

DRAFT

EMERGENCY RESPONSE PLAN

CPV TOWANTIC ENERGY CENTER

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June 2015

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1.0 INTRODUCTION

This Emergency Response Plan (ERP or Plan) has been developed to direct response actions at the CPV Towantic Energy Center (the Facility) in the event of an emergency in accordance with condition number 1h and item number 2, Development and Management Plan (D&M Plan), of the Connecticut Siting Council's (CSC) final Decision and Order (D&O) for Docket 192B dated May 14, 2015. The Facility is located within the Town of Oxford in New Haven County, just south of the Middlebury, Connecticut town line. The Facility footprint is situated along the eastern side of Woodruff Hill Road, just south of an Algonquin Gas Transmission right of way. Figure 1-1 in Appendix A presents the Towantic Site Location Map.

The ERP covers responses to natural phenomena, fires, medical emergencies, oil and hazardous material (OHM) spills/releases, and any other reasonably foreseeable incidents that would affect the health and safety of the plant personnel and/or the general public.

1.1 Purpose

The purpose of this ERP is to establish the responsibility for handling emergency situations promptly, minimizing hazards, and disseminating information to all plant personnel and regulatory authorities (as required). This program will be annually reviewed and updated as appropriate by CPV Towantic's Plant Manager and Compliance Coordinator after seeking input from local public safety officials, Waterbury-Oxford Airport (OXA) and the Department of Emergency Services and Public Protection (DESPP).

Plant personnel will review this ERP at least annually during routine health and safety training.

After an actual emergency or drill, a critique of the emergency response will be conducted to evaluate and improve this plan, as needed.

1.2 Companion Plans & Procedures

This ERP is designed to be utilized in conjunction with current versions of the following CPV Towantic plans:

- *Spill Prevention Control and Countermeasure Plan.*
- *Stormwater Pollution Prevention Plan.*
- *Site Emergency Response Procedures.*

These Plans and Procedures will be fully developed and implemented in accordance with condition number 1h and item number 2 of the final D&O for Docket 192B prior the commencement of commercial operation.

The following figures are attached to this Plan.

- Figure 1-1, Towantic Site Location Map.
- Figure 1-2, Project Location Map.

Comment [KK1]: Figures to be finalized and submitted to council in accordance with D&O condition 1.h.

- Figure 1-3, Aerial Photograph.
- Figure 1-4, Facility Layout (as provided in item A of CPV Towantic D&M Plan).
- Figure 1-5, Stormwater Management Plan
(as provided in items E, I, J, O and R of the CPV Towantic D&M Plan).
- Figure 1-6, Emergency Response Site Plan - Emergency Equipment, Emergency Exit Routes, Emergency Evacuation Meeting Point.

Comment [KK2]: To include color-coded spill routing, per request from Oxford Fire Department.

1.3 Facility Organization, Trained Staff, Security

The Facility will be manned 24 hours per day, 7 days per week. The operational labor force will consist of trained employees who will be on-site at all times that will be available to provide initial emergency response support.

The perimeter of the Facility site will be secured with a chain link fence, sliding gates and surveillance equipment so as to permit only authorized access to the facility's service drive, structures and operations. One gate would provide access into the project site, thereby restricting access to this area. The gate would be locked during normal operations with access provided by facility personnel. Normal plant lighting and emergency temporary lighting would be provided throughout the facility. The Facility security will be controlled by the Facility's operators in the control room 24 hours per day, 7 days per week, and 365 days per year. All site security personnel will be equipped with communication equipment to maintain contact with construction and operations management personnel and/or the Oxford Police and Fire Departments, OXA, the DESPP and [INSERT OTHER RELEVANT PARTIES].

Table 1-1: Preliminary Operations Staffing Plan			
Job Title/ Staff	Emergency Response Job Function	Training	Total
Plant Manager	Alternate Coordinator Emergency	40-hour OSHA, 8-hour Site Supervisor	1
Compliance Coordinator	Emergency Coordinator , Training	40-hour OSHA, 8-hour Site Supervisor	1
Production Manager	Alternate Coordinator Emergency	40-hour OSHA, 8-hour Facility Hazard Awareness	1
Plant Engineer	None	40-hour OSHA, 8-hour Facility Hazard Awareness	1
Business Manager	None	8-hour Facility Hazard Awareness	1
Control Room Operators	Alternate Coordinator Emergency	40-hour OSHA, 8-hour Site Supervisor	4
Operators	Response Team Member	24-Hour OSHA	8
Maintenance and I&C Technicians	Response Team Member	24-Hour OSHA	4
Administrative Support	None	8-hour Facility Hazard Awareness	1
Totals			22
<p>40-hour OSHA: Training designed for workers who are involved in clean-up operations, voluntary clean-up operations, emergency response operations, and storage, disposal, or treatment of hazardous substances or uncontrolled hazardous waste sites in accordance with 29 CFR 1910.120.</p> <p>24-hour OSHA: Training designed for personnel that may approach a spill in an emergency response with intentions of stopping the spill and containing the spread of the material.</p> <p>8-hour Supervisor: Specialized training in safety management and facility specific safety programs.</p> <p>8-hour Facility Hazard Awareness: Training designed for personnel that may be present at an initial incident who will not take direct action to contain or control the incident.</p>			

1.3 ERP Distribution

At a minimum, this ERP shall be located in the following locations:

- Facility Emergency Evacuation Meeting Point
- Facility Administration Office

In addition, this Plan will be provided to:

- Connecticut Siting Council
- Department of Emergency Services and Public Protection
- Waterbury-Oxford Airport
- Oxford Fire Department
- Oxford Police Department

- Oxford First Selectman
- [INSERT OTHER PARTIES AS NEEDED]

1.4 Plan Updates

This Plan will be updated as necessary and reviewed annually, at a minimum, by the Facility's Plant Manager and Compliance Coordinator after seeking input from local public safety officials, Waterbury-Oxford Airport (OXA) and the Department of Emergency Services and Public Protection (DESPP), however each agency that receives the plan will be requested to provide input on subsequent updates to the plan. The Oxford Fire and Police Departments will have "hands on" input during annual training exercises planned at the Facility. A record of all revisions and amendments will be documented in subsequent revisions to this Plan.

