

National Aeronautics and Space Administration

**Office of Inspector General**  
Washington, DC 20546-0001



December 11, 2013

TO: Charles Bolden  
Administrator

Pete Worden  
Director, Ames Research Center

FROM: Paul K. Martin   
Inspector General

SUBJECT: Review of Allegations of Improper Leasing and Provision of Aircraft Fuel at  
Moffett Federal Airfield

In 2007, NASA's Ames Research Center (Ames) began leasing space in an aircraft hangar on its property to H211, a private company managing aircraft owned or leased by Google executives Larry Page, Sergey Brin, and Eric Schmidt. Pursuant to the lease, H211 pays NASA \$1.4 million annually to rent approximately 70,000 square feet of space and stores up to nine aircraft that includes two helicopters and seven planes ranging in size from a Boeing 767 to a two-seat military aircraft known as an Alpha Jet. Located adjacent to Moffett Federal Airfield (Moffett), a former U.S. Navy base managed by Ames, the hangar is less than 4 miles from Google's headquarters in Mountain View, California.

Pursuant to a related Space Act Agreement with H211, the company allows NASA to use its aircraft – primarily the Alpha Jet – to conduct Earth science research. H211 fuels its planes for both private and NASA-related flights with aviation fuel supplied by the Defense Logistics Agency-Energy (DLA-Energy), an arm of the U.S. Department of Defense (DOD). DLA-Energy is the sole provider of aviation fuel at Moffett and charges DOD entities one rate and non-DOD entities, including NASA and NASA contractors, a higher rate to covers its costs. However, because this rate does not include state and local taxes or other fees H211 would have been charged at local airports, the price-per-gallon is lower than comparable aviation fuel prices at those venues.<sup>1</sup>

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<sup>1</sup> DLA-Energy charged H211 federal taxes on the fuel it supplied.

In August 2012, the OIG issued an audit report in which we found that H211 made an unsolicited offer to lease the hangar space after learning about its availability as a result of dealings company officials had with Ames on other matters.<sup>2</sup> We also reported that Ames did not advertise the availability of the hangar before entering into the lease. At that time, NASA guidance was unclear regarding when competition should be used for such leasing opportunities. Because we believed that an official announcement of the hangar's availability would have ensured a more transparent leasing process and fairness to other potentially interested parties, we recommended that NASA revise its policies to ensure public notification is provided when significant leasing opportunities at NASA Centers become available. In response, NASA agreed to revise its policy and expects to complete those revisions by March 31, 2014.

Even after issuance of our August 2012 audit, allegations of impropriety and unfairness persisted regarding H211's leasing and fuel arrangements with Ames. Accordingly, we initiated this review.

In sum, we found that consistent with NASA policy Ames based the price of its lease with H211 on the fair market value of comparable hangar space. We also found that the lease and companion Space Act Agreement supported NASA's mission, a requirement for the type of lease Ames entered into with H211. Since 2009, H211 has flown more than 200 flights to collect climate data at no cost to NASA – science missions Ames officials estimate would have cost the Agency between \$1,800 and \$6,500 per flight hour to operate depending on the type of aircraft used. Accordingly, we determined that NASA benefitted from both its lease and Space Act Agreement with H211.

We found that a misunderstanding between Ames and DLA-Energy personnel rather than intentional misconduct led to H211 enjoying the discounted fuel rate for flights that had no NASA-related mission. From September 2007 until August 2013, H211 purchased fuel at Moffett from DLA-Energy either directly or through NASA for both its personal (non-NASA related) flights and NASA science flights at a rate intended only for government agencies and their contractors. Even though Ames officials accurately reported to DLA-Energy the nature of the Center's agreement with H211, DLA-Energy misunderstood that H211 was drawing fuel for both private and NASA-related missions. While this arrangement did not cause a loss to NASA or DLA-Energy, it resulted in considerable savings for H211.<sup>3</sup> Specifically, we calculated that since inception of its lease H211 paid approximately \$3.3 million to \$5.3 million less for fuel supplied by DLA-Energy than it would have paid to buy fuel at market rates.

Since September 2013 H211 has been paying NASA a market-based rate for fuel it purchases at Moffett. Initially, H211 paid the market rate for all flights regardless of their purpose, but this has since changed to two rates – a market rate for private flights

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<sup>2</sup> NASA OIG, "NASA's Infrastructure and Facilities: An Assessment of the Agency's Real Property Leasing Practices" (IG-12-020, August 9, 2012).

