

INTERNAL AUDIT REPORT

2015-05

Proximity Card Access Control System Follow-Up

Anchorage Water and Wastewater Utility

June 24, 2015

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Mayor Dan Sullivan

June 24, 2015

Honorable Mayor and Members of the Assembly:

I am pleased to present for your review **Internal Audit Report 2015-05; Proximity Card Access Control System Follow-Up; Anchorage Water and Wastewater Utility**. A brief summary of the report is presented below.

In accordance with the 2015 Audit Plan, we have completed a follow-up audit of Proximity Card Access Control System at the Anchorage Water and Wastewater Utility. The objective of this audit was to conduct a follow-up audit to determine the effectiveness of corrective actions taken by Anchorage Water and Wastewater Utility on the deficiencies contained in Internal Audit Report 2011-12. Specifically, we selected and reviewed both Anchorage Water and Wastewater Utility employees' and contractors' proximity card authorization forms and compared them to the card holder report generated by the Proximity Card Access System to determine if the cards were properly issued and managed in compliance with Policy and Procedure 25-1. We also reviewed whether Anchorage Water and Wastewater Utility had sufficient internal controls in place to prevent unauthorized use of the cards.

Based on our review, it is our opinion that management action taken in response to the 2011 audit report did not improve a majority of the issues identified. Our follow-up audit revealed that action taken by Anchorage Water and Wastewater Utility personnel was partially effective for 2 of 6 deficiencies and ineffective for 4 of 6 deficiencies. We found that further management action is still required. Specifically, access privileges programmed for each proximity card did not always agree with the approved authorization form and employee proximity cards were not always returned upon termination of employment. Also, proximity cards issued to contractors were not always returned when projects were completed. Moreover, there was a lack of supervisory and management oversight of the Card System and the proximity card Policy and Procedure could be improved. Finally, the proximity card authorization form was not always completed when cards were issued to Anchorage Water and Wastewater Utility employees and contractors.

There were six follow-up findings and one new finding in connection with this audit. Anchorage Water and Wastewater Utility was responsive to the findings and recommendations.

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Introduction. In 2011, we performed an audit of the Anchorage Water and Wastewater Utility's (AWWU) Proximity Card Access Control System (Card System) and issued Internal Audit Report 2011-12 dated September 26, 2011. To assess the effectiveness of corrective action, we have performed a follow-up audit. This report contains the result of our follow-up audit.

Anchorage Water and Wastewater Utility uses a Card System called "Diamond II." This Card System permits a person to enter a facility by placing a plastic card near an electronic card reader. Each card can be programmed to allow a user to enter or exit selected facilities at specific dates and times. AWWU implemented this Card System in all major facilities.

According to AWWU management, the Card System is a replacement for the traditional key entry system. It was implemented because, unlike the traditional key entry system, it can easily accommodate lost, damaged, or stolen proximity cards. AWWU's Policy and Procedure (P&P) 25-1, *Photo Identification/Proximity Cards*, governs the use of this Card System.

Objective and Scope. The objective of this audit was to conduct a follow-up audit to determine the effectiveness of corrective actions taken by AWWU on the deficiencies contained in Internal Audit Report 2011-12. Specifically, we selected and reviewed both AWWU employees' and contractors' proximity card authorization forms and compared them to the card holder report generated by the Card System to determine if the cards were properly issued and managed in compliance with P&P 25-1. We also reviewed whether AWWU had sufficient internal controls in place to prevent unauthorized use of the cards.

The audit was conducted in accordance with generally accepted government auditing standards, except for the requirement of an external quality control review, and accordingly, included tests of accounting records and such other auditing procedures as we considered necessary in the circumstances. The audit was performed during the period of February 2015 through April 2015. The audit was requested by the Assembly.

Overall Evaluation. Management action taken in response to the 2011 audit report did not improve a majority of the issues identified. Our follow-up audit revealed that action taken by AWWU personnel was partially effective for 2 of 6 deficiencies and ineffective for 4 of 6 deficiencies. We found that further management action is still required. Specifically, access privileges programmed for each proximity card did not always agree with the approved authorization form and employee proximity cards were not always returned upon termination of employment. Also, proximity cards issued to contractors were not always returned when projects were completed. Moreover, there was a lack of supervisory and management oversight of the Card System and the proximity card P&P could be improved. Finally, the proximity card authorization form was not always completed when cards were issued to AWWU employees and contractors.

AUDIT FINDINGS FOLLOW-UP

1. Prior Finding: Access Privileges Did Not Match Approved Authorization Form.

- a. **Corrective Action.** Access privileges programmed for each proximity card still did not always agree with the approved authorization forms. However, unlike our previous audit we did find that the proper number of authorized cards was issued and card holder names matched approved authorization forms. Specifically, we found the following;

- ***Facility Access Privilege Did Not Always Match*** - Cards for 18 of 32 AWWU employees and 2 of 6 contractors were programmed with different

facility access privileges than were authorized. For example, one employee's card permitted access to the Eklutna Water Treatment Facility. However, the access form only approved access to the Asplund Wastewater Treatment Facility. In another case, an employee's card permitted access to the front gates and main buildings at the Eklutna Water Treatment Facility, the Ship Creek Treatment Facility, the Asplund Wastewater Treatment Facility, and the Eagle River Wastewater Treatment Facility. However, the authorized access form only approved access to the Headquarters Building and the King Street Maintenance Facility.