2.0 GENERAL FACILITY INFORMATION

2.1 Existing Site and Surrounding Conditions

The CPV Towantic Energy Center is located in the northern portion of the Town of Oxford, near the boundary with the Town of Middlebury. The Facility is bounded by Woodruff Hill road and a Connecticut Light and Power transmission right-of-way to the west; the Algonquin interstate natural gas pipeline system owned by Spectra to the north; a Spectra-owned gas compression station to the east and lot 9B and Spectra's gas compression station access road to the south. Figure 2-1 shows the site boundary on the United States Geological Survey (USGS) map for the general area. Figure 2-2 provides the site boundary and area on an aerial photograph. Figure 2-3 illustrates the general facility information described in this section.

2.2 Facility Description

All Facility equipment described in this section is presented on the Site Plan, Figure 2-3.

The combined-cycle facility can generate a peak of 785 megawatts (MW) of electricity. On an average ambient day (59°F ambient dry bulb temperature) approximately 524.5 MW of this power is produced using two combustion turbine generator sets. Exhaust heat from the combustion turbines is sent to a heat recovery steam generators (HRSGs) to produce steam to drive a steam turbine generator. The steam turbine generator provides approximately 280.5 MW, the balance of the Facility's gross output. Approximately 20 MW are consumed within the Facility to power necessary Facility systems, which leaves a net Facility electric output of 785 MW.

The HRSGs include a natural gas-fired "duct burner" (supplemental firing system). The duct burners would allow for additional electrical production during select periods. For environmental purposes, the Facility is equipped with state of the art emissions control technology. This equipment includes selective catalytic reduction technology (SCR) and an oxidation catalyst would be used to control oxides of nitrogen (NO_x) and carbon monoxide (CO) emissions, respectively. Exhaust steam from the steam turbine is cooled and condensed and then returned to the HRSG using an air-cooled condenser.

2.3 Structures

The Generation Building contains the following equipment:

- Steam turbine and the steam turbine generator;
- Other mechanical equipment, such as pumps, piping and electrical equipment needed for plant operation.

The plant site has overhead gantry cranes to facilitate major equipment maintenance activities. Elevated platforms are installed to provide for access to equipment and piping. The roof of the structure is designed to support metal decking and insulating panels. The walls are insulated

metal siding supported on a steel frame. Also enclosed within the main generation building are office space, a meeting room, a kitchen, storage areas and restroom facilities.

The two (2) gas turbines and associated generators are installed directly adjacent to the Generation Building.

Approximate building dimensions and heights for major Facility components are as follows:

- Generation Building 161 feet by 92 feet by 37 feet height
- Admin/Control/Electrical Building 186 feet by 59 feet by 52 feet height
- Steam Turbine Generator Enclosure 110 feet by 44 feet by 27 feet height
- Gas Turbine Generator Enclosure 129 feet by 37 feet by 37 feet height
- HRSG 138 feet by 48 feet by 110 feet height
- HRSG Stack 22 foot diameter with 150 foot height
- Glycol Fin Fan Cooler 100 feet by 60 feet by 20 feet height
- Gas Compression Area TBD
- Generator Step Up Transformers 48 feet by 30 feet by 20 feet height
- Ammonia Storage Tank 13 foot diameter by 25 foot height
- Maintenance/Warehouse Building included inside Admin/Control Building
- Gas Meter Enclosure 100 feet by 50 feet by 10 feet height
- Air Cooled Condenser 268 feet by 250 feet by 85 feet height
- Demin Water Storage Tank(s) 60 foot diameter with 42 foot height
- Service/Fire Water Storage Tank 40 foot diameter with 40 foot height
- Fuel Oil Storage Tank 73 foot diameter with 48 foot height
- Fuel Oil Delivery Facilities 125 feet by 38 feet by 16 foot height

2.4 Power Generation Equipment

The major pieces of equipment include two combustion turbine generators with an evaporative inlet air cooler, two HRSGs with duct burner, a steam turbine, an air-cooled condenser (main cooling system), a fin-fan cooler (auxiliary cooling system), an electric and emergency diesel fire pumps, and a combustion turbine exhaust stack. Additional support systems and equipment include, but are not limited to, the following:

- Feed-water systems;
- Condensate system;
- Water treatment system comprised of demineralized water trailers;
- Selective catalytic reduction (SCR) system;
- Oxidation (CO) catalyst;
- Chemical storage and injection system;
- Sanitary waste collection and discharge system;
- Fire protection system (including detection and alarm system);
- Domestic (potable) water distribution system;
- Instrument and service air systems;
- Heating, ventilating and air conditioning systems;

- Wastewater collection, treatment and discharge systems;
- Oil-water separators;
- On-site natural gas interconnection;
- On-site natural gas compressor and conditioning station;
- 115 kV overhead electrical transmission line;
- 115 kV switchyard; and
- Controls and instrumentation.

2.5 Auxiliary Equipment

Auxiliary equipment at the Facility includes the following:

- Combustion turbine inlet air evaporative cooler;
- Power transformers;
- Water demineralization system;
- Electric fire pump; and,
- Emergency diesel fire pump (back-up power to the electric fire pump)
- Emergency diesel generator
- Auxiliary Boiler

2.6 Fuel

Natural gas is the primary fuel with ultra-ultra-low sulfur distillate oil serving as a back-up fuel. Storage for the back-up fuel is in a 1,500,000-gallon fuel oil storage tank. The storage tank is equipped with secondary containment capable of retaining 110 percent of the storage tank capacity. Fuel delivery piping outside of the containment area is double walled with interstitial monitoring for leak detection. The fuel off-loading facilities would be capable of handling four tanker trucks simultaneously and has its own containment.

2.7 Key Facility Components

2.7.1 Combustion Turbine Generator

The two combustion turbine generators are internal combustion engines that operate with rotary motion (rotates a shaft to generate electricity). The turbines are composed of three major components: the compressor, combustor, and power turbine. In the compressor section, ambient air is drawn in and compressed up to 21 times ambient pressure and directed to the combustor section where fuel is introduced, ignited, and burned. Hot gases from the combustion section are diluted with additional air from the compressor section and directed to the power turbine section at high temperature. Energy from the hot exhaust gases, which expand in the power turbine section, is then recovered in the form of shaft horsepower (i.e., horsepower present at turbine shaft). More than 50 percent of the shaft horsepower is needed to drive the internal compressor and the balance of recovered shaft horsepower is available to drive the turbine and generate electricity.

Additional auxiliary systems provided with the combustion turbine generator package include: static excitation system, electric starting system, inlet silencer, evaporative inlet air cooler, packaged electrical/control systems, carbon dioxide fire protection systems, vibration monitoring, compressor water wash skids, and engine lubricating oil systems.

