Emergency Plan
Ecoline Processed Landfill
Gas Averaging Tank

December 2011
Updated April 2014
Updated September and November 2015
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I. Introduction

As an integral part to the Ecoline project, the University of New Hampshire (UNH) maintains a tank, known as the “Averaging Tank” for the storage of blended processed landfill gas and natural gas. The storage tank provides fuel to the Siemens Turbine operating in the Co-gen Facility located at Library Way on the UNH campus in Durham, New Hampshire. The tank is situated on a grassy embankment below the railroad tracks and across from the access road from the Central Heating Plant. The Central Heating Plant is where the boilers are located and the Co-gen Facility is where the turbines reside. In this document, the two buildings are referred to as the Combined Heat Plant. UNH has contracted with EMCOR Facilities Services (EFS) to operate the Combined Heat Plant and associated equipment at the UNH Campus, including the averaging tank.

The tank is subject to the requirements of the National Fire Protection Association’s Standard (NFPA) 55. One requirement contained in NFPA 55 is the preparation and implementation of an emergency plan. UNH has developed this emergency plan in accordance with NFPA 55 requirements.

This emergency plan also meets the requirements of the Occupational Safety and Health Administration’s (OSHA) regulation 29 CFR 1910.38 – Emergency Action Plans and contains the minimum elements required by OSHA for emergency action planning.

UNH/EFS personnel to contact regarding employee duties and information contained in the plan:

David Bowley, UNH 603-862-0647
Matt O’Keefe, UNH 603-862-1276
Mike Jeannette, EFS 603-862-3862

II. NFPA Background

The NFPA, headquartered in Quincy, Massachusetts, is an international, nonprofit, membership organization founded in 1896 to protect people, their property and the environment from destructive fire. NFPA is the established worldwide advisor on the topics of fire safety and protection. Most states have adopted NFPA standards for buildings, processes, services, designs, and installations.

NFPA Standard 55 (NFPA 55), Compressed Gases and Cryogenic Fluids Code, was developed by the Industrial and Medical Gases Committee in recognition of the need to provide information on the use of cylinder gases in one standard. The Compressed Gas Association assisted the project by submitting a draft that was used as the framework for the standard. Since this standard was introduced in 1993, it has been widely used and accepted by users of different types of gases as a single source covering requirements for installation and usage of compressed gases.

NFPA 55 does not apply to the off-site transportation of materials covered by this code. Nor does it apply to the storage, use, and handling of liquefied petroleum gases in accordance with NFPA 58, Liquefied Petroleum.
UNH maintains numerous tanks of compressed and liquefied gases, namely propane throughout campus. Liquefied petroleum gases are stored in accordance with NFPA 58.

### III. Emergency Plan Requirement

Section 4.2.1 of NFPA 55 states that an emergency plan should be prepared and updated wherever liquefied or compressed gases are produced, handled, stored or used. The plan should be available for inspection by any regulatory authority upon reasonable notice. The following information is to be included in the emergency plan:

- The type of emergency equipment available and its location.
- A brief description of any testing or maintenance programs for the available emergency equipment.
- An indication that hazard identification labeling is provided for each storage area.
- Location of posted emergency response procedures.
- Safety data sheets (SDS) are to be available for all gases stored on the site.
- A list of responsible personnel who are designated and trained to be liaison personnel for the fire department.
- A list of the types and quantities of compressed and liquefied gases normally at the facility.

UNH’s emergency plan contains all required information outlined above.

### IV. Emergency Action Plan Requirements (OSHA 29 CFR Part 1910.38)

In the event of an emergency related to the release of processed landfill gas/natural gas from the averaging tank and associated piping, UNH plans to evacuate UNH/EFS employees and the Town of Durham Fire Department will take control of the emergency. Since UNH/EFS employees will not participate in the emergency response, 29 CFR Part 1910.120(q) (emergency response plan) does not apply and only an emergency action plan is required in accordance with the requirements of 29 CFR Part 1910.38. At a minimum, an emergency action plan should include the following elements:

- Procedures for reporting a fire or other emergency;
- Procedures for emergency evacuation, including type of evacuation and exit route assignments;
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate (if applicable);
- Procedures to account for all employees after evacuation;
- Procedures to be followed by employees performing rescue or medical duties; and
- Name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