- ***Card Expiration Dates Did Not Always Match*** - Card expiration dates in the Card System did not always match what was approved on the proximity card authorization forms. Specifically, 5 of 14 authorization forms for contractors contained expiration dates that did not match the Card System. For example, the cards for one contractor had an expiration date of October 1, 2029. However, the approved authorization forms had an expiration date of October 1, 2009.
- ***Card Expiration Dates Not Specified*** - The card expiration date was not specified on the proximity card authorization forms for 8 of 14 contractors. Thus, Information Technology (IT) staff issued the cards with a default expiration date of 20 years from the issue date. As a result, contractors had access to AWWU facilities after their contract with AWWU had been completed.
- ***Access to Restricted Area Given Without Proper Authorization*** - A proximity card was issued with access privileges to a restricted area without proper authorization. Specifically, one employee's card permitted full access

to the Asplund Wastewater Treatment Facility including a chlorine storage area. However, the access form only approved access to the Asplund Wastewater Treatment Facility's front gate and main building.

- b. **Evaluation of Corrective Action.** Partially effective. Although AWWU addressed some elements of the previous audit finding, the finding was not fully corrected.

- c. **Recommendation.** The AWWU General Manager should require IT staff to program proximity cards only as specified by the approved proximity card authorization form. In addition, the AWWU General Manager should require that all previously issued proximity cards are reviewed to ensure that they have been programmed as specified by the approved proximity card authorization form.

- d. **Management Comments.** Management stated, "Management concurs with this finding. The AWWU I.T. Division will conduct a full audit of all cards to identify all differences, and go through an exercise to re-solicit forms and signatures in cases where access does not match. In order to facilitate accuracy going forward, AWWU will redesign the Prox Card Access form and groups in the Diamond II system to align with each other. This will make it easier for staff to consistently apply the same access to every card. This is a potentially large effort, and will take several months to complete. A redesigned form and fully audited data set is targeted to be complete 12/31/2015. Going forward, the I.T. Division will maintain a current and accurate list of employees and contractors holding access cards, locations accessible to each cardholder through the prox card system, and termination dates for card deactivation, as applicable."

- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

2. **Prior Finding: Employee Cards Not Always Returned.**

- a. **Corrective Action.** We were unable to determine whether employee proximity cards were returned when employment terminated. AWWU P&P 25-1 states that “Supervisor/Project Manger: . . . Secure photo identification/proximity cards from employees and contractors upon termination of employment or contract. Forward cards to the Help Desk/IT Division for deactivation.” Although the Municipality’s employee termination check list included the return of identification cards, supervisors appeared confused regarding what to do with collected the cards. In addition, there was no record indicating that employee proximity cards were forwarded to IT staff. According to IT staff, the cards are still not being returned.
- b. **Evaluation of Corrective Action.** Not effective.
- c. **Recommendation.** The AWWU General Manager should remind all AWWU employees of the requirements found in AWWU P&P 25-1.
- d. **Management Comments.** Management stated, “Management concurs with this finding. As part of the employee termination process, it is the supervisor’s responsibility to collect the proximity card. This will be made clear through P&P and communicated clearly to supervisors through the P&P update process, as well as the employee termination workflow. There may be instances where an employee is terminated and refuses or is unable to furnish their card. In these events, the employee card will be deactivated and the fact that the card was not recovered will be documented. Destruction of Employee Cards by AWWU IT staff will be documented as well, indicating employee id, name, and date destroyed.”

- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

3. **Prior Finding: Employee Cards Not Always Deactivated.**

- a. **Corrective Action.** Employee proximity cards were not always deactivated when employment terminated. Specifically, 4 of 24 terminated employees' cards we reviewed were still active. AWWU P&P 25-1 states that the division is to deactivate proximity card access upon verbal or written notification from employee supervisor or division director.
- b. **Evaluation of Corrective Action.** Not effective.
- c. **Recommendation.** The AWWU General Manager should require that proximity cards for all terminated employees be deactivated.
- d. **Management Comments.** Management stated, "Management concurs with this finding. A workflow will be established between AWWU Finance Division Payroll section and the AWWU I.T. Help Desk. This workflow will have AWWU Payroll notify I.T. of all employee terminations and termination dates. This will trigger a workflow in I.T. to deactivate the employee card at the end of the employees shift, on the termination date of the employee. This workflow will encompass all terminations at the utility, and thus ensure that all employees terminated have their prox cards deactivated."
- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

