting to present, for approval, an overall schedule including projected travel times, meeting dates, deliverables and key Study milestones. The Contractor shall present, during the initial meeting with DGAC, an overall project agenda, Study goals, objectives and description, list of key contacts and responsibilities and work approach. These items shall be discussed and agreed upon before commencement of the Study. During this time, the Contractor shall also discuss with DGAC the current Automatic Dependent Surveillance-Broadcast (ADS-B), Local Area Augmentation Systems (LAAS) and NEXTGEN technology implementation programs being carried out in Chile.

Subsequently, the Contractor shall conduct a two-week visit to Chile to assess the existing airspace procedures between Puerto Montt and Cochrane, the existing surveillance system conditions and to collect, review and analyze all data that may be relevant to the development and implementation of a functional surveillance solution for the region. As part of this task, the Contractor shall conduct a site visit to the Cochrane Airport and conduct a full inspection of airport facilities, focusing on the airside characteristics, navigational aids and precision approaches available.

The Contractor shall conduct a detailed review of the cooperation agreement between the U.S. Federal Aviation Administration (FAA) and DGAC as it pertains to the implementation of LAAS and ADS-B technologies in Chile. This review is of importance as any recommendations provided as a result of this feasibility study shall comply with such agreement.

The Contractor shall conduct a data collection effort for all information relevant to the project. From DGAC's data bank, the Contractor shall, at the minimum, collect and

review the following: (Some studies may be in Spanish, and it will be the Contractor's responsibility to translate the information for its use, if needed):

- Available reports, results and recommendations arising from the recently-funded USTDA Technical Assistance for ADS-B and LAAS technologies in Chile;

- Plans, programs and studies available from DGAC that detail NEXTGEN technology applications in Chile;

- Previous studies completed regarding topographic and geo-referenced satellite surveying of the 10th and 11th regions of the Chilean terrain. The Contractor shall use these studies to determine the location of the existing communications, navigation and surveillance (CNS) equipment and their actual coverage;

- All available information concerning the coverage, military airspace restrictions and non-covered mountainous terrain for the optimization of the new airspace architecture covered by the existing radar systems and the proposed ADS-B system for the Chilean airspace;

- All available information pertaining to the Instrument Landing Systems (ILS) utilized at the airports in Chile; and the proposed LAAS system for major airports in Chile;

- Existing Environmental Impact Studies for the Puerto Montt and Cochrane airports focusing on noise restrictions, fuel fall out and dumping conditions at the airports' surrounding areas;

- All other pertaining information to substantiate the technical, economical and operational findings and recommendations of this feasibility study.

DELIVERABLE #1: As part of Task 1, the Contractor shall travel to Santiago, Chile to conduct a Study kickoff meeting and present and discuss with DGAC the Study schedule and work approach.

Task 2: Surveillance Technology Assessment and Recommendation

The Contractor shall research and evaluate the capabilities of prospective technologies and identify their applicability to the Chilean airspace. In this regard, the Contractor shall evaluate the feasibility of implementing surveillance technologies, at the minimum, considering ground-based radar, ADS-B and Wide Area Multilateration (WAM), for the area of the feasibility study. The assessment shall consider the technical and economic feasibility of implementing these technologies as a stand-alone or as a combination of systems, taking into consideration the existing ground-based surveillance infrastructure in the area; the implementation timeline for ADS-B, especially for general aviation and corporate aviation; and the terrain conditions.

The Contractor shall conduct an assessment to determine the benefits and obstacles for implementing each type of technology and recommend the most adequate system (or combination of systems) to be utilized. At the end of Task 2, the Contractor shall present a report to DGAC contrasting the available options and the benefits and obstacles of each and provide a recommendation for the option that seems most viable, given technical capacity provided, reliability and implementation cost.

In its analysis, the Contractor shall develop a solution that provides the most economical and reliable surveillance solution for the area. The solution may involve the use of one or more technologies or a combination of any of these technologies. The Contractor shall develop the solution for the existing terrain between the airport of Puerto Montt and the Cochrane aerodrome taking into account the limitations posed by mountainous terrain in the area, the weather conditions and the remoteness of the region. The Contractor shall determine new equipage requirements for each alternative and perform a comparative safety analysis of the alternatives.

DELIVERABLE #2: The Contractor shall present a report to DGAC containing an assessment of, at the minimum, three technologies (ground-based radar, ADS-B and WAM), as a stand-alone or combined system. The report shall compare and contrast each option considering the technical and economic viability of each, based on the local conditions of the Chilean airspace. In addition, the report will provide a recommendation for one of the alternatives. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the report in English and in Spanish.

Task 3: Preliminary Site and System Recommendations

Based on the recommended technologies, the Contractor shall recommend locations for potential sites where the selected/recommended technologies can be implemented and where the system can perform as designed. The site selection shall be provided so as to minimize relocation during the detailed assessments conducted by the Grantee during the implementation phase. As part of this task, the Contractor shall:

- Provide the Grantee with a methodology for detailed site selection which would be used during the implementation stage.
- Report the infrastructure (e.g. building size, electrical/communications systems), equipment and installation needs pertaining to each site proposed.
- Conduct a cost estimate for each site and corresponding systems. This cost estimate shall be as detailed as possible, considering the level of site analysis provided by the Contractor.