UNH’s emergency plan contains all required information outlined above.
V. Averaging Tank

UNH maintains an 18,000 gallon “Averaging Tank” located on Library Way adjacent to the Combined Heat Plant on the UNH Durham campus. The tank functions as an inline buffer and mixing tank for processed landfill gas (PLG) from the UNH Landfill Gas Processing Facility in Rochester. The function of the Averaging Tank is to maintain a required volume of gas that is consistent in the BTU content or volume. PLG is transported by pipeline from the Landfill Gas Processing Facility at the Turnkey Landfill in Rochester to the UNH campus. The pipeline enters campus adjacent to the Central Heating Plant building within an area surrounded by a chain link fence. The PLG is delivered to the blending skids where it can be mixed with natural gas from the utility supplier to achieve the desired BTU content and pressure for use in the Siemens turbine. The Wobbe Index, which is a method of representing the heating value of a gas and is calculated by dividing the high heating value of a gas by the square root of its specific gravity, is maintained at a minimum 32 MJ/m³. Gas enters the tank from the blending skid. The Averaging Tank can hold up to 10 minutes of fuel. Gas is piped from the tank to the Siemens Turbine within the Co-gen Facility. The pressure of the gas ranges from 85 to 110 psi.

VI. Hazard Identification and Labeling

Natural gas/PLG is an odorless, colorless gas, or odorless liquid in its cryogenic form. In either form, methane poses a serious fire hazard when accidentally released. As a gas, it will act as a simple asphyxiant and represent a significant health hazard in enclosed areas by displacing the oxygen in the atmosphere. The gas is lighter than air and may spread long distances. Distant ignition and flashback are possible. The liquid gas can cause frostbite to any exposed tissue.

A safety data sheet (SDS) of natural gas and an ultimate analysis of PLG are contained in Attachment A and filed in the SDS binder located in the control room of the Co-gen Facility. The health hazards, firefighting and explosion data, and protection measures contained in the SDS for natural gas also apply to PLG.

The Averaging Tank is labeled in accordance with NFPA 704. Section 704 of NFPA specifies a labeling system for identifying the hazards associated with materials. The hazard identification system is a color-coded array of four numbers or letters arranged in a diamond shape. The blue, red, and yellow fields (health, flammability, and reactivity) all use a numbering scale ranging from 0 to 4. A value of zero means that the material poses essentially no hazard; a rating of four indicates extreme danger. The white “special notice” area can contain several symbols (i.e. OX for oxidizers).

Natural gas has the following NFPA 704 codes:

Health Hazard rating (blue diamond): 1
Fire Hazard rating (red diamond): 4
Reactivity Hazard rating (yellow diamond): 0
Special Notice area: blank
The NFPA 704 placard with the above numbers for health, fire and reactivity is posted in two locations on the chain link fence surrounding the Averaging Tank.

VII. Emergency Equipment and Alarms

The tank is equipped with two over pressurization vents which automatically release if the pressure in the tank exceeds 180 psi. The gas line entering the tank is also equipped with an emergency release vent set at 140 psi. All emergency release vents are tested annually.

The NG/PLG fuel system is equipped with an Emergency-Stop or E-Stop system. E-Stop is activated by any fire alarm within the Combined Heat Plant or at the control panel in the Co-gen Facility Control Room. When a fire alarm is activated, an alarm sounds indicating that employees must evacuate. At the same time, E-stop activates controls to shut down the flow of gas to the tank and from the tank to the building. In addition, fuel lines in the building are immediately evacuated and vented to the atmosphere at the roof when E-Stop is activated. The emergency shutdown system is tested annually.

VIII. Emergency Response and Notification

The emergency response procedures are posted in the Central Heating Plant office and the control room of the Co-gen Facility. The emergency response procedures are as follows:

- Activate fire alarms / Initiate E-Stop
- Call 911
- Contact the control room (862-1167)
- Evacuate the building

No employees will remain behind to operate any equipment before evacuating, therefore no procedures are provided in this plan. Once the fire alarms are activated all employees are required to evacuate. All plant operators are trained in CPR, which allows them to volunteer their assistance in the event of emergency rescue or medical response.