2.7.2 Heat Recovery Steam Generators (HRSGs)

High temperature exhaust gases exit the combustion turbine generators and are routed to the two HRSGs via ductwork. In the HRSGs, the heat from the exhaust gases is transferred to water/steam tubes that are immersed in the HRSG gas flow, first to boil the water into steam and then to superheat the steam for use in the steam turbine. The exhaust gases from the HRSG are routed to the stack.

The HRSGs would have supplemental fuel firing provided by an approximately 315×10^6 Btu/hr natural gas-fired duct burner.

2.7.3 Steam Turbine Generator

Steam generated in the HRSGs is expanded through a steam turbine coupled with a generator (steam turbine generator) to generate additional electricity. The steam turbine generator is a multi-stage, reheat, condensing turbine and that produces approximately 263 MW of electric power at an average ambient temperature of 59° F, in the non-duct fired mode of operation. The steam turbine generator is designed to exhaust to an air-cooled condenser. The steam turbine generator would be designed to run continuously, but is also be capable of operating as a cycling unit. The steam turbine generator is located in the generation building.

Provisions have been made in the design to minimize thermal expansion, stresses, distortion and vibration. The steam turbine is designed to shut down under any of the following conditions: overspeed, high vibration, high thrust, high differential expansion, low lube oil pressure and high back pressure. A 100 percent high pressure/low pressure turbine steam bypass system is provided to dump steam to the condenser, if necessary. The turbine bypass system would be utilized for temperature matching on warm and hot starts in addition to keeping the gas turbine in operation in the event of a steam turbine trip.

2.7.4 Gas Compression System

Transmission-pressure gas (390 to 750 psig) will be supplied by a lateral off of the Algonquin Gas Transmission line owned and operated by Spectra Energy. The lateral enters the metering and regulation (M&R) station where gas is first filtered, then metered, heated and regulated. Gas compression facilities are also provided inside the power plant fence line to boost gas pressure in the event that inlet pressure is lower than required for the power plant gas turbines. The M&R station will be designed for a maximum flow rate of 132,000 dekatherms/day (5,400 Mscfh), with a maximum allowable operating pressure (MAOP) of 750 psig.

The Gas Compression System will be comprised of 3 gas compression skids, each capable of supporting 50% of the Facility's maximum flow rate of 132,000 dekatherms/day.

2.7.5 Main System Cooling (Air-Cooled Condenser)

An air-cooled condenser is located adjacent to the generation building to provide cooling for the steam exhausted from the steam turbine. The air-cooled condenser is designed to operate with ambient air as a direct steam-cycle heat sink. Steam is routed from the steam turbine exhaust through ducts to a series of fin tube heat exchangers. The steam flows through the tubes and condenses inside the tubes forming condensate while air flows over the outer tube surface. Condensate is discharged from the air-cooled condenser and returned to the HRSG after the latent heat of vaporization is transferred from the turbine steam directly to the air stream. Air is moved through the air-cooled condensers by a series of fans, with ambient air drawn from below the condenser and the heated warmer air discharged from the top of the condenser.

2.7.6 Auxiliary System Cooling (Fin-Fan Cooler)

A fin-fan cooler (auxiliary cooling system), separate and distinct of the air-cooled condenser, would be provided for cooling of plant equipment and sub-systems. The fin-fan cooler is an air-cooled heat exchanger that rejects heat from a fluid directly to ambient air using a series of tubes, fins and fans similar to an automobile radiator. Propylene glycol / water mixture is used as a coolant. The fin-fan cooling system is designed to support base load capability of the plant up to an ambient temperature of 105° F. This system would be controlled remotely from the plant control room.

The following equipment and sub-systems are served by the fin-fan cooler:

- Steam Turbine Generator (STG) Coolers;
- Combustion Turbine Generator (CTG) Coolers;
- STG and CTG Lube Oil Coolers;
- STG and CTG Auxiliaries;
- STG Hydraulic Power Unit Coolers
- Sample Coolers;
- Service and Instrument Air Compressors and Aftercoolers (if water-cooled); and
- HRSG Feed Pump Oil Coolers;

2.7.7 Evaporative Cooler

The inlet air cooler operates when temperatures exceed approximately 59° F in order to maximize plant efficiency and output. Water is pumped into the evaporative cooling media, which is a cellulose-based material. It is mounted at the inlet of the inlet filter house. The water trickles down and soaks the media, while inlet air is passed through. This causes evaporation of water, causing cooling of the air passing through.

2.7.8 Emergency Diesel Fire Pump

An emergency diesel fuel pump is used only to maintain on-site firefighting capability if electric power was not available from the utility grid.

2.7.9 Stack

Exhaust gas from the HRSGs flow into the two, above grade, stacks located south of the gas turbine generator enclosures.

2.7.10 Aqueous Ammonia Storage

The selective catalytic reduction requires aqueous ammonia injection for NO_x emissions control. A 19 percent aqueous ammonia solution is stored in a 20,000-gallon tank. The 13 foot diameter by 25 foot high tank is a welded of steel construction. The tank is located within a concrete containment area capable of storing 110 percent of the tank contents. The tank has a leak detection system with an audible alarm in the control room. The storage tank and containment design would include provisions for overflow detection and prevention.

2.7.11 Water Tanks

The primary source of water for fire protection is the 500,000 gallon raw water that contains a dedicated capacity of 300,000 gallons specific for the fire protection system. The plant personnel are trained as an on-site fire brigade, working cooperatively with the Oxford Fire Department, to function as the first line of defense in the event of a fire at the plant.

The two (2) demineralized water tanks will both store approximately 875,000 gallons of treated water and both tanks are approximately 60 feet in diameter and 42 feet high. The tanks are located on the south side of the demineralized water treatment area.

A 500 gallon off-line turbine/compressor wash water holdup tank would be installed on-site to manage wastewater generated during off-line CT washes. The waste stream is trucked off-site for appropriate treatment and disposal at a licensed treatment facility.

2.7.12 Indoor Material Storage Areas

Facility operations require limited amounts of lubricating oils and certain other industrial chemicals, stored in specially designed, covered containment areas. All on-site chemical storage areas are situated indoors with appropriate containment.

The combustion and steam turbine generator sets contain lube oil. The oil is stored in steel tanks. The lube oil reservoirs have secondary containment designed to contain 110 percent of the oil volume in the unlikely event of a catastrophic failure. Visual and automated leak detection would be provided by the level and pressure indicating control system.

