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WBEA – Standard Operating Procedure			
SOP Title		On Call	
SOP Number		WBEA-OPS-001	
Author		Zach Eastman	
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1	March 31, 2013	First Draft	Zach Eastman



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Introduction and Background

This SOP highlights the requirements and expectations placed upon the person On-Call for AATC during weekends and Holidays.

WBEA's goal is to provide air quality data 24 hours a day 365 days a year. The Alberta Government, through the Air Monitoring Directive, 1989 - AMD 2006 require that the monthly operational time for all criteria parameters be above 90%.


In light of this, an on-call system has been established to ensure network coverage during weekends and holidays. This on-call system is meant to provide emergency response in order to maintain network operational time of greater than 90%.

It is the responsibility of the person on-call to minimize down time by monitoring data, reporting issues and responding to these issues in a timely, safe and efficient manner as outlined in WBEA standard operating procedures.

Be familiar with all Policies, Standard Operating Procedures and Safety Protocols.

On Call Expectations and Requirements

- The person on-call is responsible for completing system checks in MDS, reporting observations in Docit and is expected to respond to emergencies in order to resolve issues that contribute to down time and data invalidation.
- The person on-call should be capable of performing routine checks, maintenance, troubleshooting and repairs as well as have entry access to all sites WBEA operates.
NOTE: consult the "Definitions" section for clarification on down time and data invalidation.
- The person on-call is expected to check data at least once per day following the schedule below:
 - Fridays -Typically the on-call person has been working until 17:00, therefore one system check between 18:00 and 20:00 is adequate to identify issues that may need resolution Saturday morning.
 - Saturdays, Sundays, and Holidays – A system check between 8:00 and 9:00 is required to identify issues of high priority. Another brief system check between 17:00 and 20:00 could be performed to identify any issues that may need to be addressed first thing the next morning.

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- *NOTE: Unless an issue is noticed nothing is required to be reported in Docit for the evening system check.*


- The person on-call is expected to respond to an emergency as soon as possible within the reasonable call-out hours of 8:00AM to 6:00PM. These hours may change due to seasonal conditions, road conditions and safety concerns.
- The person on-call must remain in the municipality while on-call.
- The person on-call must be able to respond to an on-call emergency during reasonable working hours, as such the consumption of alcohol and or the use of substances that impede this duty is prohibited. For further clarification consult the *WBEA drug and alcohol policy*.
- The person on-call must have their WBEA cell phone with them at all times and be able to receive phone calls.
- Issues with AMS 08 (Fort Chipewyan) will not normally require a field visit to address issues over the weekend. Any issues observed with AMS 08 over the weekend should be communicated to the supervisor either at the time of discovery, or first thing Monday morning.
- Issues with the MAML and AMS 101 (portable) will be dealt with on a case by case basis. Always consult with senior field techs before addressing issues with these stations.
- Refer to Table 1.0 for some common issues observed during on call shifts and priority response levels related to these issues.
- **IMPORTANT: Issues that are not causing down time or data invalidation are not to be handled during on-call hours. Always consult with senior field staff before heading out in the field to address an issue. Maintenance can often wait until regular working hours. The person on call is responsible for emergency response only.**

Turnover Requirements

If issues are identified throughout the on-call period, these issues need to be communicated to the network supervisor to ensure the issues are addressed. The network supervisor will then assign the appropriate staff to address the issues identified. Details of the issues will have been captured and documented during the Daily Systems Checks completed by the on-call technician.

Safety

Although the person on-call is responsible for minimizing down time this is not to be done in an un-safe manner. Adhere to all safety procedures in the *WBEA safety manual*.

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Driving is often the most dangerous aspect of on-call field work. Driving conditions in the Wood Buffalo region can change suddenly, especially during late fall, winter and early spring. Pay close attention to the forecast. **If conditions are dangerous do not head out.** Safety is always the primary concern. Always have your phone on your person as well as station and vehicle keys. Keeping these items on you ensures you always have access to them no matter where you are and contact someone for help if needed.

The person on-call is most likely working alone. The person on call must notify senior field staff when they are heading out, expected time of return and notify senior field staff when they return to the shop. Periodically check in with senior field staff during the day as to the progress being made and ensure that any change of plans or scope of work is communicated to senior field staff prior to implementing these changes. Always consult and follow all working alone procedures in the WBEA safety manual.

Table 1.0 - Priority Levels for Common Issues Observed While On-Call

TABLE 1.0

Observation	Priority	Possible Issues Observed in the Past	Call Out Response
Instrument flat line and or irregular baseline shift.	<u>Very High Priority</u>	<ul style="list-style-type: none"> - Pump failure - Carrier gas depleted - Hydrogen depleted - Zero air unit malfunction - Power failure - Data capture failure - Data logger failure - MET sensor failure (bearings, frozen...) - Other 	1. Check available remote RTMC's and diagnostics. 2. Contact a senior tech and discuss to decide if a field visit is warranted.
No data on MDS	<u>Very High Priority</u>	<ul style="list-style-type: none"> - Data acquisition (campbells) failure - Power failure - Data base / network issue 	1. Check available remote RTMC's and diagnostics. 2. Contact a senior tech and discuss to decide if a field visit is warranted.
Daily zero / Span did not occur but data is still being received.	<u>High Priority.</u>	<ul style="list-style-type: none"> - Pump failure - Carrier gas depleted - Hydrogen depleted - Span gas depleted - Zero air unit malfunction - Brief Power failure 	1. Check available remote RTMC's and diagnostics. 2. Contact a senior tech and discuss to decide if a field visit is warranted.


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		<ul style="list-style-type: none"> - Calibrator down - Connection issue (wiring) - Cal line rupture Other 	
Exceptionally Low or High daily span, (+/- 10% of expected response).	High Priority	<ul style="list-style-type: none"> - Pump failure - Zero air malfunction - Calibrator malfunction - Other 	<ol style="list-style-type: none"> 1. Check available remote RTMC's and diagnostics. 2. Contact a senior tech and discuss to decide if a field visit is warranted.
Station temperature – 18 or + 28 Deg C	High Priority	<ul style="list-style-type: none"> - Thermostat / heater settings need adjusting - AC unit failure - Power failure 	<ol style="list-style-type: none"> 1. Check available remote RTMC's and diagnostics. 2. Contact a senior tech 3. Head to station immediately with the required supplies to complete the job. 4. If a thermostat / heater setting issue, adjust settings. Sometimes adding a space heater to older stations such as AMS 05 is necessary in the winter months due to extreme cold. Issues outside of thermostat / heater settings usually require the services of HVAC technicians.
Issues not contributing to down time, data invalidation or data loss such as slight baseline shifts	Low Priority	<ul style="list-style-type: none"> - Normal instrument drift - Inefficient pump - Other 	Issue can wait until Monday or earliest return to FOC. On-call technician to communicate the issue to network supervisor.

Definitions

Down time is any period in which continuous air monitoring data is not being collected or the data which is being collected is suspect and may be invalidated by the QA/QC process. Time while systems

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are in daily zero and span mode, and when monthly multipoint calibrations is not considered downtime. These periods are considered operational time as the tasks are required for normal system operation.

Data Invalidation Data will not be formally invalidated until it goes through the monthly QA/QC and data validation process. Indicators are used to assess system performance and may cause data to be invalid. There are obvious indicators that the data from the system is invalid. Below are lists of some common indicators:

Obvious Downtime

- Analyzer is off
- No flow through the analyzer
- Any analyzer with a converter that is not functional
- Power down at a station

Common Indicators

- Daily spans outside the 10% limit
- Drift in baseline
- Excessive signal noise
- Slow response time for span