



**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

The Inspector General

Office of Inspector General

Washington, DC 20590

January 17, 2013

The Honorable Randy Neugebauer
United States House of Representatives
Washington, DC 20515

Dear Representative Neugebauer:

Thank you for your January 26, 2012, letter in which you raised concerns with the Federal Aviation Administration's (FAA) decision to realign the Abilene Regional Airport's terminal radar approach control facility (TRACON) functions into the Dallas/Ft. Worth TRACON. Your letter questioned several specific aspects regarding the three business cases used to support FAA's decision, and cited concerns over the lack of transparency regarding FAA's justification for the realignment. As agreed with your staff, we reviewed FAA's costs and potential savings associated with the realignment, including the underlying assumptions used in the business cases. Accordingly, we are providing the results of our review, which we discussed with your staff on October 3, 2012.

The scope of our review encompassed FAA's three business cases—including one independent business case prepared by an FAA contractor—that the Agency used to support its realignment decision. We interviewed FAA and National Air Traffic Controller Association (NATCA) representatives at the Headquarters level as well as the author of the independent business case regarding the findings of FAA's three business cases, the assumptions used, and why each case was produced. We visited the Abilene air traffic facility and the Dallas/Ft. Worth TRACON and interviewed local FAA and NATCA representatives, the Abilene Airport Director of Aviation, and the Dyess Air Force Base Airspace Manager about the business cases and the current status of the realignment.

In summary, our review found that none of FAA's three business cases presented a comprehensive picture of the costs and potential benefits of the Agency's Abilene TRACON realignment effort. While the independent business case provides the most detailed cost comparison due to how it measured long-term air traffic controller labor costs—the largest cost driver of the realignment—none of the business cases provide enough information to determine whether the TRACON realignment would result in

future cost savings or operational benefits, such as how changes would enhance the flow of air traffic that can impact the costs and savings of potential realignments. This lack of key details is similar to our 2010 findings regarding the business cases used to support the Boise TRACON transfer to the Salt Lake City TRACON,¹ and highlights the need for FAA to produce more comprehensive business cases for its future realignment efforts.

BACKGROUND

The original Abilene air traffic facility was commissioned in 1961 as a stand-alone control tower to direct traffic at the Abilene Regional Airport. In 1995, the tower inherited the broader TRACON functions that had been performed by military controllers at nearby Dyess Air Force Base. The original Abilene facility was in poor condition, with continuous repairs needed for items such as water leaks and mold remediation. Also, the 62-foot tall tower presented line-of-sight issues for controllers monitoring aircraft on the tarmac due to structures constructed after the tower was commissioned.

As a result, FAA began planning for the new Abilene facility in fiscal year 2002. Construction began in April 2010 and was completed in March 2012 at a cost of \$21 million. FAA's original plan was to transfer the facility's TRACON functions to the Dallas/Ft. Worth TRACON at the time the tower was commissioned. However, problems with implementing a new digital processing and controller display system² at the Dallas/Ft. Worth TRACON have delayed transferring the Abilene TRACON functions until 2014. As a result, the TRACON functions are currently performed in a temporary trailer located next to the new control tower in Abilene (see exhibit A for pictures of the trailer).

Much of the planning for the new Abilene facility occurred during a time of contentious labor-management relations between FAA and NATCA. Disagreement between the parties centered on a disputed 2006 labor contract, implemented by FAA, resulting in little interaction between the organizations in subsequent years. After FAA and NATCA signed a new collective bargaining agreement in 2009, the two sides agreed to re-examine eight TRACON realignments, including Abilene, through a joint Realignment Transition Workgroup.³ The Workgroup examined the status of

¹ "Letter to Idaho Congressional Delegation Regarding the Review of FAA's Business Case for Moving the Terminal Radar Approach Control Services from Boise, Idaho to Salt Lake City, Utah," CC-2009-099, June 30, 2010. OIG reports and correspondence are available on our Web site at <http://www.oig.dot.gov/>.

² The system is known as the Standard Terminal Automation Replacement System (STARS) and replaces the aging air traffic automation systems at TRACONs and air traffic control towers. A joint program between the Department of Defense and FAA, STARS ensures the safe separation of civilian and military aircraft.