Chemicals, used oils and lubricants are stored in designated areas with secondary containment. Any incompatible materials (e.g., acid and caustic) are separate containment areas. The portable containers within the storage enclosure would not be stacked more than two high without using a properly designed storage rack for that purpose.

3.0 HAZARD ANALYSIS

This section analyzes the hazards at the Facility and details actions Facility personnel should take in the event of an incident. This analysis is not intended to detail every emergency response procedures, rather, potential hazards were identified that required detailed analysis. Potential resources and receptors categories were selected and analyzed in Section 3.1 and specific hazard analysis was completed for the following categories:

- Section 3.2, Fires and Explosions;
- Section 3.3, Spills;
- Section 3.4, Aqueous Ammonia;
- Section 3.5, Natural Gas;
- Section 3.6, Oil and Hazardous Materials Delivery
- Section 3.7, Blood-Borne Pathogens; and,
- Section 3.8, Severe Storms.

3.1 Resources and Receptors

The potential resources and receptors requiring analysis include:

- Facility personnel;
- Delivery personnel;
- Visitors and contractors;
- Adjacent community; and,
- Surface water and wetlands.

During hazard analysis, these resources and receptors will be addressed, as necessary. A brief summary of each is described below.

3.1.1 Personnel, Visitors, and Contractors

The Facility personnel shall be trained to respond to an event at the Facility. All employees, visitors, and contractors must sign-in/sign-out in the logbook at the Administration/Control Building during routine workdays. Visitors may be asked to read a brief description of the facility and understand the evacuation procedure. During an emergency, the Emergency Coordinator is responsible for obtaining this logbook directly or via a designated individual (e.g., office personnel). This will allow for all personnel to be accounted for in an emergency.

3.1.2 Adjacent Land Uses

Existing adjacent land uses are presented on Figure 3-1-2 and are described below.

The northwestern quadrant of the 1-mile study area consists of developed and undeveloped commercial/industrial parcels, OXA and some residential areas. The northeastern quadrant includes Spectra's gas compression station and primarily undeveloped commercial/industrial and residential areas. The southeastern quadrant consists of primarily commercial/industrial undeveloped land and residential areas, including portions of the fifty-five plus golf course community of Oxford Greens. The southwest quadrant is nearly entirely commercial/industrial property and OXA.

3.1.3 Wetlands and Ecological Resources

Existing wetland features occurring on or near the project site are depicted in Figure 3-1-3 and described below.

Wetland 1 ($\pm 10,322$ SF) is a dense glacial till hillside seep wetland meadow wetland system with scattered shrubs characterized by a relatively narrow clearing surrounded to the north and south by mature upland forest located in the central-west portion of the Site. Water is conveyed west, originating at a stone wall at the edge of a large open field. This wetland feature terminates as it approaches the Woodruff Hill cul-de-sac. Evidence of mechanical compaction in the form of tire ruts is prevalent throughout this wetland seep system along with disturbed wetland soil profiles.

The majority of Wetland 2 ($\pm 10,561$ SF on site) is off-site, with only its western edge located in the northwest corner of the Site. Wetland 2 is a complex of forested, scrub/shrub, and emergent seep wetland habitats formed in dense glacial till. An overhead electrical distribution ROW running north/south along the Site's western property boundary, north of the CL&P ROW, bisects the eastern upper reaches of this wetland system. Evidence of mechanical compaction in the form of tire ruts and gravel surfaces is prevalent throughout this utility ROW resulting in shallow ponding water at the time of inspection. Wetland 2 generally drains east to west across a moderately west-facing slope, formed in dense glacial till.

Wetland 3, located entirely off Site along the west property boundary and connected to Wetland 2 further off Site to the west, is a small hillside seep wetland system that has experienced high levels of anthropogenic activity. Wetland 3 is generally located at the confluence of a CL&P ROW and Woodruff Hill Road cul-de-sac. As such, the hydrology and nature of Wetland 3 has been highly altered from previous filling activities associated with CL&P maintenance and upgrading of this electrical transmission ROW, resulting in disturbed wetland soil profiles, surface compaction and altered vegetation communities. This wetland system receives hydrology from the surrounding uplands to the north and east via seasonal overland flow and groundwater exfiltration, as well as a PVC pipe conveying flows from a dug drainage swale located along the east side of Woodruff Hill Road on the Site.

Wetland 4 (± 178 SF) is a very small, isolated man-made depressional wetland feature located in a generally flat, forested upland area located in the central-north portion of the Site. This depression was artificially created in dense well drained glacial till soils, apparently the result of a dug test pit that was improperly backfilled. This anthropogenic feature has formed a small depression that intercepts the seasonally high groundwater table as evident by a review of disturbed hydric soil profiles.

3.2 Fires and Explosions

The use of flammable materials at the Facility results in the potential for fires and/or explosions. As a result, fire prevention systems have been designed into the facility and are detailed below.

3.2.1 Fire Incident Prevention

Good housekeeping is an essential element of fire prevention. Waste paper, rags, and other combustible material shall not be allowed to accumulate. Emergency exits and passageways shall be free of obstructions at all times. Employees shall eliminate such hazards if possible and in any event, report them to supervisors.

All employees will be informed of the following:

- 1) Smoking is allowed only in designated areas within the Facility;
- 2) Where the nearest fire exit is located in regard to the work area;
- 3) What to do when a fire alarm sounds;
- 4) How to sound a fire alarm;
- 5) The location of fire extinguishers nearest the work area;
- 6) The meaning of identification markings on fire extinguishers; and
- 7) The emergency evacuation site meeting point location and evacuation routes.

3.2.2 Fire Protection Equipment

This section describes the onsite equipment and systems to be provided to prevent or handle fire emergencies and hazardous substance incidents during operation.

The Facility shall have multiple safety systems, including on-Site fire protection systems and onsite emergency response equipment. These systems will include pull boxes, on-Site fire hydrants, fire suppression systems, portable fire extinguishers, an internal public address system, emergency lighting, first-aid kits, spill response kits, eyewashes, safety showers, and personal protective equipment such as hard hats, safety shoes, and safety glasses. On-site Facility personnel shall be trained in fire safety.

The Facility fire protection system shall be designed in accordance with the State Fire Safety Code, and the NFPA Standard 101 Life Safety Code, latest edition. A complete onsite fire protection system shall be installed for emergency use. The source of fire suppression water will be from onsite storage supplied by an interconnection to the Heritage Village Water Company potable water system.

This fire protection system will be highly protective of the Facility workers and, as a result, is also protective of the neighborhood. Component specific fire safety systems are described below.