<sup>3</sup> Accordingly, the only potential "victims" in this situation are the state of California and the local government which may have lost tax revenue associated with the fuel purchases and perhaps a commercial fuel supplier who may have missed out on potential profit from the fuel sales.

and a cost-plus-surcharge rate for NASA science missions. From these payments, NASA reimburses DLA-Energy for the cost of the fuel at the “non-DOD Federal Government” rate, retains a percentage to cover its administrative and support costs, and remits the remainder to the U.S. Treasury. As a result of this new arrangement, the Government is collecting more money than it costs to provide the fuel to H211.

While we concluded that the fuel arrangement between Ames and H211 did not result in an economic loss to NASA or DLA-Energy, H211 nevertheless received a monetary benefit to which it was not entitled. Accordingly, we recommend that NASA explore with the company possible options to remedy this situation.

## **I. Background**

Leasing is among the options available to NASA when it identifies underutilized real property on its Centers. Leasing property may generate revenue to help reduce overhead expenses and defray the costs of maintaining and improving aging infrastructure. In addition, leasing enables NASA to keep facilities in its inventory that although currently underutilized may be needed in the future.

One of the leasing mechanisms NASA can employ is the Enhanced Use Lease (EUL) under which the Agency can retain all proceeds rather than remitting the amount beyond its costs to the Treasury as is required in a traditional lease.<sup>4</sup> Under NASA’s EUL policy, the lease must align with a NASA mission and the responsible Center is required to conduct an analysis to determine the fair market rental value of the property and to charge that rate. When a lease offer is unsolicited, as it was with H211, the Center is not required to provide public notice of the rental opportunity if it prepares a written justification of its action.<sup>5</sup>

As of July 2013, Ames had entered into approximately 60 EULs with roughly 25 tenants for property and facilities ranging from one room of office space to 42 acres of undeveloped land. For fiscal year 2013, Ames estimated that it collected approximately \$11 million in income from these leases. Of that amount, Ames officials allocated funds towards recovering the cost of the services the Center provides tenants, such as security, maintenance, fire protection, and demand services, and divided the remainder using a 65/35 percentage split between NASA Headquarters and Ames to support other projects.

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<sup>4</sup> NASA first received EUL authority as part of the Consolidated Appropriations Resolution of 2003, which enabled the Agency to lease property at Ames and Kennedy Space Center in exchange for cash or in-kind consideration. Consolidated Appropriations Resolution, 2003, Pub. L. No. 108-7 (February 20, 2003). This authority has since been modified several times. Currently, all Centers may enter into EULs but may accept in-kind consideration only as it relates to the development of renewable energy production facilities. Consolidated and Further Continuing Appropriations Act, 2012, Pub. L. No. 112-55 (November 18, 2011).

<sup>5</sup> NASA Procedural Requirement (NPR) 8800.15B § 7.8 “Real Estate Management Program” and NASA Desk Guide for Enhanced Use Leasing of Real Property.

Beginning in July 2007, Ames entered into an EUL with H211 under which the company leases approximately 70,000 square feet of space in Building N211, a large hangar adjacent to Moffett Airfield.

**Figure 1: H211 Aircraft Parked in front of N211 – Location of H211 on Ames**



Source: NASA OIG.



Source: NASA.

The EUL allows H211 to store and service aircraft that are majority owned or leased by H211 executives and includes use of the hangar and related services such as use of the airfield, airfield traffic control, and utilities. Since 2007, the EUL – under which H211 pays approximately \$1.4 million per year – has been extended twice and is currently scheduled to expire in July 2014.<sup>6</sup>

DLA-Energy is the only source of aviation fuel at Moffett, and H211 has received fuel from either NASA or DLA-Energy for all its planes stored at Ames throughout the lease. For part of the lease term, NASA acted as an intermediary between H211 and DLA-Energy regarding fuel purchases and charged a slightly higher rate than DLA-Energy to cover its associated costs. Apart from these periods, H211 contracted directly with DLA-Energy for fuel.