Task 4: Surveillance Solution Program

Upon acceptance by DGAC for the recommended surveillance option and recommended

sites, the Contractor shall develop a full program for implementation of the recommended technology(ies). DGAC must agree to the surveillance solution, in terms of the areas to be covered. This program will consist of the following:

3.1 Drawings: The Contractor shall prepare a detailed set of drawings and calculations showing:

- the locations of the proposed antennae;
- the location of the proposed communications and data processing facilities;
- the infrastructure required to support all of the proposed facilities;
- the integration of the technologies with the visualization system operating in Chile; and
- recommended redundant systems for these facilities that assure a level of availability of services compatible with the operational needs of DGAC.

3.2 Users needs: The Contractor shall determine the users' needs in terms of avionics integration, considering the type of aircraft flying in the area of this study. For this the Contractor should follow the FAA CAPSTONE as a model for the solution of air navigation in the area of this study.

3.3 Cost Estimate: For the proposed surveillance solution, the Contractor shall present a cost estimate of the proposed system, with sufficient detail to facilitate the decision making process by DGAC, including the avionic integration for the users.

3.4 Maintenance Plan: The Contractor shall also include the requirements for maintenance and certification for the proposed facilities.

3.5 Equipment Specifications: The Contractor shall compile an equipment inventory that details product specifications, uses and availability for the technologies identified, and that are compatible with DGAC.

3.6 Transition Needs: The Contractor shall identify any equipment that may be necessary to reach full implementation during a transition period, if applicable.

DELIVERABLE #3: The Contractor shall present a report containing the Surveillance Solution Program, including the recommended system siting, cost, maintenance requirements, avionic integration and equipment aspects. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the report in English and in Spanish.

Task 5: Cost-Benefit Analysis

Based on the results of Tasks 1 through 4, the Contractor shall develop a cost-benefit analysis considering operational improvements, safety enhancements and any economic gains from the project for the surveillance program. This document shall provide the justification from the technical and economical points of view to support the decisions

adopted by DGAC.

This task shall be mainly based on the results of Tasks 3 and 4; however, The Contractor shall expand these detailed cost estimates, including engineering costs and capital costs for the implementation of each task. Based on the Cost-Benefit analysis, the Contractor shall propose a capital investment program for the short, medium and long terms.

DELIVERABLE #4: The Contractor shall develop a report containing the findings of Task 5. This report shall contain the results of the cost-benefit analysis and a list of equipment selected for each task 1 through 4. Two copies of the report shall be provided to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the reports in English and in Spanish.

Task 6: Develop a Financial Plan

The Contractor shall develop a preliminary financial and funding program to implement the recommended program for surveillance technologies, based on sources of funding available to DGAC. The financial plan shall include capital costs of acquiring the recommended equipment and systems, as well as construction of any supporting infrastructure needed. The financial plan shall allow for gradual implementation of technologies, thus enabling a practical transition from the existing environment for airspace users and providers.

The Contractor shall identify potential funding mechanisms available for the implementation of the equipment and infrastructure expenditures identified in previous tasks. Among other sources, the Contractor shall assess funding through U.S. export credit agencies, multilateral funding, supplier credits and public funding.

The Contractor shall prepare a list of potential U.S. suppliers of equipment and services that could participate or provide the recommended technologies. The Contractor shall provide contact information for major suppliers as part of this task.

Task 7: Conduct a Preliminary Environmental Impact Assessment

The Contractor shall conduct a preliminary environmental impact study for the implementation of the Project with reference to local requirements and multi-lateral lending agencies (such as the World Bank). This review shall identify potential negative impacts of the Project. The Contractor shall briefly discuss the extent to which potential negative impacts can be mitigated, and develop plans for full environmental impact assessment or other studies in anticipation of the Project moving forward to the implementation stage, if necessary.

Task 8: Preliminary Assessment of Developmental Impacts

The Contractor shall conduct an assessment to identify significant potential development impacts of the Project in Chile. While specific focus should be paid to the immediate

impact(s) of the Project, the Contractor will include, where appropriate, any additional developmental benefits of the Project, including spin-off and demonstration effects. The Contractor shall provide estimates of the Project's potential benefits in the following areas:

(a) Infrastructure and Industry: The Contractor shall provide a generic statement on the infrastructure impact giving a brief synopsis of upgrades to the country's infrastructure.

(b) Market-Oriented Reforms: The Contractor shall provide an overview of potential changes in the market as a result of the project, focusing on increased competition and level of service.

(c) Human Capacity Building: The Contractor shall provide a brief synopsis of the type of positions that would be needed to implement, manage and operate the proposed Project and identify benefits of the proposed training program.

