8/28/17 12:56 PM

**Alberta Air Non Systemic Corrective Action
Report AIR NSC-00085**

Alberta Air

Missed Canister Event at PRAMP Reno Station

Maxxam Analytics
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Non Systemic Corrective Action Report	
Non Systemic Corrective Action Report (NSC) Status	
Current Status	**Closure Approval Requested**
Creation Date	August 11, 2017 **Date of Last Modification** August 28, 2017
☐ **Effectiveness Review Requested Date**	August 28, 2017
Requester Information	
Requester	Chinenye Ewelike
Responsibility	
Allowance	Ambient Air Quality Assurance
Responsibility Model	Expediter-by-Name from Expediter Candidacy
Process Type	Acceptance-by-Expediter
Expediter	Cheri Sinclair
Categorization	
National Accounts	non-National
Alberta Air Departments	Air Services Ambient
Report Re-issues	Expediter to Complete No

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Client Information	
Company Name	PRAMP
Client External Email Address	pramptech@gmail.com
How Contacted	Client was contacted by phone and email
Date Contacted	8/11/17
Client Contact Name	Lily Lin

Priority and Schedule	
Priority Code	Medium
Action Request Due Date	September 1, 2017

Problem Description	
Direct Cause - (to be completed by the expediter)	Compromised Sample
Maxxam Job Number or	

Sample Number (If Applicable)	JOB #: 196-2017-07-93-C
NSC – Descriptions	A Non methane hydrocarbon canister event was not identified during daily station review on July 21, 2017. The canister was not collected and exchanged following the event. As this error was not discovered until August 9th, the sample integrity was compromised and delivered to the sub-contracting lab after the recommended hold time.
Client Project ID Number	RENO Ambient Air Monitoring Station

1.0 Additional Information and Attachments

Please enter or attach any additional information that will assist the expediter (e.g. e-mails, reports, etc.)

- **August 9, 2017**: Operations discovered a canister event from July 21 was not identified during daily station review (1_RENO canister issue missed on July 21.pdf).
- **August 11, 2017**: after investigating the miss, the client was contacted. At this time, the client requested that the canister still be sent for analysis. Customer service confirmed the canister was collected and received the chain of custody that was prepared for the canister (2_RE_ RENO canister issue missed on July 21.pdf & 3_Reno canister 0721.pdf).
- **August 11, 2017**: following the phone conversation, the client sent an email requesting details surrounding the event, with a deadline of August 14 @ 12:00 (4_request for the missed canister event.pdf).
- **August 14, 2017**: in the interest of meeting the client's deadline, a brief summary was provided to the client. Maxxam indicated elaboration would be provided during the monthly PRAMP committee meeting, scheduled for August 15 (5_RE_ request for the missed canister event.pdf).
- **August 14, 2017**: the client expressed disappointment in the initial response and escalated the issue to the Director (6_Re_ request for the missed canister event.pdf).
- **August 14, 2017**: the Director replied back to the client with a detailed response and suggested corrective actions (7_RE_ request for the missed canister event.pdf).
- **August 15, 2017**: the client replied back acknowledging the proposed corrective actions and suggested two more additions. The Operations Supervisor fielded the questions and informed the client the hold time for the canister was indeed past due to delayed shipping (8_RE_ request for the missed canister event.pdf).

📄 1_RENO canister issue missed on July 21

📄 2_RE_ RENO canister issue missed on July 21

📄 3_Reno canister 0721

📄 4_request for the missed canister event

📄 5_RE_ request for the missed canister event

📄 6_Re_ request for the missed canister event

📄 7_RE_ request for the missed canister event

📄 8_RE_ request for the missed canister event

2.0 NSC Investigation

Please describe all the steps/actions taken in determining the cause of the nonconformance (e.g. Review instrument calibration, raw data, QC results, preparation process etc.) COR FCD-00241 can be used as a guidance document only to assist expediters in the investigation process.

On August 9th, while completing the August monthly calibrations, the field technician noticed the pressure on the collection canister was 0, indicating a sample had been taken. Upon further investigation he discovered there was a sample collected on July 21st that was missed. He stated in his email that he would bring the canister back to Edmonton on August 11. Normally, we would send the canisters directly to the lab for analysis; however, not knowing the hold times, he thought the sample was already compromised. During the investigation, it was discovered that the max NMHC for that day was 1 data point and was over looked in the daily data review.

Current Daily Review Process:

The current daily data review process with respect to hydrocarbon alarms and canister triggers involves 3 different elements:

1.   Manual data review each morning with the review being performed by a member of our Ambient Air team. This review involves looking at the previous day of data for all stations that are polled from EDAS and scan for any anomalies/max values that are higher than their exceedance level, etc., with a review of the zero and span values that are polled as well. There are criteria

that these values need to fall within otherwise they are flagged in our daily log and delegated for troubleshooting.
2.   Automatic alarm notifications generated by EDAS and DRDAS based on trigger criteria values, with each system generating automatic emails that are sent to various members of our Ambient Air and Customer Service teams.
3.   Automatic alarm notifications generated by SiteAnalyst based on trigger criteria values, with SiteAnalyst generating automatic emails that are sent to the same Ambient and CS team members.