3.2.3 Combustion Turbine Generating Sets

The combustion turbine generator will include controls to detect fire, unsafe temperatures, or explosive atmospheres in the equipment. The enclosure will be equipped with pre-engineered carbon dioxide (CO₂) fire suppression systems controlled by fire and heat detectors.

3.2.4 Gas Compressor Building

The enclosure will be provided with smoke and gas detectors, hand-held fire extinguishers, and a remote shutoff of the gas feed.

3.2.5 Fuel Tank Area

A foam deluge system will be provided at the ultra-low sulfur diesel fuel storage tank and unloading area.

3.2.6 Main Step-up Transformer

Fire walls will be provided for protection of structures.

3.2.7 Yard Fire Hydrants and Fire Water Supply

Hydrants will be provided throughout the Facility, including a hydrant at the Facility's primary response entrance.

3.3 Spills

Spill prediction, prevention, and control shall be achieved through the use of proper unloading procedures, the use of spill control devices, and the practice of regular maintenance and inspections of the tanks and/or the storage systems.

Implementation of the standard fueling procedures, spill control devices, inspections and security measures at the Facility shall minimize the potential for a spill or release associated with storage tanks, chemical storage areas, and oil storage systems.

The potential chemical hazards at the Facility are associated with the various oil/petroleum products and chemical materials used at the Facility. In the event of an oil or chemical spill, only appropriately trained Facility personnel are allowed to provide emergency response. Potential Facility worker exposure to these chemicals could occur through inhalation, ingestion, or absorption.

Ingestion and absorption will be controlled through the use of personal protective clothing and decontamination procedures. Inhalation hazards will be controlled through the use of respiratory protection. Skin and eye contact of all media containing contaminants shall be avoided.

A summary of chemical hazards and safety information is provided on Table 3-3. A detailed presentation of chemical hazards and safety information is presented on the material safety data sheets provided in Appendix B.

**Table
Oil and Hazardous Material Response and Safety Information**

3-3:

Chemical Name	Federal RQs 40 CFR 302 TPQ/ CERCLA National Response Center		Exposure Controls	Physical Properties	Exposure Symptom/ First Aid
Bearing Oil	None/None. (Report to NRC if release reaches surface water).	Any quantity.	TLV= 5 mg/ m3 Use NIOSH respirator if mist is involved.	UEL: ND LEL: ND F.P.: 300 <input type="checkbox"/> F B.P.: 600 <input type="checkbox"/> F S.G.: ND Amber color, sweet odor.	Mild irritant to eyes, skin. Irrigate immediately with water.
Transformer and Auxiliary Transformer Oil	None/None. (Report to NRC if release reaches surface water).	Any quantity.	TLV = ND Stay upwind; use NIOSH respirator	UEL: ND LEL: ND F.P.: >295 <input type="checkbox"/> F B.P.: >300 <input type="checkbox"/> F S.G.: 0.88 White liquid with petroleum odor.	Irritation to eyes, skin. Irrigate immediately with water.
Generator and Gas Compressor Lube Oil	None/None. (Report to NRC if release reaches surface water).	Any quantity.	PEL: 5 ppm TLV: 5 ppm (as oil mist) Use NIOSH respirator if mist is present	UEL: ND LEL: ND F.P.: 300 <input type="checkbox"/> F B.P.: 425 <input type="checkbox"/> F S.G.: 0.89 Clear and Bright liquid.	Mild irritation to skin. Irrigate immediately with water.
Turbine Lube Oil	None/None. (Report to NRC if release reaches surface water).	Any quantity.	PEL: 5 ppm TLV: 5 ppm (as oil mist) Use NIOSH respirator if mist is present	UEL: ND LEL: ND F.P.: >392 <input type="checkbox"/> F B.P.: >527 <input type="checkbox"/> F S.G.: 0.953 Brown oily liquid with petroleum odor.	Mild irritant to eyes, skin. Irrigate immediately with water.
Fuel Oil	None/None (Report to NRC if release reaches surface water).	Any quantity.	Use NIOSH respirator if mist is present.	UEL: 5 % LEL: 0.7% F.P.: 100-162 <input type="checkbox"/> F B.P.: 347-617 <input type="checkbox"/> F S.G.: ND Colorless to yellowish, oily liquid with a strong odor.	Irritation to eyes, skin, respiratory system; nausea, headache. Irrigate immediately with water.

Table 3-3: Oil and Hazardous Material Response and Safety Information					
Chemical Name	Federal RQs 40 CFR 302 TPQ/ CERCLA National Response Center		Exposure Controls	Physical Properties	Exposure Symptom/ First Aid
Aqueous Ammonia (19 percent)/1336-21-6	None/1,000 lbs (110 gallons) report to NRC.	1,000 lbs (110 gallons) to air or 100 lbs (11 Gallons) to land.	PEL: 50 ppm TLV: 25ppm IDLH: 300 ppm With SCBA only at >250 ppm	UEL: 25% LEL: 16% F.P.: Autoignition 1204°F B.P.: 97 °F S.G.: 0.9 Colorless solution, offgasses with pungent, suffocating odor.	Irritation to eyes, skin, respiratory system; potentially toxic if ingested. Irrigate immediately with water.
Dielectric Fluid	None/None (Report to NRC if release reaches surface water).	Any quantity.	Use NIOSH respirator if mist is present	UEL: ND LEL: ND F.P.: 370 °F B.P.: 644 °F S.G.: ND Clear liquid with a mild sweet odor.	None
Natural Gas	Report significant incident to NRC.	None.	TLV: simple asphyxiant	UEL: 15% LEL: 5% F.P.: unknown, autoignition >1,000°F Colorless gas, lighter than air.	Absorb/inhalation risk. Can lower oxygen content in confined area. Rapid evaporation may cause frostbite. Move to fresh air.

3.4 Aqueous Ammonia

Aqueous ammonia will be stored on site for use in the Selective Catalytic Reduction (SCR) emissions control system for nitrogen oxides. An aqueous ammonia solution containing less than 20 percent ammonia by weight will be stored in a 20,000-gallon tank. The tank will be an approximate diameter of 13 feet and an approximate height of 25 feet.

The tank will be located within an impermeable concrete containment area. The containment area will be approximately 50 feet long and 20 feet wide. The containment basin is designed to contain 110% of the tank contents in the event of a total tank failure that would release the tank contents.

Facilities such as the CPV Towantic Energy Center that store aqueous ammonia solutions containing less than 20 percent ammonia by weight are not subject to the United States Environmental Protection Agency (EPA) Risk Management Planning (RMP) Rule.