4. **Prior Finding: Contractor Cards Not Always Returned.**

- a. **Corrective Action.** Proximity cards issued to contractors were still not always returned when projects were completed. AWWU P&P 25-1 requires project managers to secure photo identification/proximity cards from employees and contractors upon termination of employment or contract and forward cards to IT staff for deactivation. According to AWWU project managers and IT staff, contractors were not asked to return their cards upon termination. However, we found some cards were still active even though the contractors were no longer working at AWWU.
- b. **Evaluation of Corrective Action.** Not effective.
- c. **Recommendation.** The AWWU General Manager should require that proximity cards for all contracts no longer working for AWWU be returned and deactivated.
- d. **Management Comments.** Management stated, “Management concurs with this finding. The AWWU employee assigned with the responsibility of managing the contractor will be responsible for collecting contractor cards upon the termination of the contracted work, or period. This will be reflected in P&P 25-1 and communicated to all AWWU project managers and contract overseers when the proximity cards are issued to them. Contractors receiving cards will be accountable for the actions of contractor employees receiving cards, including return of the card upon termination of employment or the contract.”
- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

5. **Prior Finding: Card System Management Could Be Strengthened.**

- a. **Corrective Action.** Management oversight of the Card System needs improvement. Our review revealed that there was still a lack of supervisory and management oversight of the Card System. Although AWWU P&P 25-1 identified individual responsibilities of the employee, supervisor/project manager, and Director, the P&P still did not clarify who was responsible for administering the Card System. We found no evidence that basic management information had been generated or requested by management. Consequently, we found no reports were produced indicating the number of active cards, the number of cards issued to employees and contractors, who had access to restricted areas, who tried to enter restricted areas but was denied, and who had terminated employment but still had an active card.
- b. **Evaluation of Corrective Action.** Not effective.
- c. **Recommendation.** The AWWU General Manager should assign management responsibility for the Card System.
- d. **Management Comments.** Management stated, "Management concurs with this finding, and has assigned oversight responsibility of the prox card system to the AWWU I.T. Division Director. The I.T. Division will report quarterly to the General Manager on additions, terminations, and changes regarding employee and contractor prox card access to AWWU facilities, including attempts at unauthorized use. The initial quarterly report for the 2nd Quarter, 2015, will be due in July 2015."
- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

6. **Prior Finding: Lack of Comprehensive Policy and Procedure.**

- a. **Corrective Action Finding.** The P&P for proximity cards needs improvement. Specifically, AWWU P&P 25-1 was last updated in 2011. Although the 2011 update did address deficiencies identified in our Internal Audit Report 2011-12, the P&P was misplaced and not distributed to AWWU employees. Further, AWWU's organizational structure has changed and the Card System has been implemented at other AWWU facilities. For example, AWWU's Employee Services Division no longer exists. However, the P&P states that "Employee Services and the IT Division will review this document each August for any needed revisions." In addition, the current P&P states that "Girdwood Wastewater Treatment Facility is excluded from Proximity Card access requirements until a new security system is installed." However, the Card System was installed at the Girdwood facility in 2014.
- b. **Evaluation of Corrective Action.** Partially effective.
- c. **Recommendation.** The AWWU General Manager should revise and implement P&P 25-1 to clarify the use of proximity cards.
- d. **Management Comments.** Management stated, "Management concurs with this finding. The I.T. Director is tasked with coordinating a review and update of the Utility's policy and procedures document, (P&P 25-1) *Photo Identification/Proximity Cards*. The I.T. Division will present proposed changes for concurrence of the AWWU Executive Leadership Team before August, 2015, and will be responsible to review this P&P document each August thereafter for any needed revisions. All facilities accessible via Prox Card will be included in the documentation, including the Girdwood Wastewater Treatment Facility."

- e. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

NEW FINDING AND RECOMMENDATION

1. **Proximity Card Authorization Forms Not Always Used.**

- a. **Finding.** The proximity card authorization form was not always completed when cards were issued to AWWU employees and contractors. These forms show what access was requested, the duration of the access for contractors, and access approval. Specifically, a proximity card authorization form did not exist for 9 of 32 current employees and for 61 cards issued to eight different contractors. For example, one contractor was issued 51 proximity cards. However, we were not able to locate the proximity card authorization forms for any of these cards. In another case, an employee reported his card was lost. His lost card was deactivated and a new card was issued on February 11, 2011. However, there was no evidence that a new proximity card authorization form was completed for the replacement card. AWWU P&P 25-1 requires that a new Proximity Card Authorization Form must be completed and submitted to replace lost or stolen cards.
- b. **Recommendation.** The AWWU General Manager should ensure that the Proximity Card Authorization Form is completed for all past, current, and future proximity cards.
- c. **Management Comments.** Management stated, "Management concurs with this finding. Revisions to P&P 25-1 *Photo Identification/Proximity Card* will address issuance of replacement cards to employees and/or contractors. The workflow documented in the revised P&P will prescribe responsibilities for receipt, compilation, and maintenance of the Proximity Card Authorization form. The

Proximity Card Authorization Form will be revised to indicate a new request, a change, a replacement, an extension, etc.”

- d. **Evaluation of Management Comments.** Management comments were responsive to the audit finding and recommendation.

Discussion With Responsible Officials. The results of this audit were discussed with appropriate Municipal officials on May 18, 2015.

Audit Staff:
Scott Lee