³ The other realignments included the Cleveland, Youngstown, Mansfield, Akron, and Toledo, Ohio TRACONs into a new TRACON in Cleveland; the Muskegon, Lansing, Grand Rapids, and Kalamazoo, Michigan TRACONs into a new TRACON in Kalamazoo; the Champaign, Illinois TRACON into the Chicago TRACON; the Dayton, Ohio TRACON into the Columbus TRACON; the Reno, Nevada TRACON into the Northern California TRACON; the West Palm Beach, Florida TRACON into the Miami TRACON; and the Rome, New York TRACON into the Syracuse TRACON.

each realignment; reviewed quantitative and qualitative information, including business cases; and made recommendations as to whether a realignment should go forward.

THE THREE BUSINESS CASES DO NOT PROVIDE SUFFICIENT INFORMATION REGARDING POTENTIAL FUTURE SAVINGS AND BENEFITS

As summarized below, the three business cases—January 2008, December 2010, and February 2011—analyzed the potential costs and savings of various options regarding whether to keep the TRACON functions at Abilene or transfer them to another facility (see exhibit B for a detailed comparison of the three business cases). In our opinion, the February 2011 business case provides the most detailed cost comparison given how it projected long-term air traffic controller labor costs, the largest cost driver of the realignment.

- **January 2008 Business Case**—The first business case, completed by FAA’s Air Traffic Organization (ATO) in January 2008, concluded that realigning the Abilene TRACON functions into the Dallas/Ft. Worth TRACON was the best option, and would result in \$7.4 million in total cost savings, or \$4.3 million in net present value⁴ cost savings, by reducing overhead staff and the number of buildings that needed to be operated and maintained.⁵ However, this business case focused mainly on the infrastructure costs of the realignment, kept controller staffing levels neutral, and assumed that the Abilene TRACON controllers would be co-located⁶ at the Dallas/Ft. Worth TRACON, resulting in no pay increase for the transferring controllers.
- **December 2010 Business Case**—The second business case, completed in December 2010 by FAA’s ATO after input from the Realignment Transition Workgroup, also concluded that realigning the TRACON functions into the Dallas/Ft. Worth TRACON was the best option, and would result in nearly \$57 million in cost savings due to reductions in controller staffing levels and other operating costs.⁷ Unlike the January 2008 business case, this business case assumed that the TRACON transfer would result in a consolidation,⁸ which would

⁴ Net present value calculates future costs and benefits of a project in the present dollar value. In this case, it is used to determine whether a project will result in more benefits to the Agency or more costs over a period of time.

⁵ Abilene Regional Airport (ABI) Air Traffic Control Tower (ATCT)/TRACON Business Case, ATO Terminal Services – Terminal Planning, January 2008.

⁶ Co-location is defined by FAA as housing several different TRACONs, which provide air traffic control to different areas, in a single facility where controllers would only be certified to work a specific area at a pay band appropriate for the area they are controlling.

⁷ ABI ATCT/TRACON Business Case, ATO Terminal Services – Terminal Planning, December 2010.

⁸ Consolidation combines TRACONs for numerous airports within a common facility. Controllers assigned to a consolidated facility certify on all areas and are paid equally, regardless of the number of aircraft for which their area is responsible.

substantially increase salaries for controllers transferring to Dallas/Ft. Worth. However, the Realignment Transition Workgroup agreed to a scoring system that emphasized the operational, Next Generation Air Transportation System (NextGen), and infrastructure aspects of the realignment over the cost aspect, and made labor costs a minor consideration in its evaluation. In addition, the Workgroup projected future controller labor costs over a 15-year period, while other operating costs were projected over a 40-year period.

- February 2011 Independent Business Case**—A third business case, completed by an FAA-hired independent contractor in February 2011, conflicts with the first two cases, concluding that it would cost approximately \$18 million (in net present value) *more* to consolidate TRACON operations at the Dallas/Ft. Worth TRACON due to lower controller salaries at the Abilene facility versus the Dallas/Ft. Worth TRACON.⁹ This business case also assumed that the TRACON transfer would be a consolidation, with increased salaries for transferring controllers. However, the independent case only assessed the financial differences between the options, and did not emphasize the operational, infrastructure, and other aspects of the realignment. Also, the independent business case projected both controller salary and other operating costs over a 44-year timeframe.

While the independent business case provides the most detailed cost analysis, none of the business cases provide enough information to determine whether the TRACON realignment would result in future cost savings or achieve operational and other benefits. Although the estimates for items such as construction, communication costs, and controller salary differences are reasonable, none of the three business cases quantify how other Agency initiatives, such as implementing operational changes and NextGen enhancements, would achieve future efficiencies that can impact the costs and savings of potential realignments. For example, while the December 2010 business cases stated that the realignment could result in improved internal efficiencies and reduced costs for airspace users, it did not quantify these anticipated benefits. Explaining and quantifying these initiatives in future business cases would provide FAA officials and other stakeholders with additional information regarding the costs, savings, and potential benefits of consolidating air traffic facilities.

