

7010.07

Atmospheric Monitoring at Puna Geothermal Venture Incidents Standard Operating Guide



This procedure is for internal use only and does not enlarge an employee's civil liability in any way. The procedure should not be construed as creating a higher duty of care, in an evidentiary sense, with respect to third party civil claims against employees. A violation of this procedure, if proven, can only form the basis of a complaint by this department for non-judicial administrative action in accordance with the laws governing employee discipline.

Related Policies: Chief's Memo 2015-070, Operating Guidelines for Atmospheric Monitoring at Puna Geothermal Venture Incidents.

Applicable HI Statutes:

I. PURPOSE

This guideline is intended to provide for consistent initial application of atmospheric monitoring around the perimeter of the Puna Geothermal Venture (PGV). This is only a guideline and should not be perceived as a rigid policy of the Hawai'i Fire Department. These guidelines is to provide for uniform application of air monitoring equipment (i.e. Area Rae, MultiRae etc.) by all County of Hawai'i Fire Department Hazardous Materials Response Teams during initial response to emergency incidents involving a chemical release at PGV.

II. SCOPE

These guidelines specifically refers to Hazardous Materials Response Team (HMRT) Company 4, utilizing a Rapid Deployment Kit (RDK) for quantitative atmospheric monitoring of Hydrogen Sulfide (H₂S) gas during an emergency call out to the PGV facility and/or the surrounding community areas. However, it may also pertain to HMRT Company 21 in the event that HM4 is not available..

III. GUIDELINES

Deployment of the RDK system shall be initiated after verification of the presence of H₂S gas in the atmosphere during an emergency call out to the general area of PGV

The Incident Command Post (ICP) shall be located in the open field NW of the facility "guard shack" along the main entrance road. Facility representatives may be directed to co-locate in this area. The RDK system shall be deployed from the ICP to the pre-designated locations dependent on the current prevailing wind pattern during the initial response phase.

Temporary "fixed" monitoring sites shall be set-up along the perimeter of PGV on the most significantly impacted aspect areas. These areas have been pre-determined through historical wind patterns and down range exposures and are limited to the resource capability of the RDK system. Wireless link range between the "host" (lap top computer) and air monitoring "unit" (AreaRae) is affected by distance, topography, landscape, and outside RF interference.

All readings of H₂S shall be quantified utilizing a time weighted average of a minimum of 10 minutes to ensure accuracy and minimize false positive readings. All positive readings shall also be verified by a 2nd air monitor of equivalent capability (Multi-Rae or QRae).

Additional "roving patrol" air monitoring shall be done as needed and/or determined by perimeter findings.