IX. Emergency Evacuation and Accountability

When the fire alarm sounds, employees are to evacuate the building through the nearest accessible exit-way. Building evacuation routes are posted at various conspicuous locations throughout the building. Evacuation plans with evacuation routes are contained in Attachment B of this plan.

The evacuation assembly area is located outside the Co-gen Facility next to the railroad tracks. The area is designated by a sign indicating: “Notice, Emergency Assembly Area, Cogeneration plant”. Once arriving at the assembly area, the control room operator or the senior EFS employee will determine if all employees are accounted for. The results of the accounting will be relayed to the Durham Fire Department personnel responding to the emergency. Upon their arrival, the Fire Department becomes the on-scene incident commander. Depending on the size,
location and conditions of the emergency, including wind and weather conditions, the incident commander may select an appropriate alternative assembly area.

X. Responsible Personnel

In the event of an emergency related to the storage and transport of the PLG/natural gas to the turbine, UNH personnel will immediately initiate E-Stop and call 911. When the Fire Department arrives on-site, they will take control of the emergency situation. The following UNH/EFS personnel will be notified immediately following the 911 call to the fire department and can act as a liaison with the fire department:

- Co-gen Facility Control Room Operator: 603-862-1167
  William Janelle, Associate Vice President - 603-862-2650 (office)
- Facilities and Operations: 603-397-9443 (cell)
- Walter Nydegger, EFS: 603-862-1167 (office) 603-783-1395 (cell)
- Mike Jeannette, EFS: 603-862-3862 (office) 781-454-6431 (cell)

XI. Tank Security

Section 7.1.8 of NFPA 55 requires that the tank be secured against access from unauthorized personnel. The tank is surrounded by an 8 foot chain link fence. The gate is locked at all times. Signs are posted on the fence indicating “Danger – Flammable Gas”. In accordance with Section 4.10.3, signs prohibiting smoking will be posted within 25 feet of the tank. Due to the fencing, no vehicles are allowed to travel near the tank, therefore no guard posts are required (Section 4.11.1).

XII. Training and Plan Review

All UNH/EFS employees involved in the operation and maintenance of the averaging tank or with an emergency response associated with the averaging tank are trained in emergency evacuation and assisting others in evacuating. Employees are trained initially, annually and any time the plan is changed.

UNH/EFS will review this plan annually in conjunction with the annual employee training and will update it as necessary.

In addition, employees with any involvement with the averaging tank are provided hazard awareness training in accordance with 29 CFR 1910.1200(h). Training includes information on the physical and health hazards of methane, measures to take to protect individuals from exposure, and description/design of the system and where the potential releases may occur. Attachment C contains an employee training log.
XIII. Regulatory Notifications

Since methane does not have a reportable quantity under the Emergency Planning and Community Right to Know Act (EPCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), a release is not reportable to the National Response Center or to the State and Local Emergency Planning Committees.

An emergency methane release should be reported to the NH Department of Environmental Services during business hours and the NH State Police on weekends and evenings as follows:

| NH Department of Environmental Services (M-F, 8-4) | 603-271-3899 |
| NH State Police (weekends and evenings)          | 603-223-4381  |
Attachment A
IDENTITY: Natural Gas

Section I

Manufacturer's Name: Southern California Gas Company
Emergency Telephone Number: Residential (800) 427-2200
Commercial/Industrial (800) 427-2000
Address: 555 West 5th Street, GT 16C0
Los Angeles, CA 90013-1044
Telephone Number for Information: (213) 244 – 2740 (Safety & Health Department - general information)

