



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6d

ACTION ITEM

Date of Meeting September 11, 2018

DATE: August 8, 2018

TO: Stephen P. Metruck, Executive Director

FROM: Brendalynn Taulelei, Senior Maintenance Manager, Asset Management and Logistics
Rob Lane, Maintenance Manager, Logistics

SUBJECT: Purchase of Liquid and Solid Pavement Deicers for the Airport

Amount of this request: \$2,200,000

Total estimated project cost: \$2,200,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to execute a contract for the purchase of liquid and solid pavement deicing agents for use at Seattle-Tacoma International Airport. The contract shall be structured as a one-year agreement with up to four one-year renewal options. The estimated value of this contract is \$2,200,000.

EXECUTIVE SUMMARY

Aviation Maintenance uses a combination of snow removal equipment and deicing agents during snow and ice conditions, to maintain surfaces for arriving and departing aircraft and vehicle traffic that uses the airport roadways. In a typical snow season at the airport, it is necessary to execute multiple short-notice, high dollar-value purchases of liquid or solid deicer to prevent impacts to Airport operations on the runways and roadways. Executing procurement for liquid and solid deicer will allow the aviation division to be well prepared for winter weather operations.

JUSTIFICATION

This contract authorization will allow us to keep Sea-Tac Airport open for public travel and regional commerce by providing the chemicals needed for deicing operations during a winter weather event. The Federal Aviation Administration Advisory Circular 150/5200-30D requires as follows: "If the runway pavement temperature is warm enough for snow to compact and bond, or if freezing rain is forecasted, approved anti-icing chemicals and/or heated sand should be applied prior to the start of precipitation or as soon as precipitation starts." Heated sand is not utilized at Sea-Tac Airport since it is less effective than deicer products, the sediment runoff impacts the performance of stormwater best management practices and requires a storage and warming facility. Deicer availability is critical during a winter weather event; therefore, the ability of contracted suppliers to provide timely delivery of deicer products when requested

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either before or during an active snow event prevents significant negative impacts to airport operations. If deicer is not available, snow and ice accumulation will lead to unsafe runway and roadway conditions due to accumulation, and an airport closure is likely.

DETAILS

For over 25 years, the Port of Seattle at Seattle-Tacoma International Airport has used liquid and solid runway and roadway deicing products manufactured by Cryotech Deicing Technologies when snow and ice control efforts are required. We currently have an approved contract (S-00317793) that has been in effect for over four years; however, the current agreement expires on November 7, 2018.

To provide safe operating surfaces, control chemicals must be applied to prevent snow and ice from bonding to our pavement surfaces, or to melt and break the bond of ice that has adhered to the surfaces. In order to accomplish these requirements, Aviation Maintenance stocks both liquid potassium acetate and solid sodium acetate snow and ice control chemicals at the airport.

Deicing chemicals have the potential to impact water quality as they degrade and wash off with stormwater runoff. To address this concern, the Port uses acetate-based deicing products which have a lower biochemical oxygen demand as it degrades in the environment than glycol-based fluids. In addition, over the past twenty years, Port Environmental has completed many studies demonstrating that Cryotech potassium acetate and sodium acetate products do not impact water quality. The study results have been reviewed and approved by the Department of Ecology.

The provider of the deicing chemicals must have a proven track record and is expected to remain or be in business for the foreseeable future. In addition, the provider must have the required infrastructure, have demonstrated their local production and storage capabilities, and have the capacities to meet delivery requirements of these mission-critical chemicals even during significant regional snow and ice events.

For the above environmental and operational reasons, we received a competition waiver for the procurement of the Cryotech deicer products E-36[®] liquid potassium acetate and NAAC[®] solid sodium acetate.

Scope of Work

This contract is for the purchase of liquid potassium acetate and granular deicer sodium acetate to support runway and roadway deicing operations located at Seattle-Tacoma International Airport. Liquid product shall be Potassium Acetate and must meet requirements of the Society for Automotive and Aerospace Engineers (SAE) Aerospace Material Specifications (AMS) 1435. Solid product shall be Sodium Acetate and must meet requirements of SAE AMS 1431.