UNDERLYING ASSUMPTIONS USED IN FAA'S BUSINESS CASES WILL LIKELY DIFFER FROM WHAT WILL ACTUALLY BE IMPLEMENTED

The three business cases used different economic and operational assumptions in analyzing the potential options regarding the Abilene TRACON realignment, including different facility lifecycle timeframes, staffing levels, equipment, and other items. FAA used some of these assumptions based on Federal regulations, Agency

⁹ ABI TRACON Business Case Review – Independent Assessment, Houghton Associates, Inc., February 2011.

best practices, or economic factors that existed at the time a business case was completed, such as Office and Management and Budget estimates for inflation and discount rates. Other assumptions differed due to changes in Agency policy that impacted the outcomes of the analyses. For example, at the time the first business case was completed, FAA's policy was to co-locate two or more separate facilities, while the policy for the second and third business cases was to consolidate facilities into one.

However, the assumptions used in the three business cases regarding staffing levels, equipment, and other items only represent estimates of future costs, and will likely differ from what will actually be implemented, resulting in different costs and savings. For example, the independent business case assumed that the realignment would require 8 additional controllers at the Dallas/Ft. Worth TRACON and 40 hours of training on the new digital processing and controller display system equipment for 13 Dallas/Ft. Worth TRACON and 14 Abilene Tower employees. However, under the terms of the FAA/NATCA collective bargaining agreement, these decisions require negotiations between the two parties. FAA and NATCA have not begun negotiations regarding controller staffing levels at the two sites, transfer procedures for employees, relocation incentives, training, and other related issues. These negotiations will likely result in different costs to the Agency than were projected in the independent business case.

MULTIPLE BUSINESS CASES WERE LARGELY DRIVEN BY AN EVOLVING RELATIONSHIP BETWEEN FAA AND NATCA

FAA's decision to produce three business cases was mainly influenced by the Agency's evolving relationship with NATCA. The first business case was completed by FAA's ATO Terminal Planning unit during a time of contentious labor-management relations, with no input from the union. FAA's Terminal Planning unit also completed the second business case nearly 3 years later. However, with a new collective bargaining agreement in place and relations between FAA and NATCA improving, this business case included input on the assumptions and other factors from the joint FAA-NATCA Transition Realignment Workgroup. Based on the findings of the second business case, the Workgroup recommended that the realignment go forward.

NATCA concurred with the recommendation to realign the Abilene TRACON functions into the Dallas/Ft. Worth TRACON, but it expressed concern that the methodology used to calculate staffing levels underestimated the number of controllers needed and the associated costs of relocating the Abilene TRACON. This concern, along with a desire from both parties for an outside review of the business case, led senior leaders from FAA and NATCA in 2010 to agree that a third, independent business case be produced, with FAA selecting Houghton Associates as

the preparer.¹⁰ This business case was completed in February 2011, almost 1 year after construction on the new Abilene facility had already began.

FAA HAS TAKEN STEPS TO PROCEED WITH THE REALIGNMENT

FAA has already taken steps to proceed with the realignment by adding three operating positions to the Dallas/Ft. Worth control room to accommodate Abilene's TRACON functions. The Dallas/Ft. Worth TRACON currently uses only one-third of its control room floor, and was designed to accommodate additional TRACON sectors. In addition, Dallas/Ft. Worth TRACON facility management and local NATCA representatives have held preliminary discussions regarding aspects of the future realignment, such as allowing facility controllers to receive training on terminal automation equipment before the realignment occurs.

Also, if Abilene's TRACON functions were to remain in Abilene, FAA would have to make several changes to the existing tower. First, the Agency would have to either construct an additional 3,100 to 3,900 square feet of space to house the TRACON function or significantly modify the existing tower building to accommodate the operation. In addition, FAA would have to make additional improvements to the new facility, such as improving the heating, ventilation, and air conditioning system. In addition, FAA would have to install the new digital processing and controller display system at Abilene, which is not currently included in the Agency's budget. Finally, if the current space of the facility is used to accommodate the TRACON, it would require relocating the technical operations staff, potentially increasing costs to the Agency.