Section II - Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits Recommended</th>
<th>% (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td></td>
<td>Simple asphyxiant</td>
<td>ACGIH TLV 1,000 ppm</td>
<td>approx. 93%</td>
</tr>
<tr>
<td>CAS number 74-82-8</td>
<td></td>
<td>Cal/OSHA PEL none listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethane</td>
<td></td>
<td>Simple asphyxiant</td>
<td>ACGIH TLV 1,000 ppm</td>
<td>approx. 4%</td>
</tr>
<tr>
<td>CAS number 74-84-0</td>
<td></td>
<td>Cal/OSHA PEL none listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td></td>
<td>Simple asphyxiant</td>
<td>ACGIH TLV 1,000 ppm</td>
<td>approx. 1%</td>
</tr>
<tr>
<td>CAS number 74-98-6</td>
<td></td>
<td>Cal/OSHA PEL 1,000 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td></td>
<td>Simple asphyxiant</td>
<td>ACGIH TLV 1,000 ppm</td>
<td>approx. 0.5%</td>
</tr>
<tr>
<td>CAS number 106-97-8</td>
<td></td>
<td>Cal/OSHA PEL 800 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td></td>
<td>Simple asphyxiant</td>
<td>ACGIH TLV 5,000 ppm</td>
<td>approx. 1%</td>
</tr>
<tr>
<td>CAS number 124-38-9</td>
<td></td>
<td>Cal/OSHA PEL 5,000 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section III - Physical/Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Property</th>
<th>Value</th>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>-259 F (methane)</td>
<td>Specific Gravity (H₂O = 1)</td>
<td>* N/A</td>
<td>Melting Point</td>
<td>*N/A</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>* N/A</td>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>*N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density (AIR = 1)</td>
<td>0.58 - 0.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>3.5 ml/ 100 ml water at 17 C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appearance and Odor:
Colorless, odorless gas without odorants. When odorant is added – characteristic gas odor. Odorant may be comprised of some or all of the following components and/or blends thereof: Tetrahydrothiophene, tertiary-Butyl Mercaptan and other mercaptans.

Section IV - Fire and Explosion Hazard Data

<table>
<thead>
<tr>
<th>Flash Point (Method Used):</th>
<th>Flammable Limits- Auto ignition Temp.</th>
<th>LEL:</th>
<th>UEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>*N/A</td>
<td>900 F to 1,300 F</td>
<td>4.5 %</td>
<td>15%</td>
</tr>
</tbody>
</table>

Extinguishing Media:
Co2, dry chemical, or halon.

Special Fire Fighting Procedures:
For fires involving this material do not enter any enclosed or confined space without proper protective equipment – including self contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards:
This gas is extremely flammable. A hazard from re-ignition or explosion exists if the flame is extinguished without stopping flow of gas and/or cooling surroundings and eliminating ignition source. Use water spray to cool surroundings and exposures.

Section V - Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>Unstable</th>
<th>Conditions to Avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>X</td>
<td>Readily mixes with air when released to create a combustible atmosphere.</td>
</tr>
</tbody>
</table>

Incompatibility (Materials to Avoid):
Chlorine, bromine, pentafluoride oxygen difluoride and nitrogen trifluoride.

Hazardous Decomposition or Byproducts:
CO, by incomplete combustion.

Hazardous Polymerization
May Occur
Conditions to Avoid: Ignition spontaneous when mixed with chlorine dioxide.
Will Not Occur X Non-corrosive.

Section VI - Health Hazard Data

<table>
<thead>
<tr>
<th>Route(s) of Entry:</th>
<th>Inhalation - Yes</th>
<th>Skin - No</th>
<th>Ingestion - Unlikely</th>
</tr>
</thead>
</table>

Health Hazards (Acute and Chronic):
Inhalation: At high concentrations, inhalation can produce dizziness, headache, incoordination and drowsiness. Simple asphyxiant –if gas displaces enough oxygen may cause suffocation. Odor may cause more sensitive individuals to feel nauseous.

Skin:
Not known to be a skin irritant. Skin absorption is unlikely.

Ingestion:
This material is a gas and under normal atmospheric conditions and ingestion is unlikely.

Carcinogenicity:
Ingredients listed in Section II are not regulated as a carcinogen by OSHA or contained in IARC or NTP listing.
Signs and Symptoms of Exposure:
Light hydrocarbon gases are simple asphyxiants which, at high enough concentrations, can reduce the amount of oxygen available for breathing. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. High concentrations of carbon dioxide can increase heart rate and blood pressure.

Medical Conditions Generally Aggravated by Exposure: Conditions aggravated by exposure may include respiratory (asthma-like) disorders. Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Persons with pre-existing heart disorders may be more susceptible to this effect.