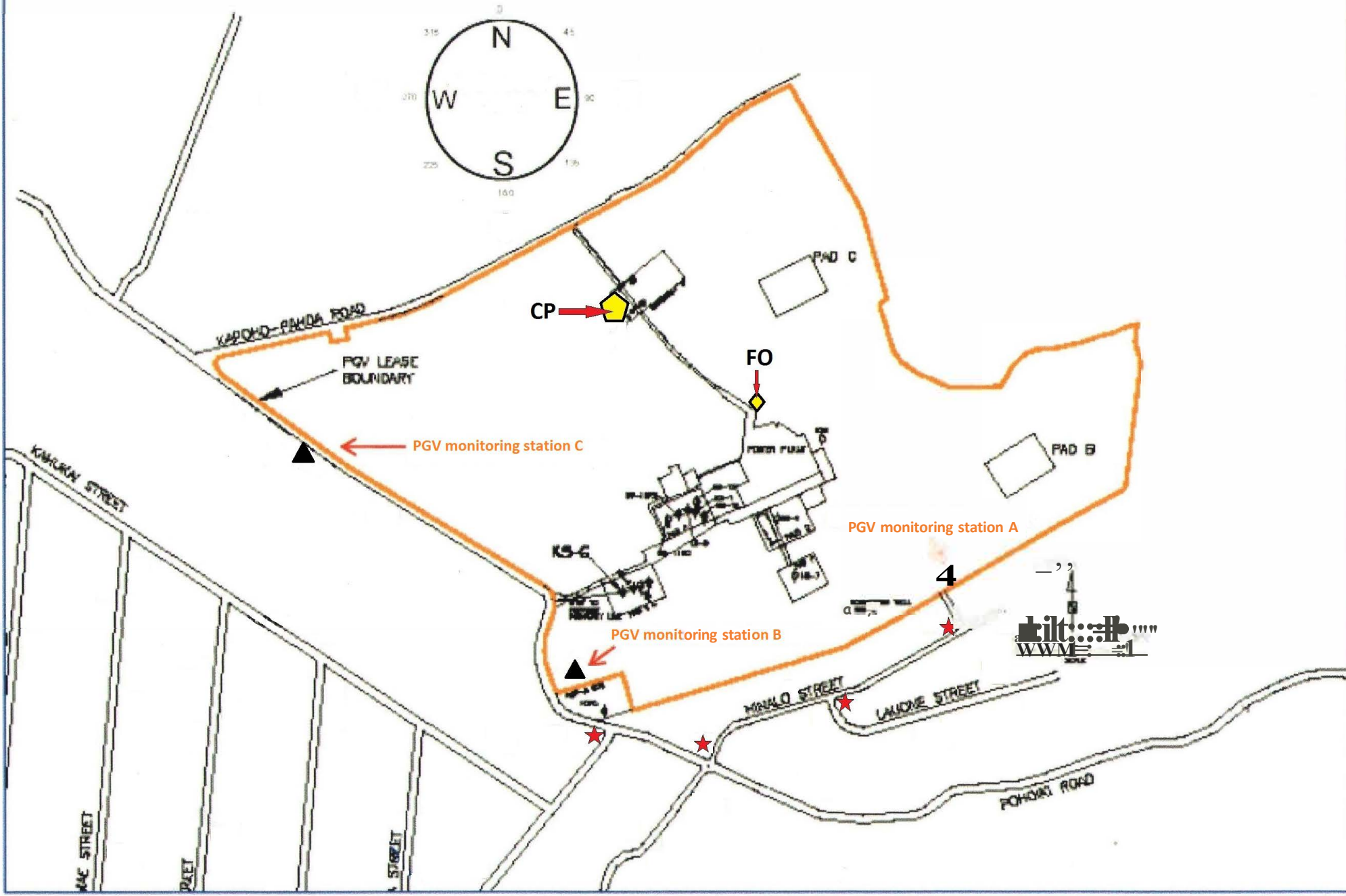
- A. Initial incident response during prevailing "normal" NE trade winds
1. RDK "host" shall remain at the ICP and be managed by a Fire Hazardous Materials Specialist (FHMS) and the Hazardous Materials Operations Team Leader (HazOps). Information shall be relayed from HazOps to the Incident Commander (IC).
 2. One Multi-Rae or Qrae (with H2S capability) shall be active at the ICP
 3. Initial RDK "unit" deployment. (See map for illustration) "Units" shall be deployed by HMRT personnel with a minimum team size consisting of two (2) personnel equipped with appropriate PPE on hand and a means for primary and secondary communications.
 - a. One (1) "unit" shall be deployed to the SW corner of the intersection at Pohoiki Rd. and Leilani Ave.
 - b. One (1) "unit" shall be deployed to the SW corner of the Pohoiki Rd. and Kapoho-Pahoa Rd. Junction
 - c. One (1) "unit" shall be deployed to Pohoiki Rd. along the roadside across of PGV gate #2
 - d. One (1) "unit" shall be deployed to Pohoiki Rd. along the roadside 0.4 miles NW of PGV gate #2
 4. Subsequent deployment and/or change of locations of "units" shall be determined by the needs of the evolution of the incident.
- B. Initial incident response during "Kona" SW wind pattern.
1. RDK "host" shall be deployed to a Base of Forward Operations (FO) located along the main entrance road near the main gate to the PGV facility and managed by a FHMS and HazOps. Information shall be relayed from HazOps to the LC.
 2. One Multi-Rae air monitor with a Rae Link repeater shall be active at the ICP
 3. One Multi-Rae or Qrae (with H2S capability) shall be deployed to the FO
 4. Initial RDK "unit" deployment. (See map for illustration) "Units" shall be deployed by HMRT personnel with a minimum team size consisting of two (2) personnel equipped with appropriate PPE on hand and a means for primary and secondary communications.
 - a. One (1) "unit" shall be deployed to the SW corner of the intersection at Pohoiki Rd. and Leilani Ave.
 - b. One (1) "unit" shall be deployed to the N corner of the intersection at Pohoiki Rd. and Hinalo St.
 - c. One (1) "unit" shall be deployed to the E corner of the intersection at Hinalo St. and Lauone.
 - d. One (1) "unit" shall be deployed to the W corner of the intersection at Hinalo St. and Honuaula.
 5. Subsequent deployment and/or change of locations of "units" shall be determined by the needs of the incident evolution.

--End--

Attachments:



1. Facility Maps

H2S Monitoring points at P.G.V. for event occurrence during s.w. "Kona" wind pattern



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 FIGURE 1

Area Rae to be deployed to predetermined locations as depicted by this symbol -

-  CP = Command Post
-  FO = Forward Operations

