Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

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REMOTE MONITORING FOR ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE

Operating as Part of a Permanent Solution, Temporary Solution or Remedy Operation Status

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Q: What is an Active Exposure Pathway Mitigation Measure for the vapor intrusion pathway?

A: An Active Exposure Pathway Mitigation Measure (AEPMM) for vapor intrusion is a remedial action that eliminates or reduces the exposure of human receptors to oil or hazardous material in indoor air at a disposal site through the continual or periodic use of a mechanical or electro-mechanical device. The most common AEPMM is an active sub-slab depressurization system which is used to mitigate vapor intrusion occurring at an occupied building. A sub-slab depressurization system typically consists of piping installed beneath a building's footprint that is connected to a fan/blower and is similar in design to a radon mitigation system. Contaminated vapors are captured by the system eliminating or reducing entry of these vapors into the occupied spaces of the building.

Q: When is remote monitoring (A.K.A remote telemetry) required for an Active Exposure Pathway Mitigation Measure?

A: AEPMMs that are part of a Permanent Solution, Temporary Solution or Remedy Operation Status require the use of remote monitoring technology to provide immediate notification to both MassDEP and the owner and operator of the building protected by the AEPMM upon failure of the AEPMM, as the result of loss of power, mechanical failure or other significant disruption of the effectiveness of the system (pursuant to 310 CMR 40.1025(3)(d) and 40.1026(3)(d), respectively). Such remote monitoring technology must also be capable of providing immediate notification to MassDEP when the AEPMM has resumed operation after a shutdown.

Remote monitoring is *not required* for AEPMMs operating as part of other types of MCP response actions (e.g., IRAs, RAMs, Phase IV), but it *may be used*.

Q: How do I set up the remote monitoring technology to notify MassDEP upon shutdown and restart of an AEPMM?

A: Remote telemetry units must be properly registered with MassDEP. Registering a telemetry device consists of a two-step process. The first step is to complete the online Initial Device Registration form found at http://www.mass.gov/eea/agencies/massdep/cleanup/regulations/remote-telemetry-information.html. After completing the online form MassDEP will contact you within 5 business days to arrange to conduct a system

shutdown and restart communication test. After conducting the shutdown and restart communication test MassDEP will contact you and either:

1. inform you that the test was successful and the registration process is complete or
2. request the notification format to be modified and then conduct another communication test.

Q: What are the notification format requirements?

A: Telemetry units must be able to communicate via **email (or text to email)**. Shutdown and restart notifications must be sent to AEPMM.BWSC@state.ma.us. Telemetry units must be able to communicate in the CSV (comma separated values) format and as close to the sequence specified below as possible, **with each value enclosed in quotes**.

> Site RTN, Device Number (01, 02, etc.), Event Description (Shutdown, Restart), Event Date: YYYYMMDD, Event Time: HH:MM (24 hour format).

For example, a notification of a shutdown of device number 01 belonging to RTN 1-12345 that occurred at 7:25 PM on June 20, 2015 would look like:

> "1-0012345","01","shutdown","20150620","19:25"

IF the device ***is not capable*** of reporting in this exact sequence, then, at a minimum, it must relay *ALL* of the required information requested above. It is crucial that the data, regardless of order in which it is presented, be enclosed in quotation marks ***and*** be transmitted in a single text block message (not transmitted in separate emails). If the date format cannot be presented as YYYYMMDD, then the format in which the date is delivered must be the same *EVERY TIME* a message is sent. If the 24 hour time format cannot be met, then the device must differentiate between day and night (AM and PM).

Q: Are there remote telemetry units that meet MassDEP's format requirements?

A: MassDEP does not recommend any specific telemetry unit. However, the telemetry manufacturers listed below make a product that is capable of meeting the MassDEP format requirements. PRPs/LSPs are welcome to use other telemetry units not contained on this list as long as the telemetry unit can meet the notification format requirements described above.

- Banner Engineering
- Integrasense
- ioBridge
- ISODAQ Technology
- Mission Communications
- VaporTrac

Q: Are there other notifications requirements when an AEPMM shutdown occurs?

A: The requirements for AEPMMs as part of a Permanent Solution, and Temporary Solution or ROS are contained in 310 CMR 40.1025 and 310 CMR 40.1026. In addition to the notifications provided via the remote telemetry device, if suspension or failure of an AEPMM system lasts 30 consecutive days, the owner of the property where the AEPMM is located must notify both the Department and any non-transient occupants of the building protected by the AEPMM who may have experienced exposure to oil and/or hazardous material as the result of the system suspension or failure on the 30th day from the start of the suspension or failure period (310 CMR 40.1025(6) and 310 CMR 40.1026(4)).