Emergency and First Aid Procedures:
Remove from exposure immediately (to fresh air) and seek medical attention. If breathing is irregular, start resuscitation, administer oxygen.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled:
Evacuate area; provide optimum explosion-proof ventilation. Shut off supply, remove or eliminate ignition sources. Minor leaks can be detected with soap solution applied at suspected leak points. Never use a flame to detect leaks.

Waste Disposal Method:
Consult Federal, State or local authorities for proper disposal procedures.

Precautions to Be taken in Handling and Storing:
Keep away from flames and chemical oxidants (See Section V above).

Other Precautions:
Proposition 65: This product contains a material which is known by the State of California to cause cancer or reproductive harm.

Section VIII - Control Measures

Respiratory Protection (Specify Type):
NIOSH approved airline respirators (Type C) or SCBA, if oxygen deficiency suspected.

<table>
<thead>
<tr>
<th>Ventilation</th>
<th>Local Exhaust</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May be needed to control accumulation of gas.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical (General)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosion proof equipment to provide adequate fresh air supply.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
</tr>
</thead>
</table>

Protective Gloves:
Chemical resistant gloves are not required but considered good practice to wear when working with chemicals.

Eye Protection:
Chemical goggles.

Other Protective Clothing or Equipment:
Flame retardant clothing should be worn in potentially flammable areas.

Work/Hygienic Practices:
Be extremely cautious – gas is extremely flammable.

* Not Applicable
Certificate of Analysis

SINCE 1985
Quality Controlled Through Analysis

10630 FALLSTONE RD. HOUSTON, TEXAS 77099
P.O. BOX 741905, HOUSTON, TEXAS 77274
TEL: (281) 495-2400
FAX: (281) 495-2410

CLIENT: TRC Companies, Inc.
SAMPLE: Gas Sample UNH Solar Turbine Fuel Cylinder # 2332 11/24/09 10:40
LABORATORY NO: 57529-01 R
REQUESTED BY: Mr. Tim Senger
REPORT DATE: December 14, 2009
PURCHASE ORDER NO: 17370 C/O 1

TEST

<p>| Composition of Natural Gas by Gas Chromatography (TCD/FID), ASTM D 1945: |</p>
<table>
<thead>
<tr>
<th>TEST</th>
<th>Mol %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>19.054</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>0.020</td>
</tr>
<tr>
<td>Oxygen / Argon</td>
<td>2.517</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>2.978</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>0.000</td>
</tr>
<tr>
<td>Methane</td>
<td>75.067</td>
</tr>
<tr>
<td>Ethane</td>
<td>0.147</td>
</tr>
<tr>
<td>Propane</td>
<td>0.058</td>
</tr>
<tr>
<td>Iso-butane</td>
<td>0.024</td>
</tr>
<tr>
<td>N-butane</td>
<td>0.025</td>
</tr>
<tr>
<td>Iso-Pentane</td>
<td>0.013</td>
</tr>
<tr>
<td>N-pentane</td>
<td>0.013</td>
</tr>
<tr>
<td>t-2-Butene</td>
<td>0.000</td>
</tr>
<tr>
<td>Ethylene</td>
<td>0.000</td>
</tr>
<tr>
<td>Propylene</td>
<td>0.000</td>
</tr>
<tr>
<td>Hexanes Plus</td>
<td>0.084</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Caloric Value and Specific Gravity of Gases, ASTM D 3588:
Specific Gravity at 60°F (air=1) 0.6798

Calculated B.T.U./cu.ft. @ 14.696 psia and 60°F

| NET (Dry basis) | 692.3 |
| Gross (Dry basis) | 769.0 |

Calculated B.T.U./lb.

| NET (Dry basis) | 13,344.7 |
| Gross (Dry basis) | 14,823.3 |

Total Sulfur by Microcoulometer, ASTM D 3246, grain/100scf ....... <0.032

Respectfully submitted
For Texas OilTech Laboratories, L.P.