In this case the manual data review failed to capture the canister trigger as it was a single data point which unfortunately was missed in the larger data set. Typically the automatic alarm notification emails provide an extremely valuable tool to identify these events, however all three systems failed to generate an email for this event (SiteAnalyst, DRDAS, EDAS). As SiteAnalyst is an external system to Maxxam, we have asked them to review this event to determine why the system failed to send the notification, we have yet to receive feedback so we do not have a corrective action for SiteAnalyst at this time.

In the case of DRDAS and EDAS failing to send emails, we now understand why that occurred. Recently Maxxam's IT group initiated a new server security protocol that was required by our parent company Bureau Veritas. An unintended consequence of this new security protocol is that it eliminated the ability of DRDAS and EDAS to send out any emails. We were not aware that either system could no longer send emails until we realized this event has occurred and investigated why we did not receive any notification emails. Over the last week my team escalated this issue to our local IT group for a resolution but were unable to receive the results expected, I have now escalated this issue to our corporate IT group as this has significant impact on all our ambient stations as we have lost all automatic alarm notifications from DRDAS and EDAS for the time being. I will be working diligently with our IT team to try and find a solution to this issue as quickly as possible so that we can restore all alarm functions for DRDAS and EDAS.

3.0 NSC Action Taken	◉ ◻

Please describe all the steps taken to prevent recurrence (e.g. SOPs update, training provided)and any follow-up needed
1. **Restore the ability of DRDAS and EDAS to send alarm notification emails**: This functionality was restored as of August 17, 2017 (9_RE_ Dr Das send alerts repair - can't be done right now.pdf).
2. **Weekly Station Review**: three seats for access to DRDAS have been purchased. Supervisors and senior technicians, from both Customer Service and Operations, will define what a station review should comprise of in order to standardize the review and escalation process. This is a new workflow and procedure and will require training and procedural changes. As of August 9th, the first draft of data flags was proposed but the process is still in early infancy. However, Maxxam is in the process of hiring a new member for the Operation's team. The implementation of weekly station review and transition to DRDAS will be a main objective in the position profile.
3. **DRDAS Tools**: Customer Service Supervisor implemented three new DRDAS tools to assist with automated data screening --> Dynamic Network Map (10_Dynamic Network Map_Data Screening Tool 1.pdf), AAAQO Exceedance Groups (11_AAAQO Exceedance Groups_Data Screening Tool 2.pdf) and Dynamic Alerts/Log book (12_Dynamic Alerts_Log Book_Data Screening Tool 3.pdf).
4. **Dynamic NMHC Canister Event Tool**: A previous tool, that was in use with a single user, was set-up with other members of the Customer Service team --> Dynamic NMHC Canister Events (13_FW_ RENO 2016 NMHC Canister Events.pdf).
5. **Data Deliverables**: Maxxam will also send 5-minute data reports with the daily and weekly deliveries. This was implemented on August 16, 2017 (14_PRAMP_ Daily_Report_20170815.pdf).
6. **Add PRAMP PM Email for Alert Notifications**: this was configured on August 25.
7. **Site Analyst**: Maxxam's senior technician will continue to work with Site Analyst to restore functionality.
8. **NSC Delivery to PRAMP**: Maxxam will provide a copy of this investigation/NSC to PRAMP on August 28.
9. **Meeting with PRAMP on August 31**: Maxxam and PRAMP representatives will meet to review and evaluate the proposed corrective actions.

📄 9_RE_ Dr Das send alerts repair - can't be done right now

📄 10_Dynamic Network Map_Data Screening Tool 1

📄 11_AAAQO Exceedance Groups_Data Screening Tool 2

📄 12_Dynamic Alerts_Log Book_Data Screening Tool 3
📄 13_FW_ RENO 2016 NMHC Canister Events
📄 14_PRAMP_ Daily_Report_20170815

Effectiveness Review

Nothing to show.

Associated Items

Notification List

Notification Recipients	Adewunmi Adekanmbi Cheri Sinclair Christopher Wesson Limin Li Maram Ghaleb Michael Espiritu Nazek Al-Hadi Pantea Niksirat Shawn Miner Trina Whitsitt

Approval Status Table

Approver Source	**Role for Approvers**		**Parallel-Everybody**	Segment

Next Backup Deadline: Sep 1, 2017; Next Escalation Deadline: Sep 7, 2017

Approver	**Action**	**Date**	**Comment**
Pantea Niksirat	Pending		
Shawn Miner	Approve	August 28, 2017 10:56 AM GMT-6	

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