3.5 Natural Gas

The Facility utilizes clean burning natural gas as its primary source of fuel. Fuel gas handling and use shall comply with the safety measures mandated in the wake of i) the Final Report entitled "Governor's Commission Re: Kleen Energy Explosion – Final Report" issued by the Nevas Commission on June 3, 2010; and ii) the Executive Report issued by the Thomas Commission on September 21, 2010.

The following standard operating procedures will be incorporated to minimize the risk associated with natural gas use:

- The pipeline interconnection operation and management will be performed in accordance with the Office Pipeline Safety standards;
- Equipment will be cathodically protected to reduce corrosion;
- Natural gas systems will be operated with direct monitoring sensors;
- Monitoring data will be collected in the Control Room and alarms shall be set to alert the operator of possible safety concerns and alerts;
- The Control Room shall be able to notify the Fire Department of the site conditions and provide guidance on response, if needed;
- Monitoring instruments and sensors shall be placed on a preventative maintenance schedule that includes calibration and alarm testing;
- Site alarms shall notify workers of an emergency condition. These shall be tested periodically to verify operation;

- The operator shall be monitoring onsite gas usage and conditions and initiate shut down during an unusual event; and
- Routine training of personnel shall be conducted and coordinated with the Fire Department in order to provide effective response during emergencies.

All procedures shall conform to the Office of Pipeline Safety, OSHA, and NFPA standards. Programs and systems shall be reviewed and updated in the Facility Operating Procedures as part of the Facility's "Management of Change" program, if new procedures or equipment are introduced.

3.6 Oil and Hazardous Materials Delivery

All operators of heavy equipment shall maintain appropriate licenses for the use of heavy equipment. The operation of all vehicles shall be performed in accordance with State and Federal Department of Transportation requirements. Vehicles entering the Facility will be visually inspected by the Technician overseeing the intended operation. Any visible safety defect shall prevent the vehicle from entering the Facility until it is repaired.

Drivers transporting hazardous materials must have a current Commercial Driver's License and completed (up-to-date) log books. The vehicles must be properly placarded. It is the responsibility of all drivers to comply with all transportation regulations including obeying posted speed limits, covering loads and utilizing designated transportation routes.

The potential for an OHM release from a vehicle at the Facility exists during routine operation of the Facility. All unloading procedures shall be completed in areas of secondary containment. Any release of OHM due to a vehicle accident shall require immediate notification and spill response outlined herein.

3.7 Blood-Borne Pathogens

"Blood-borne pathogens" refers to pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B virus, Human Immunodeficiency Virus, Clostridium tetani (tetanus), and Clostridium perfringens (gas gangrene).

The only Facility personnel who might be exposed to this hazard under normal conditions is the initial emergency responder, in the event he or she is required to render first aid to an injured worker while waiting for emergency personnel. First aid kits shall be available throughout the Facility and contain gloves, surgical mask, and safety goggles to be used whenever contact with bodily fluids is possible. The kits shall also be equipped with a CPR mask that has a one-way valve in the event mouth-to-mouth resuscitation of a worker is required. Antibiotic cleansers shall be included in the kit, as will special bags for the containment of medical waste.

3.8 Severe Storms

In order to ensure adequate coverage in the event of a severe storm, such as a hurricane or blizzard, the Plant Manager or Compliance Coordinator will determine a list of essential personnel required regardless of the operating status of the units. All employees scheduled to work will be expected to arrive for work as scheduled unless previous arrangements have been made with their supervisor. Non-essential personnel will be released from duty well in advance of the storm's arrival. All essential personnel will be expected to report to work early enough to avoid being detained by the arrival of storm conditions. Essential personnel should come prepared to stay at the plant for a period as long as two days in the event that a severe storm prevents other employees from returning to work as scheduled.

4.0 EMERGENCY RESPONSE

This section details emergency response actions Facility personnel shall conduct in the event of an incident. Any incident will be recorded on an Incident Report Form. These actions are presented in the following subsections:

- Section 4.1, Discovery, which includes Key Personnel and Job Functions, Spill Reporting and Documentation, and Activation of the On-Site Emergency Operations Center;
- Section 4.2, Facility Evacuation Plan;
- Section 4.3, Initial Response Actions, which includes procedures for a Medical Emergency, Power Outages, OHM Spill, Natural Gas Release, Severe Weather, Hostile Threats, and Vehicular Accidents;
- Section 4.4, Sustained Actions; and
- Section 4.5, Termination, Decontamination, Waste Management, and Follow-up Actions.

4.1 Discovery

The Emergency Coordinator (or Alternate) is responsible for determining the proper response to an incident at the Facility. If an employee discovers a fire, spill, malfunctioning equipment, or other emergency, immediately contact the Control Room or Emergency Coordinator (see Table 4-1). Prior to the completion of construction and mobilization of operations personnel to the site, the Engineering Procurement and Construction Contractor (EPC Contractor) will hold primary responsibility for compliance with this Plan in the event of an emergency. Construction phase emergency contacts can be found in Table 4-1(a).

A release or threat of release of OHM to the environment, including a release to a secondary containment structure, is considered a potential emergency. Facility personnel should be able to recognize when a situation evolves beyond his or her ability to control or mitigate the spill, leak, or other emergency incident without help.

The following information should be provided to the Control Room or Emergency Coordinator:

- Nature of emergency;
- Location of emergency;
- Size and extent of emergency;
- Materials involved; and
- Extent of injuries to personnel, if any.

For situations where there is a release of OHM to the environment, the Control Room or Emergency Coordinator shall be contacted **as soon as possible**. The Emergency Coordinator has command authority until relieved by management and shall direct the appropriate emergency response. If emergency services arrive at the Facility in the event of an incident, the Emergency Coordinator will transfer command to the emergency services lead.

CPV Towantic shall implement a Code Red (or similar) notification system to ensure timely notification of local agencies and other organizations. Notification, and the resulting mobilization of resources, **will not be delayed** pending collection of all information. Missing information shall be supplied during follow-up calls to the agencies.

In the event of a fire or discharge of oil or other hazardous material, rapid notification of responsible Facility personnel, oil spill and/or hazardous material removal organizations, and federal, State, and local regulatory agencies or emergency response personnel is essential to protecting the environment. Table 4-1 provides the contact telephone numbers of all persons or groups that may require notification.