A. Phi/Sorubakksh
Director of Laboratory Operations

These analyses, opinions or interpretations are based on material supplied by the client to whom, and for whose exclusive and confidential use this report is made. Texas Oiltech Laboratories, Inc. and its officers assume no responsibility and make no warranty for proper operations of any petroleum, oil, gas or any other material in connection with which this report is used or relied on.
Certificate of Analysis

CLIENT: TRC Companies, Inc.   REQUESTED BY: Mr. Tim Senger
SAMPLE: Gas Sample UNH Solar Turbine Fuel Cylinder # 2858 11/24/09 16:15
LABORATORY NO: 57529-02 R   REPORT DATE: December 14, 2009
PURCHASE ORDER NO: 17370 C/O 1

TEST

<table>
<thead>
<tr>
<th>TEST</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>15.818</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>0.016</td>
</tr>
<tr>
<td>Oxygen / Argon</td>
<td>1.390</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>3.381</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>0.000</td>
</tr>
<tr>
<td>Methane</td>
<td>79.395</td>
</tr>
<tr>
<td>Ethane</td>
<td>0.000</td>
</tr>
<tr>
<td>Propane</td>
<td>0.000</td>
</tr>
<tr>
<td>Iso-butane</td>
<td>0.000</td>
</tr>
<tr>
<td>N-butane</td>
<td>0.000</td>
</tr>
<tr>
<td>Iso-Pentane</td>
<td>0.000</td>
</tr>
<tr>
<td>N-pentane</td>
<td>0.000</td>
</tr>
<tr>
<td>t-2-Butene</td>
<td>0.000</td>
</tr>
<tr>
<td>Ethylene</td>
<td>0.000</td>
</tr>
<tr>
<td>Propylene</td>
<td>0.000</td>
</tr>
<tr>
<td>Hexanes Plus</td>
<td>0.000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Caloric Value and Specific Gravity of Gases, ASTM D 3588:
Specific Gravity at 60°F (air=1) 0.6596

Calculated B.T.U./cu.ft. @ 14.696 psia and 60°F
- NET (Dry basis) 721.7
- Gross (Dry basis) 801.9

Calculated B.T.U./lb.
- NET (Dry basis) 14,338.5
- Gross (Dry basis) 15,932.7

Total Sulfur by Microcoulometer, ASTM D 3246, grain/100scf <0.032

Respectfully submitted
For Texas Oiltech Laboratories, L.P.

A. Phil Sonnabend
Director of Laboratory Operations

These analyses, opinions or interpretations are based on material supplied by the client to whom, and for whose exclusive and confidential use this report is made. Texas Oiltech Laboratories, Inc. and its officers assume no responsibility and make no warranty for proper operations of any petroleum, oil, gas or any other material in connection with which this report is used or relied on.
Attachment B
1.0 Purpose:

The purpose of this document is to detail the Emergency Evacuation Procedure for evacuation of the UNH Heating and Cogeneration Plant located on the University of New Hampshire, Durham NH 03824

2.0 Scope:

This plan shall apply to all EES employees on the University Of New Hampshire Durham Campus and sub tier contractor employees under the direct control of EES.

The relative OSHA standards are as follows:
Title 29, Code of Federal Regulations, Parts 1910 and 1926, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor. This plan is intended to comply with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.038

3.0 Responsibilities:

The responsibility for ensuring that this program is followed is binding upon all employees. All shall be instructed in the safety significance of this program. Each new employee shall be instructed by the in the purpose and use of this program.

The Plant Manager is responsible for implementing, enforcing and ensuring compliance with this procedure.

The Lead Shift Plant Operator is responsible for carrying out the procedure.

4.0 Special Definitions:

Assembly Area: Outside of the Cogeneration Plant, next to the railroad tracks, as designated by sign.
Evacuation Route: As designated by the evacuation exit diagram.
Red Button: Emergency Stop button

5.0 Associated Documents:

1.) Evacuation Exit Diagram Cogen Main Floor
2.) Evacuation Exit Diagram Cogen Upper Mezzanine Level
3.) Picture of Emergency Assembly Area
6.0 Actions:

Upon notification of a pending disaster such as a bomb threat, or upon the occasion of an actual disaster such as a major earthquake or out of control fire, the Plant Operators are to evacuate the cogeneration facility, following the prescribed evacuation exit plan.