DLA-Energy policy authorizes it to provide fuel to DOD and other Federal agencies. In addition, DLA-Energy may service government contractors upon receipt of a written request and justification and with approval from the DLA-Energy Commander.<sup>7</sup>

<sup>6</sup> In May 2013, NASA and the U.S. General Services Administration partnered to issue a Request for Proposals (RFP) to obtain lease proposals for the rehabilitation and reuse of Hangar One and for operation, management, and maintenance of Moffett Airfield. Citing this pending RFP, NASA has rejected requests from H211 to extend the lease beyond July 2014.

<sup>7</sup> Per the policy, authorized customers are U.S. military units, including the National Guard, Reserve components, and other U.S. Government agencies; foreign governments authorized by international agreement; commercial foreign vessels and aircraft (when no other energy supply source is available nor provisioned for by an international agreement); and government contractors that perform contract or charter services for the U.S. Government.

Pursuant to this requirement, Ames annually reported to DLA-Energy that H211 was leasing a hangar, office, and shop space from the Center and that “from time to time” NASA and H211 would “collaborate on activities that support NASA’s missions and which involve the use of H211’s aircraft as a platform to support such mission-related activities.”

In 2002, Ames and DLA-Energy’s predecessor agency entered into a Memorandum of Agreement (MOA) pursuant to which DLA-Energy would provide NASA and NASA customers with fuel at the “into-plane contract price charged at [Norman Y. Mineta] San Jose Airport.”<sup>8</sup> The term “customer” is not defined in the MOA. Ames officials told us that they viewed H211 as a NASA “customer” by virtue of the company’s lease agreement with the Center. In addition, some Center officials said that they understood the reference in the MOA to the fuel price charged at the San Jose Airport to mean that DLA-Energy charged H211 a market-based rate for fuel. They also told us that they only became aware of a potential problem with the fuel rate H211 was paying when the allegations of impropriety and unfairness were raised.

In actuality, DLA-Energy charges all entities to which it supplies fuel one of two rates: a rate for DOD organizations and a cost-plus-surcharge rate for non-DOD entities. Both of these rates are lower than commercial fuel rates in the Moffett area because they do not include state and local taxes or other fees associated with being a tenant at a commercial airport. Accordingly, throughout the term of its lease H211 received a discount on fuel for all its planes stored at the Ames hangar regardless of whether they were being used for NASA missions or for personal flights of H211 executives.

The 2007 lease between Ames and H211 notes that the company is “beneficially owned” by the principal executives of an entity with which Ames has an existing “programmatic, collaborative relationship” and which plans to “establish a physical presence” on Ames property. Although the lease does not name the entity, we determined that the reference is to Google.<sup>9</sup> In addition, the lease states that H211 and Ames were preparing a separate Space Act Agreement to allow Ames to “place instruments” on H211 aircraft and “regularly collect Earth observations” in support of NASA research and that allowing H211 aircraft to operate from Moffett both supported “the broader programmatic relationship” between Ames and Google and provided “a particular research opportunity to [Ames] at a greatly reduced cost.”

Ames and H211 finalized their initial Space Act Agreement in August 2007. Like the EUL, the Space Act Agreement cites the existing collaborative relationship between Ames and Google and allows Ames to place instruments on H211 aircraft to collect Earth observation data. Under the Agreement, NASA would supply fuel for H211 planes and H211 would reimburse NASA for the “actual cost” to the Agency for that fuel. The

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<sup>8</sup> The “into-plane” rate is the rate charged for delivering fuel directly into aircraft rather than to a ground tank or other storage unit.

<sup>9</sup> In December 2006, Ames signed a Space Act Agreement with Google to work together on a variety of technical issues ranging from large-scale data management and massively distributed computing to human-computer interfaces. This agreement was the first in a series of collaborations between Ames and Google that include joint research, products, facilities, education, and science missions.

Space Act Agreement makes no distinction between H211 flights flown for purposes of NASA research and those flown for non-NASA purposes.

In April 2009, Ames and H211 revised their Enhanced Use Lease so that H211 would deal directly with DLA-Energy when purchasing fuel. Thereafter, H211 signed a purchase agreement with DLA-Energy in which H211 “warranted” that the fuel would be used “to support only the performance of U.S. government contract, charter, or other approved use.” The purchase price was set at DLA-Energy’s cost-plus-surcharge rate. In connection with this agreement, Ames provided DLA-Energy with a letter explaining the relationship between the Center and H211 in which it described the company as a tenant that collaborates with NASA on mission-related activities. We asked an H211 official about the fuel agreement with DLA-Energy and in particular the “warranty” statement. The official told us that he assumed H211 qualified as an “other approved use” and that the fees the company paid for aviation fuel were proper. Moreover, the official explained that because DLA-Energy was the only option available to obtain fuel at Moffett, basing the company’s aircraft at an airfield without an available fuel supply would have been impractical.