(d) Technology Transfer and Productivity Enhancement: The Contractor shall provide an overview of any advanced technologies that would be implemented as a result of the Project. The Contractor shall provide a brief description of any efficiency that would be gained.

(e) Other: The Contractor shall identify and present a generic statement regarding any other developmental benefits of the Project, including any spin-off or demonstration effects, such as the CNS/ATM concept.

DELIVERABLE #5: The Contractor shall develop a report containing the findings of Tasks 6-8. The Contractor shall provide two copies of the report to DGAC in English and two in Spanish. The Contractor shall also provide DGAC with a CD of the reports in English and in Spanish.

Task 9: Executive Summary and Final Report

The Contractor shall prepare and provide a comprehensive Final Report to DGAC, which shall contain the key findings, recommendations and conclusions of the Study, and shall incorporate all other documents and/or reports provided pursuant to Tasks 1 through 8 above. When the final report is complete, the Contractor shall provide a final oral presentation of the Final Executive Summary and the Final Report to DGAC and other stakeholders at the DGAC offices in Santiago, Chile.

The Contractor shall ensure that the Final Report is submitted in accordance with Clause I of Annex II of the Grant Agreement. The Final Report shall be a substantive and comprehensive report of work performed to carry out all of the tasks set forth in the Terms of Reference and shall include, among other things, an Executive Summary and all deliverables. Each task of the Terms of Reference shall form a separate chapter of the Final Report.

The Final Report shall also include a comprehensive list of suppliers, including potential sources of U.S. equipment and services, relevant to the implementation of each component of the Projects as outlined in the Study.

The Contractor shall provide five (5) hard copies and one (1) electronic version of both the confidential and public versions of the Final Report to DGAC in Spanish and one (1) hard copy of both the confidential and public versions of the Final Report in English. The Contractor shall provide copies to USTDA and the U.S. Embassy in Santiago in English in accordance with Clause I of Annex II of the Grant Agreement.

Notes:

1. The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.
2. The Contractor and DGAC shall be careful to ensure that the public version of the Final Report contains no security or confidential information.
3. The DGAC and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the approved/public Final Report that is developed under these Terms of Reference.

ANNEX 6

COMPANY INFORMATION

A. Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), the information requested in sections E and F below must be provided for each subcontractor.

1. Name of firm and business address (street address only), including telephone and fax numbers:

2. Year established (include predecessor companies and year(s) established, if appropriate).

3. Type of ownership (e.g. public, private or closely held).

4. If private or closely held company, provide list of shareholders and the percentage of their ownership.

5. List of directors and principal officers (President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer; provide full names including first, middle and last). Please place an asterisk (*) next to the names of those principal officers who will be involved in the Feasibility Study.

6. If Offeror is a subsidiary, indicate if Offeror is a wholly-owned or partially-owned subsidiary. Provide the information requested in items 1 through 5 above for the Offeror's parent(s).

7. Project Manager's name, address, telephone number, e-mail address and fax number .

B. Offeror's Authorized Negotiator

Provide name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

C. Negotiation Prerequisites

1. Discuss any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Feasibility Study as proposed and reflect such impact within the project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

D. Offeror's Representations

Please provide exceptions and/or explanations in the event that any of the following representations cannot be made:

1. Offeror is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The Offeror has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the Feasibility Study. The Offeror is not debarred, suspended, or to the best of its knowledge or

belief, proposed for debarment, or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. The Offeror has included, with this proposal, a certified copy of its Articles of Incorporation, and a certificate of good standing issued within one month of the date of its proposal by the State of _____. The Offeror commits to notify USTDA and the Grantee if they become aware of any change in their status in the state in which they are incorporated. USTDA retains the right to request an updated certificate of good standing.

3. Neither the Offeror nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

4. Neither the Offeror, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.

5. There are no federal or state tax liens pending against the assets, property or business of the Offeror. The Offeror, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

6. The Offeror has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The Offeror has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected Offeror shall notify the Grantee and USTDA if any of the representations included in its proposal are no longer true and correct at the time of its entry into a contract with the Grantee.

Signed: _____
(Authorized Representative)

Print Name: _____

Title: _____

Date: _____

E. Subcontractor Profile

1. Name of firm and business address (street address only), including telephone and fax numbers.

2. Year established (include predecessor companies and year(s) established, if appropriate).

F. Subcontractor's Representations

If any of the following representations cannot be made, or if there are exceptions, the subcontractor must provide an explanation.

1. Subcontractor is a corporation *[insert applicable type of entity if not a corporation]* duly organized, validly existing and in good standing under the laws of the State of _____. The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the Offeror is selected, to execute and deliver a subcontract to the Offeror for the performance of the Feasibility Study and to perform the Feasibility Study. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. Neither the subcontractor nor any of its principal officers have, within the three-year period preceding this RFP, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.

4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

The selected subcontractor shall notify the Offeror, Grantee and USTDA if any of the representations included in this proposal are no longer true and correct at the time of the Offeror's entry into a contract with the Grantee.

Signed: _____
(Authorized Representative)

Print Name: _____

Title: _____

Date: _____