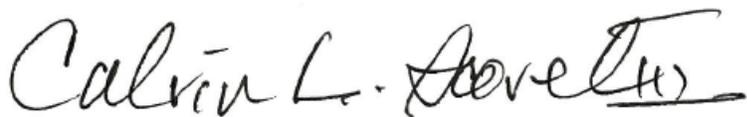
CONCLUSION

The extent to which FAA realigns and consolidates the Nation's air traffic control facilities is an important component of its efforts to modernize the National Airspace System. If one of the driving factors behind consolidations is cost savings, then it is important for FAA to be as detailed as possible in its business cases to address the question of whether these decisions are in the best interest of the taxpayer. With plans for large-scale facility consolidations in development, it will be increasingly critical that FAA clearly explain future consolidation plans, expected operational benefits, costs, and potential limitations to Congress and other stakeholders. This will require the Agency to provide more information for estimating the costs and expected benefits of realignment efforts. We discussed the results of our work with FAA officials, who agreed that it is important to have sound business cases for realigning and consolidating FAA facilities.

¹⁰ According to FAA, Houghton Associates was selected due to its previous experience with completing business cases for other FAA projects, such as the Wide Area Augmentation System.

If I can answer any questions or be of further assistance in this matter, please contact me at (202) 366-1959 or Matthew E. Hampton, Deputy Assistant Inspector General for Aviation and Special Program Audits, at (202) 366-1987.

Sincerely,

A handwritten signature in black ink that reads "Calvin L. Scovel III". The signature is written in a cursive style with a prominent initial "C" and a long, sweeping underline.

Calvin L. Scovel III
Inspector General

cc: FAA Administrator
FAA Deputy Administrator
FAA Director, Air Traffic Control Facilities, AJW-2
FAA Audit Liaison, AAE-100

EXHIBIT A. PICTURES OF THE TEMPORARY ABILENE TRACON



Source: OIG

EXHIBIT B. COMPARISON OF FAA'S THREE BUSINESS CASES

	FAA's January 2008 Business Case	FAA's December 2010 Business Case	Houghton Associates February 2011 Independent Business Case
Recommendation/Finding	<ul style="list-style-type: none"> Construct a new tower at Abilene and co-locate the TRACON functions to the Dallas/Ft. Worth TRACON 	<ul style="list-style-type: none"> Construct a new tower at Abilene and consolidate the TRACON functions to the Dallas/Ft. Worth TRACON 	<ul style="list-style-type: none"> It is more cost-effective to construct a TRACON in Abilene than consolidate the TRACON functions into the Dallas/Ft. Worth TRACON
Projected Total Cost for Recommended Option	<ul style="list-style-type: none"> \$66.5 Million for New Tower (\$27.9 Million for Construction and Equipage; \$16.1 Million for Sustainment; \$22.5 Million for Staffing) \$41.6 Million for Existing DFW TRACON (\$3.0 Million for Equipage; \$4.2 Million for Sustainment; \$34.4 Million for Staffing) 	<ul style="list-style-type: none"> \$2.703 Billion for Investment and Lifecycle Costs (Constant Dollars) \$801.4 Million for Staffing Costs (Constant Dollars) 	<ul style="list-style-type: none"> \$463.9 Million for Controller Labor (Net Present Value) \$160.4 Million for Supervisory and Administrative Labor (Net Present Value) \$9.1 Million for TRACON Construction, Equipment, and Other Operating Expenses (Net Present Value)
Projected TRACON Savings/Additional Cost	<ul style="list-style-type: none"> \$7.4 Million Current Year Operating Savings (\$0.3 Million Labor; \$7.4 Million Facility Operations) \$4.3 Net Present Value Savings 	<ul style="list-style-type: none"> \$57.2 Million Current Year Operating Savings (\$26.6 Million Labor; \$30.6 Million Other Facility Operations) 	<ul style="list-style-type: none"> \$20.95 Million in Total Labor Costs Savings (Net Present Value) \$4.11 Million in Additional Costs to Construct, Operate, and Maintain Abilene TRACON (Net Present Value)
Lifecycle/Labor Assumptions	<ul style="list-style-type: none"> 20 Year Lifecycle for Infrastructure and Labor Costs Assumed Co-Location – No Increase in Salaries for Controllers Transferring to the Dallas/Ft. Worth TRACON 	<ul style="list-style-type: none"> 15 Year Lifecycle for Staffing Costs 40 Year Lifecycle for Other Costs Assumed Consolidation – Increase in Salaries for Controllers Transferring to the Dallas/Ft. Worth TRACON 	<ul style="list-style-type: none"> 44 Year Lifecycle for All Costs Assumed Consolidation – Increased Salaries for Controllers Transferring to the Dallas/Ft. Worth TRACON

Source. OIG analysis of FAA documents.