The arrangement between H211 and DLA-Energy remained in place until August 2013 when Ames and H211 revised their Space Act Agreement so that H211 purchased fuel from DLA-Energy through NASA. Unlike the earlier period in which NASA acted as intermediary between H211 and DLA-Energy, under the current arrangement one of two rates is charged – the cost-plus-surcharge rate for NASA-related missions or a market rate for personal, non-NASA flights. The market rate includes Center management and operations fees, with NASA paying DLA-Energy the cost-plus-surcharge rate and forwarding the remaining funds to the U.S. Treasury.

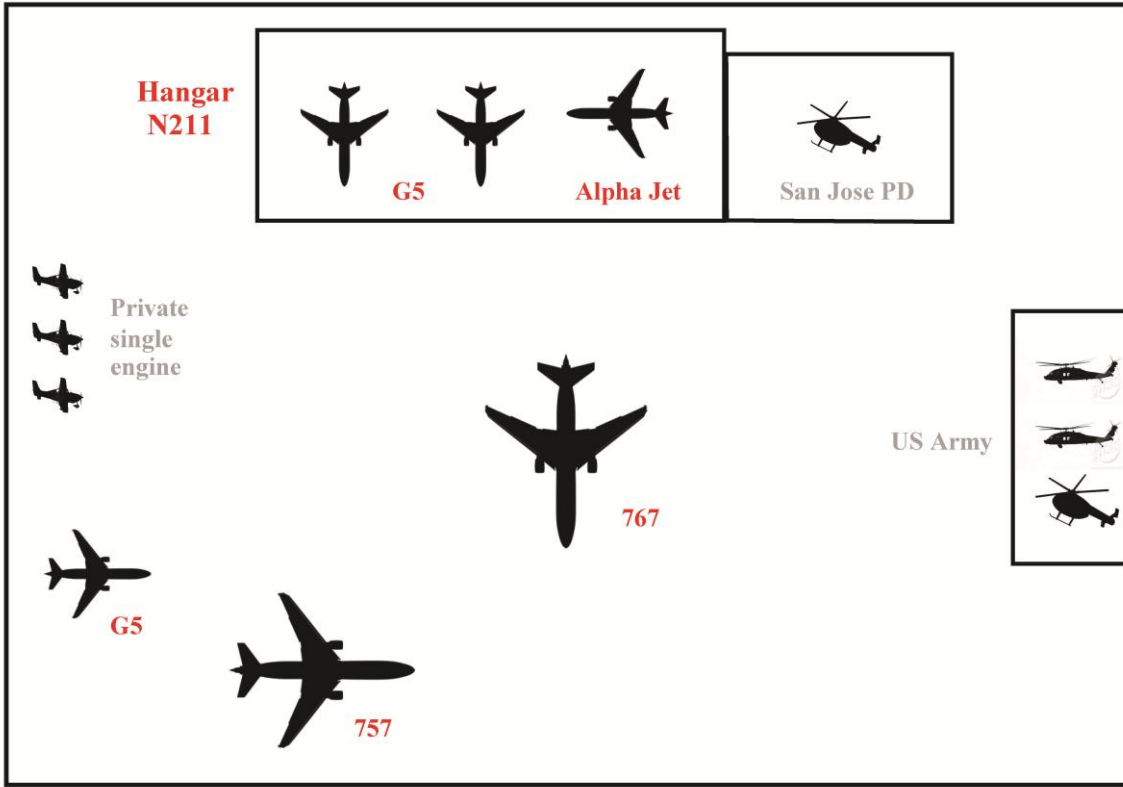
As of August 2013, H211 housed up to seven airplanes and two helicopters at Ames (see Figure 2). Six of the planes – a Boeing 757, a Boeing 767, and four-Gulfstream Vs – are passenger aircraft.<sup>10</sup> The seventh is an Alpha Jet, an experimental aircraft. H211 purchased the Alpha Jet in 2008 primarily for the purpose of conducting NASA science missions after officials determined that it was cost- and time-prohibitive to seek Federal Aviation Administration (FAA) approval to install scientific equipment on the company’s passenger aircraft.