Prior to exiting from the cogeneration facility control room, the ‘Master Plant Shut Down’ button, located on the Combined Heat and Power Plant Control Panel, on the TVC cabinet, will be depressed. This will automatically shutdown the Siemens and the Solar combustion turbines by stopping their gas compressors, and shutting all open automated gas valves. In addition, the fire alarm will commence sounding.

Plant Operators located in any other areas of the cogeneration facility, or heating plant, are to leave the building by the nearest available exit. Any additional personnel are to be instructed to do the same.

All personnel will muster at the ‘Emergency Assembly Area’, located near the railroad tracks near the plant, and designated by a sign, which states ‘NOTICE, EMERGENCY ASSEMBLY AREA, Co-Generation Plant’. The senior Emcor person will muster and account for all onsite personnel.
Evacuation Plan:
1) Activate Plant Stop, Red Button Located In CoGen Control Room
2) Leave By Next Direct Route.
3) Assemble At Meeting Location.

Legend:
-下达指令
-警告/警告
-紧急站
-火警探测器

EMCOR Energy Services
Evacuation Exit Diagram
CoGen Main Floor

EMCOR Energy Services
Standard Operating Procedure

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Evacuation Plan:
1) Activate Plant Stop. Red button located in CoGen Control Room.
2) Leave by nearest direct route.
3) Assemble at Meeting Location.

Legend:
- ENTR
- EXIT
- ION/TEREX
- WASH STATION
- AIR SUPPLY/EVENT EXHAUST

EMCOR Energy Services
Evacuation Exit Diagram
Upper Mezzanine Level

Page 4 of 4
1.0 Purpose:

The purpose of this document is to detail the Emergency Evacuation Procedure for evacuation of the UNH Heat Plant located on the University of New Hampshire, Durham NH 03824

2.0 Scope:

This plan shall apply to all EES employees on the University Of New Hampshire Durham Campus and sub tier contractor employees under the direct control of EES.

The relative OSHA standards are as follows:
Title 29, Code of Federal Regulations, Parts 1910 and 1926, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor. This plan is intended to comply with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.038

3.0 Responsibilities:

The responsibility for ensuring that this program is followed is binding upon all employees. All shall be instructed in the safety significance of this program. Each new employee shall be instructed by the in the purpose and use of this program.

The Plant Manager is responsible for implementing, enforcing and ensuring compliance with this procedure.

The Lead Shift Plant Operator is responsible for carrying out the procedure.

4.0 Special Definitions:

Assembly Area: Outside of the Cogeneration Plant, next to the railroad tracks, as designated by sign.

Evacuation Route: As designated by the evacuation exit diagram.

5.0 Associated Documents:

1.) Evacuation Exit Diagram Heat Plant Main Floor
2.) Evacuation Exit Diagram Heat Plant Lower Level
3.) Picture of Emergency Assembly Area
6.0 Actions:

Upon notification of a pending disaster such as a bomb threat, or upon the occasion of an actual disaster such as a major earthquake or out of control fire, the Plant Operators are to evacuate the Heat Plant, following the prescribed evacuation exit plan.

Prior to exiting from the Heat Plant, boilers in operation will be shutdown. Boilers #1 and #2 will be secured by pushing the red ‘Systems Stop’ button for each. Boiler #3 will be secured by pushing the ‘Emergency Trip’. Boiler #5 will be secured by pushing the ‘Burner Trip’ button.

Plant Operators are to leave the building by the nearest available exit. Any additional personnel are to be instructed to do the same.

All personnel will muster at the ‘Emergency Assembly Area’, located near the railroad tracks near the plant, and designated by a sign, which states ‘NOTICE, EMERGENCY ASSEMBLY AREA, Co-Generation Plant’. The senior Emcor person will muster and account for all onsite personnel.
Employees having any involvement with the averaging tank are required to receive hazard awareness training. Training is required to cover the following topics:

- Description/design of the averaging tank/piping system and where potential releases may occur
- Physical and health hazards of methane
- Measures to take in the event of a release
- Type and location of emergency response equipment
- Review of emergency response procedures and location of where procedures are posted
- Review of procedures for emergency evacuation
## Employee Training Records

**University of New Hampshire, Durham, NH**

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