



UO Standard S4350

ISSUING DEPARTMENT: **S&CU**

EFFECTIVE DATE: **8-06**

UO SPONSOR: **Senior Director - AIP**

REVIEW DATE: **8-11**

PAGE NO.: **1** OF **3**

TITLE: Odorization of Natural Gas

Purpose This standard defines responsibilities and procedures for proper odorization of natural gas in Pacific Gas and Electric Company’s (the Company’s) gas transmission and distribution system to ensure compliance with applicable federal and state laws and regulations. The standard covers the odorants approved for use by the Company and specifies the maintenance, operation, and recordkeeping procedures for odorizers and odorant monitoring instruments.

Recision This UO Standard supersedes UO Standard S4350, “Odorization of Natural Gas,” effective September 2004.

Safety Improper odorization can expose employees, customers, and the public to unsafe conditions, result in noncompliance with federal and state regulations, and create negative publicity for the Company. Failure to comply with mandatory federal and state regulations may subject the Company to regulatory fines or disciplinary actions by the enforcing agencies.

Implementation Responsibilities The senior director of Asset Investment Planning is responsible for reviewing, approving, and distributing this standard.
The senior director delegates authority to the manager of Gas Transmission and Distribution (GT&D) Station Engineering to revise and reissue attachments to this standard, or to approve variances from the procedures in this standard on an exception basis.
The directors, managers, superintendents, and supervisors of Gas Transmission and Distribution (GT&D) are responsible for ensuring that the provisions of this standard are followed.

Compliance Implementation and effectiveness are measured by responsible managers and superintendents. In addition, periodic audits may be conducted by internal Company departments and the California Public Utilities Commission (CPUC) to verify compliance with this UO standard, the requirements of CPUC General Order 112E, and the Department of Transportation (DOT) 49 CFR Part 192.625.

Procedure The procedures of this standard are detailed in Attachment 1, “Procedures for Odorization of Natural Gas.”

Definition of Terms

CFR: Code of Federal Regulations

CPUC: California Public Utilities Commission

DOT: Department of Transportation

ED: Energy Delivery

GT Gas Quality On-Call Group: A technical resource, which is available to SGC when corrective measures to gas quality system emergencies are needed. This group is comprised of ED M&C and SGC members who understand the Company’s gas quality and odorization programs and have received training covering the gas quality incident reporting process, emergency notification, and contingency procedures.

GT&D: Gas Transmission and Distribution

Lower explosive limit (LEL): The lowest concentration of gas in air that will support combustion. For the Company’s natural gas, the LEL is approximately 5% gas-in-air.

M&C: Maintenance and Construction

Odor intensity test instrument (commonly called “odorometer”): An instrument used to allow a person to determine the odor intensity at various gas-in-air concentrations.

Odorant: A chemical compound that is added to natural gas to give it a characteristic scent that warns of its presence.

Odorizer: The equipment used to add odorant to natural gas.

SGC: System Gas Control

TBM: Tertiary butyl mercaptan

THT: Tetrahydrothiophene

UO: Utility Operations

Date Issued/Updated

Effective: July 2006

Review Date: July 2011

Signed,

Kevin J. Dasso
Senior Director
Asset Investment Planning

Reference Documents 49 CFR, Part 192.625

CGT Recommended Practice 4351.1, "Bulk Odorant Deliveries, Maintenance and Operating Procedure"

CGT Engineering Guideline 4351, "Typical Odorant Injection System Specifications"

CPUC General Order 112E (and subsequent revisions)

GS Interim Standard 465-2, "Management of Natural Gas Odorants"

Attachments

Attachment 1, "Procedures for Odorization of Natural Gas"

Attachment 2, "Monthly Odorization Report," Form 62-4650

Attachment 3, "Odor Intensity Report," Form 62-3480

Attachment 4, "Odor Intensity Test Schedule for Gas Transmission and Distribution Systems"