Between August 2012 and July 2013, H211 flew 229 flights out of Moffett. Fifty-nine of these flights were NASA air sample missions (26 percent of total flights) and 170 were private flights with no connection to NASA (74 percent). The majority of Alpha Jet flights were related to NASA science missions.

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<sup>10</sup> The Boeing 767 is owned by Blue City Holdings, a holding company financed in part by the same individuals who own H211. We received an allegation that this aircraft is illegally present at Ames because it is not registered to H211. However, the lease requires that planes stored in the hangar be majority owned or leased by H211 executives, not that they be registered to the company. In addition, we found that H211 properly notified Ames about the Boeing 767 and Ames approved the plane for storage in the hangar.

**Figure 2: Diagram of Hangar and H211 Aircraft during August 2013 OIG Visit to Moffett Field**



Red - H211 asset  
Grey - Other

\*Diagram as of August 6, 2013

Note: One H211 Gulfstream V and two helicopters not pictured.

Source: NASA OIG site visit.

## II. Analysis

### A. H211 Lease is Consistent with NASA Policy

According to NASA policy, EUL rental rates must be based on the fair market price for the property or facility and the lease must support a NASA mission. In addition, for unsolicited leases, public notice regarding the rental opportunity is not required if the Center provides a written justification for its action.

We found that Ames took adequate steps to determine the fair market value of the hangar space before leasing it to H211. Specifically, Ames contracted with an airport management and consulting firm that found that leases at comparable locations in the immediate area, including the San Francisco International and San Jose airports, would cost approximately \$753,000 annually plus fees for additional services. Using the

contractor's determination, Ames and H211 agreed to a rental fee of approximately \$1.4 million per year for the hangar space.<sup>11</sup>

With regard to supporting the NASA mission, H211 agreed to place instruments on its aircraft to collect Earth observations in support of research being conducted at Ames. According to the lease, Ames and H211's original intent was that H211 would install sensors on an unspecified number of its aircraft, which would enable the planes to collect air samples as they flew. However, installing such equipment on H211's passenger aircraft required FAA approval. Ultimately, due to the cost and time required to modify the passenger aircraft, this plan was abandoned and H211 acquired the Alpha Jet, which because it was classified as an experimental aircraft did not require FAA approval to retrofit. Since 2009, NASA has conducted over 200 science missions using the Alpha Jet.<sup>12</sup>

NASA incurs no cost in connection with the Alpha Jet or other scientific flights conducted with H211 planes. H211 reported to NASA that it costs the company approximately \$4,500 per flight hour to operate the Alpha Jet. Using this figure, we estimated that between September 2010 and July 2013, H211 provided flight support to Ames valued at approximately \$668,000.<sup>13</sup> According to NASA documentation, similar flights conducted using NASA aircraft would cost project managers between \$1,800 and \$6,500 per flight hour, depending on the type of aircraft used.

As we reported in our August 2012 audit, Ames did not prepare a public notice regarding the availability of the hangar space before leasing it to H211. As noted earlier, because H211 made an unsolicited offer to rent the hangar, Ames was required only to provide a written justification for not giving public notice for the leasing opportunity. When questioned, Ames pointed to the benefit it would receive from using H211 planes for science missions and its existing relationship with Google to justify the lack of notice. In our audit report, we recommended that NASA widely publicize its leasing opportunities and officials agreed to update Agency policies in response to our recommendation.

## **B. Until Recently H211 Paid Less Than Market Rate for Fuel for its Private Flights**

DLA-Energy is the only source of aviation fuel at Moffett and throughout the course of H211's 6-year lease all its aircraft at Ames have used fuel supplied by DLA-Energy. The 2002 MOA between DLA-Energy and NASA provided that DLA-Energy would charge NASA "customers" the into-plane contract price charged at the San Jose airport for fuel. Ames officials explained that the San Jose airport was cited in the MOA because at the time an authorized contractor was selling fuel at a reduced rate at that airport. However,

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<sup>11</sup> The rent is higher than the estimate for surrounding facilities because it includes road and grounds maintenance; security, fire, and first responder services; infrastructure repair; and utilities.