Table 4-1: Contacts			
Contact	Name	Phone Number	Secondary Info
Plant Manager	TBD	TBD	TBD
Compliance Coordinator	TBD	TBD	TBD
Production Manager	TBD	TBD	TBD
Control Room	TBD	TBD	TBD
<u>Key Air / Waterbury-Oxford Airport</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
Oxford Fire Department	TBD	TBD	TBD
Oxford Hazardous Materials Response Team	TBD	TBD	TBD
Oxford Police Department	TBD	TBD	TBD
Connecticut State Troopers	TBD	TBD	TBD
National Response Center	TBD	TBD	TBD
CT DEEP Spill Hotline	TBD	TBD	TBD
Regional Medical Center Emergency Department	TBD	TBD	TBD
State Emergency Response Commission	TBD	TBD	TBD
EPA Region I -- After Hours Emergencies	TBD	TBD	TBD

Table 4-1(a): Contacts			
Contact	Name	Phone Number	Secondary Info
<u>EPC Project Manager (Title TBD)</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>EPC Safety Manager (Title TBD)</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>CPV Asset Manager (Title TBD)</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>Key Air / Waterbury-Oxford Airport</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>Oxford Fire Department</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>Oxford Hazardous Materials Response Team</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>Oxford Police Department</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>

**Table 4-1(a):
Contacts**

<u>Contact</u>	<u>Name</u>	<u>Phone Number</u>	<u>Secondary Info</u>
<u>Connecticut State Troopers</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>National Response Center</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>CT DEEP Spill Hotline</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>Regional Medical Center Emergency Department</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>State Emergency Response Commission</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<u>EPA Region I - After Hours Emergencies</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>

4.1.1 Key Personnel and Job Functions

The Plant Manager or Compliance Coordinator is responsible for ensuring implementation of the following:

- Emergency command center management;
- Communications;
- Fire fighting;
- Site Security;
- Rescue operations;
- Emergency medical services;
- Damage assessment;
- Mitigation and investigation;
- Corporate notification for public information;
- On-scene safety functions at the emergency site;
- Warning and evacuation of plant;
- Sheltering, feeding, and counseling functions;
- Accounting for personnel;
- Securing entrance gates; and
- Issuing the “ALL CLEAR.”

During a large scale response effort, multiple response coordination is proposed to be organized among Facility management and/or staff, the federal government, local officials, and emergency response officials, state representatives and other organizations, as necessary. Appropriate officials from each organization and the Facility shall participate in a coordinated decision-making process during the response.

This system, based on the national incident command system, uses the basic principles of planning, directing, organizing, coordinating, communicating, delegating and evaluating during a response. This system assigns these tasks to five functional areas under the direction of this joint command staff. The functional areas include: *Command, Operations, Planning, Logistics, and Finance*, presented and described below. The Compliance Coordinator (Table 4-2) shall assign

individuals to roles described below as they become necessary. It is not necessary to assign a separate individual to each role. One person may assume two or more roles as necessary. Response actions will be managed by the following corporate organizational structure:

Table Individual Roles		4-2:
Command and Control:	Plant Manager, Compliance Coordinator or designated representative	
Liaison with Government:	Plant Manager	
Safety:	Compliance Coordinator or designated representative	
Spill Operations:	Compliance Coordinator or designated representative	
Planning:	Compliance Coordinator or designated representative	
Public Information:	Plant Manager or designated representative	
Logistics:	Plant Manager	
Finance:	Plant Manager	

4.1.2 Spill Reporting and Documentation

In the event of a release of OHM, rapid notification of responsible facility personnel, oil spill removal organizations and state and federal regulatory agencies may be essential to protecting the environment in the vicinity of the Facility. Each employee shall be trained to recognize emergency situations and shall understand when and how to make the appropriate notifications.

CPV Towantic shall be responsible for all reporting and documenting reportable quantities of spilled oil and/or hazardous materials. The following actions are to be taken by the Compliance Coordinator in the event of a reportable quantity release:

- **National Response Center** (NRC) will be notified by calling (800) 424-8802 in accordance with the requirements of 40 CFR Part 117 and 40 CFR Part 302 as soon as they have knowledge of the release.
- **State of Connecticut**, under CGS Chapter 446k, Section 22a-450, requires that all releases and spills of petroleum and most hazardous materials be reported to the following:

CT DEEP Emergency Response Unit (Spill Hotline)

1-866-DEP-SPIL (1-866-337-7745) toll free

Or

1-860-424-3338

Local authorities (e.g., fire department) will be notified of any major spills. Prompt reporting allows quick response, which may reduce any adverse impacts to human health and the environment.

Under CGS Ch. 446k, Sec. 22a-450, the person in charge of any terminal for the loading of any oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes, which by accident, negligence or otherwise causes the discharge, spillage, uncontrolled loss, seepage or filtration of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes, shall immediately report facts such as:

- the location;
- the quantity and type of substance, material or waste;
- the date and the cause of the incident;
- the name and address of the owner; and
- the name and address of the person making the report and his relationship to the owner.

In the unlikely event that a spill has reached navigable waters in “harmful quantities” (40 CFR Section 110.6), the Emergency Coordinator or person with any knowledge of such conditions must immediately notify the federal NRC at:

National Response Center
(800) 424-8802 (24 hours per day)

When contacting the NRC, the following information should be provided:

- time, location, and source of the spill;
- type and quantity of material spilled;
- cause and circumstances of the spill;
- hazards associated with the spill;
- personal injuries;
- corrective action taken or planned to be taken;
- name and telephone number of individual reporting the spill; and
- any additional pertinent information.

In addition, the EPA Region I Response Center should be contacted immediately for any spill that reaches navigable waters (per 40 CFR Section 110.6) at the following number:

EPA Region I Hotline
(888) 372-7341 (24 hours per day)

4.1.3 Activation of the On-Site Emergency Operations Center

The location designated for the on-site Emergency Operations Center is the Control Room or other designated area within the Facility. In the event of an incident in the Control Room, the remote Emergency Operation Center shall be at the Emergency Evacuation Meeting Point.

The Plant Manager or Compliance Coordinator will decide on the activation of the Emergency Operations Center. The Emergency Operations Center includes detailed drawings of the Facility, standard and emergency communication equipment, contact information, and this Plan.

4.1.4 List of Emergency Equipment

Facility personnel shall act as first responders, with a primary function to identify the source and control where possible. Spill kits shall be located throughout the Facility and specifically in areas of oil and/or hazardous material use to support this first response. In each spill kit, a Department of Transportation, *Emergency Response Guidebook*, shall be placed on top. This guidebook shall be designed to support first responders during the initial phase of the hazardous materials incident.

