



# COMPLIANCE ALERT

**DATE OF INCIDENT:**

August 12, 2009

**SOURCE OF MORE INFORMATION:**

Mark Maloney, Project Manager, Environmental Services - East Region

**INCIDENT DESCRIPTION:**

Management of an air sparge and soil vapor extraction system at Shell Service Station in Jacksonville, Florida, was transitioned to the Primary Environmental Consultant (PEC) in March 2007. The equipment, designed to run 24-hours per day, is housed in a metal sea container surrounded by a wooden fence. The system uses a regenerative blower for vacuum extraction, with recovered vapors discharged through a 3-inch-diameter stack, topped with a tee fitting to keep rain water out of the stack. The top of the stack is approximately 12-feet above ground surface. Noise abatement and control were not part of any permit requirement for installation or operation of the system.

The PEC received an email from the local regulatory agency on August 12, 2009, citing a noise complaint from a nearby resident. The PEC visited the site on August 12, 2009 at approximately 2 pm, and recorded readings of 50 to 60 decibels (dB) adjacent to the driveways of nearby residences. Upon further inquiry, on August 14, 2009, a letter from the agency was received indicating a maximum decibel reading of 55 dB is allowed from a commercial property to a residential property between 10 pm and 7 am, and 60 dB between 7 am and 10 pm; therefore, the system was shutdown on August 14, 2009. During a site visit on August 17, 2009 and temporarily activating the system, it was determined the noise was coming from the stack and resonating in the direction of the homes. The system remained off until a silencer could be installed on the stack.

**LESSONS LEARNED:**

During the incident review, awareness of noise emitted from existing remedial systems was noted as an area that may not have been considered or monitored at sites that do not require noise abatement as part of the system installation and/or operating permitting processes. The incident review also found that assumptions regarding non-permitted, but potentially regulated, operating conditions (e.g., noise, aesthetics) should be considered or challenged during RECAP reviews, when a remediation system is transitioned from one consultant to another, or when a system is upgraded or modified.



Photo of stack prior to noise complaint.

**SUGGESTIONS FOR PREVENTING SIMILAR INCIDENTS:**

- A review of permit requirements and local ordinances must be conducted when a remediation system is modified (e.g., addition of a larger blower, change from catalytic to thermal treatment of vapors) or initially installed.
- Consider including a requirement to take decibel readings with a sound level meter during O&M visits at regular intervals (e.g., quarterly) or whenever a remediation system is started or modified.



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- Consider confirming permit requirements and local regulations to determine the current system operating requirements during RECAP reviews or when remediation systems are transitioned from one consultant to another.
- Consider questioning site personnel to determine if complaints exist or have been voiced by neighboring individuals but not (yet) reported to Shell, the PEC, regulators, or city officials.