<sup>12</sup> NASA personnel have occasionally used H211 passenger aircraft to support NASA science projects. For example, passenger aircraft were used in 2009 for three Science Instrumentation Environmental Remote Research Aircraft Unmanned Aircraft Systems transport support missions.

<sup>13</sup> The flights supported the Alpha Jet Atmospheric Experiment Project.



since 2009 H211 has been paying DLA's cost-plus-surcharge rate, which is lower than commercial rates charged at the San Jose airport.

Although DLA policies permit sale of fuel at the cost-plus-surcharge rate to government contractors upon approval from the DLA-Energy Commander, H211 is not a NASA contractor but rather a tenant and Space Act Agreement partner. We found that Ames officials accurately reported H211's relationship with the Center to DLA-Energy but DLA-Energy believed H211 was performing only NASA-related missions and therefore was entitled to fuel at the cost-plus-surcharge rate. We found that a misunderstanding between Ames and DLA-Energy personnel rather than intentional misconduct led to H211 receiving the discounted fuel rate for flights that had no NASA-related mission.<sup>14</sup>

In 2012, the cost-plus-surcharge rate DLA-Energy charged H211 ranged between \$3.05 and \$3.81 per gallon, while the retail price at the San Jose airport fluctuated between \$7.01 and \$7.44 per gallon. However, because airport tenants typically receive a negotiated discount on this retail price the potential savings to H211 are not as simple as comparing the two fuel rates. By using historical discounted airport prices and our analysis of DLA-Energy records, we calculated that H211 paid DLA-Energy \$2 million in 2012 for fuel that if purchased at the San Jose airport would have cost approximately \$3 million to \$3.6 million, including approximately \$240,000 to \$300,000 in state and local taxes. To determine H211's total savings since inception of the lease in 2007, we applied the percentage of savings in 2012 to previous years and calculated that since inception of its lease with Ames H211 saved approximately \$3.3 million to \$5.3 million in fuel costs.<sup>15</sup>

In May 2013, after the issue regarding the fuel rate for H211 was brought to their attention, DLA-Energy determined that H211 was only eligible to receive fuel at the cost-plus-surcharge rate when its flights support NASA research. As a result, NASA did not request renewal of the DLA-Energy fuel purchase agreement with H211 when it expired in August 2013. Therefore, as of September 1, 2013, H211 is receiving fuel from DLA-Energy through NASA under an arrangement where NASA charges the company for non-NASA flights a price based on an average of the contracted commercial rate at San Francisco Bay area airports. Ames officials said they are tracking the local aviation fuel rates daily to ensure the proper amount is invoiced to H211. NASA intends to remit any amounts in excess of DLA's rate and its costs to the U.S. Treasury as miscellaneous receipts. Agency officials said in the first two months of the new arrangement this amounted to approximately \$35,000. Based on this figure, we estimate that by the end of

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<sup>14</sup> DLA-Energy officials told us they do not routinely deal with "private tenants" such as H211 and therefore generally charge one of two rates: (1) the rate for DOD entities or (2) the cost-plus-surcharge rate for all other federal agencies and their contractors.

<sup>15</sup> Because historical retail rates for aviation fuel at San Jose Airport were not available, we applied the percentage discount derived from 2012 figures to the invoice totals H211 paid between 2007 and 2011 and adjusted for inflation to develop an estimate of total savings over the life of the lease. The calculated amount of savings depends on the assumed negotiated rate if H211 were a tenant in a San Francisco Bay Area airport rather than at Moffett. Bargaining power when negotiating these rates depends on many factors, including the volume of fuel used and the type and number of aircraft housed at the airport.

H211's lease in July 2014 the total "excess" fees transferred to the Treasury will amount to approximately \$158,000.

We acknowledge that NASA received substantial benefit from its agreements with H211, including more than 200 scientific flights and a substantial amount of rental income for the once-vacant hangar. However, we also found that H211 received a significant discount on fuel for its many non-NASA-related flights to which it was not entitled. While this arrangement did not cause an economic loss to NASA or DLA-Energy, it did result in considerable savings for H211 and engendered a sense of unfairness and a perception of favoritism toward H211 and its owners. Accordingly, we recommend that NASA explore with the company possible options to remedy this situation.

cc: Michael Wholley  
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