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Schedule

The current contract expires in November 2018. We intend to secure a contractor no later than October 2018.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not execute a new long-term contract for deicer but purchase deicer as needed from multiple suppliers during a snow event.

Cost Implications: Pricing consistent with Alternative 2 below. Estimated contract amount \$2.2 million over five years.

Pros:

- (1) Flexibility to go with any company who has product available and best current price.

Cons:

- (1) Product quantity needed for a single event would exceed direct-buy purchase limits of \$50,000. A purchase of between \$50,000 and \$150,000 would require three quotes before issuing a purchase order. A purchase of over \$150,000 would require a formal bid, which would take longer. These processes take too long for such a critical operation. Performing individual purchases may result in a lower quantity of deicer that could be purchased within the \$2.2 million estimated cost.
- (2) Product quantity needed for a single snow event may exceed purchasing limits as outlined in the General Delegation of Authority. The Executive Director purchasing limit is not to exceed \$300,000.
- (3) Liquid deicing products from different companies may react unpredictably when mixed together in the same storage tanks. It is possible to create a transition plan to switch from one product to another, but it would be dangerous to frequently add different products to the same tanks.
- (4) Liquid deicing products outside of those already tested and approved from different companies may have different environmental impacts that are unknown to port staff. If we went with another product we would have to update our NPDES (National Pollutant Discharge Elimination System) Permit and get approval from the Washington Department of Ecology. This process could take a year and a half, cost over \$300,000 for testing, and may result in other corrective actions having to be implemented, or possibly, our request may be denied outright.
- (5) Vendors may not store sufficient quantities of product locally unless obligated by contract requirements. Needed quantity may not be available during an event, which is a great risk to airport operations.
- (6) Vendors would fill orders for customers who they have contracted obligations for before filling requisitions from the port.
- (7) The port would likely have to pay a premium for delivery charges.
- (8) Procuring deicer without a contract leads to variable and unpredictable cost per gallon.

This is not the recommended alternative.

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Alternative 2 – Authorization to execute a new contract for the purchase of liquid and solid deicer products for the airport.

Cost Implications: The contract to purchase liquid and solid deicer products for the airport is estimated to cost \$2.2 million in total over a five-year period. Over the past five seasons we have used 300,000 gallons of deicer, for an average usage of 60,000 gallons per year and an average cost of \$276,000 per year. Actual deicer usage is highly variable. In 2015 we used only 225 gallons of deicer. Since the product was already on hand, 2015 had \$0 procurement costs. In contrast, we used over 155,000 gallons of liquid deicer in 2017 at a cost of \$776,000. Total estimate of \$2.2 million is based on \$300,000 per year for five years plus a contingency in case any one of the years is equal to our recent single-year high.

Pros:

- (1) A new contract is the most reliable and effective method as it enables the port to set price points and service-level agreement and delivery terms. These items can be negotiated up front with suppliers and locked in for the duration of the contract:
 - (a) We can specify delivery terms and conditions, to ensure the deicer products are readily available to be transported during a heavy snow event.
 - (b) Contracted pricing protects the port from market fluctuations.
- (2) The contract may be able to specify the vendor's use of small businesses in their supply chain.
- (3) Contracting with a single company would not limit our ability to issue purchase orders to other companies if our need exceeded the vendor's capacity.

Cons:

- (1) May not be able to take advantage of price drops due to market conditions.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Annual expenditures under this contract will be incorporated into the Aviation Maintenance operating budget. For example, the proposed 2019 Aviation Maintenance baseline budget includes \$269,200 for deicing product. The funding source is the Airport Development Fund.

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

October 22, 2013 – The Commission authorized for the Chief Executive Officer to execute a five-year contract for the purchase of liquid and solid pavement deicing agents for use at Seattle-Tacoma International Airport for an estimated total amount of \$3,000,000.