At minimum, each spill kit will be designed to respond to at least a 20-gallon spill for oil, water, coolant, non-aggressive chemical, and will be contained in a water proof container with the following:

- 4- 10 foot absorbent socks;
- 10-Mat pads;
- Temporary disposal bags;
- labels;
- Emergency Response Guidebook;
- 1-Nitrile suit; and
- 2-pairs Nitrile gloves.

Additional personnel protective equipment shall be available in the Warehouse.

4.1.5 Onsite Medical Equipment and Supplies

First aid/CPR kits shall be located at the following locations:

- Emergency Evacuation Meeting Point;
- Control Room;
- Maintenance Building;
- Turbine Building; and
- Water Treatment Building.

AED stations shall be located throughout the Facility at the following locations:

- Location 1 TBD;
- Location 2 TBD; and
- Location 3 TBD.

4.2 Evacuation Plan

4.1.64.2.1 Facility Evacuation Plan

In all emergencies, the Compliance Coordinator will remain in direct charge, unless superseded by the alternate.

Emergency notifications and/or instructions will be relayed over the Facility public address system.

All personnel, visitors, and contractors must safely make their way to the **Emergency Evacuation Meeting Point: [INSERT MEETING POINT TBD]** All must wait for an accountability check and release by the Compliance Coordinator.

The Facility shall be equipped with distinct audible and visual emergency signaling devices (flashing lights and audible steady or intermittent tone) as follows: **[INSERT SIGNALING DEVICES AS NEEDED]**

- **Steady tone** – alert employees to immediately evacuate the building; and
- **Flashing warning lights** – alert employees of an emergency in high noise level areas.

The emergency signal (siren) will alarm for a minimum of five (5) minutes.

Any time the alarm system has been activated, the Compliance Coordinator will record a “Fire/Alarm Report” in the Control Room Logbook and a notice will be forwarded to the Facility personnel.

Employees can activate the alarm system by 1) pulling a manual fire alarm station; or, 2) contacting the control room and asking that the alarm be sounded.

NOTE:

Any employees can report an emergency to the Fire Department via a Facility phone by dialing 911, then notifying the Compliance Coordinator as to the extent of the emergency.

4.1.6.14.2.1.1 Responsibilities

Facility personnel, visitors, and contractors who are ordered to evacuate shall be responsible for following directions given by management, supervisors or the Compliance Coordinator and for reporting to the Emergency Evacuation Meeting Point. The route map to the Emergency Evacuation Meeting Point shall be posted at the Emergency Exits of all Facility buildings.

Supervisors shall be responsible for evacuating personnel and visitors and knowing the location of all individuals evacuated.

The Plant Manager or Compliance Coordinator will be responsible for determining that an evacuation is required, performing the head count and accounting for all personnel, and for directing the evacuation.

If there is potential for off-site impacts (i.e., smoke) which may pose a nuisance to the public, the Fire Department will become the lead for any community notification/evacuation plan. CPV Towantic will support the Fire Department with pre-incident planning as part of routine site familiarization and training with key Fire Department staff.

4.1.6.24.2.1.2 *Precautions and Requirements*

Facility personnel who have been ordered to evacuate must report to the Emergency Evacuation Meeting Point. If this is not done, unnecessary risks may be imposed on those designated to conduct searches for those persons that remain unaccounted.

Facility personnel should escort visitors and private contractors during an evacuation. Equipment operators should ensure all equipment is in a safe (i.e., shut down) condition prior to evacuation, if conditions allow.

If emergency conditions threaten the Emergency Evacuation Meeting Point, the Compliance Coordinator must designate an appropriate alternate area.

4.1.6.34.2.1.3 *Accountability*

Accountability is the process whereby the location and status of all site personnel, visitors, and contractors is determined during an emergency. This is necessary to determine if anyone is missing or in trouble. It may also prevent a search effort being made for an employee believed to be missing onsite who is actually safely away from the hazard area. All employees, visitors, and contractors must sign-in/-sign-out of the logbook at the Administration and Control Room Building during routine workdays. During an emergency, the Compliance Coordinator is responsible for obtaining this logbook directly or via a designated individual (e.g. office personnel).

Upon receipt of an order to evacuate, personnel will follow the evacuation procedures for the building to the Emergency Evacuation Meeting Point. Based on information obtained regarding potential threats, personnel will select the appropriate evacuation route at the time of the incident.

Once the evacuation is complete, the Compliance Coordinator will account for personnel. Arrangements will be made with the Oxford Fire Department for search and rescue, if it becomes necessary.

4.1.74.2.2 *Local Area Evacuation Plan*

In the event of an emergency that may require evacuation of the nearby areas surrounding the Facility, the Compliance Coordinator shall immediately contact the Oxford Fire Department to provide notification of:

- Time and nature of emergency;
- Health risks resulting from emergency;
- [Placeholder - TBD INFORMATION REQUIRED]; and

- [Placeholder - TBD INFORMATION REQUIRED].

4.24.3 Initial Response Actions

Upon being notified of the emergency situation, the Compliance Coordinator will determine the following:

- Hazards involved;
- Extent of the incident;
- Resources threatened;
- Exclusion zones needed;
- Facility evacuation required; and
- Outside emergency response assistance needed.

More detailed information is provided below. It is understood that modification to these procedures may be instituted during an emergency if the Compliance Coordinator determines a better response action.

4.2-14.3.1 *Medical Emergency*

The response actions to be taken by Facility personnel in the event of a medical emergency, personal injury, industrial accident, exposure to hazardous materials, and/or fire are as follows:

1. Identify the nature of the medical emergency, determine the cause if possible, and take precautionary measures to protect other Facility personnel from further injury;
2. If time allows, notify or designate a person to notify the Emergency Coordinator. If the situation is life threatening any personnel may contact emergency aid from outside the Facility;
3. The Compliance Coordinator will summon emergency aid from outside the Facility, as necessary;
4. Only professional medical response personnel should move victims of head, neck, or back injuries unless the situation is life threatening. Facility personnel are not required to administer first aid. Any employee who does administer first aid does so at his/her own risk;
5. Facility response personnel will eliminate and continue to restrict any medical hazard;
6. In the event of a chemical exposure, the Emergency Coordinator will immediately forward the appropriate Material Safety Data Sheet to on-site emergency response personnel and to the appropriate hospital;
7. Facility personnel will not enter confined spaces during emergencies at any time. Such entry will not be completed until the Compliance Coordinator has cleared the area via the confined space entry requirements of 29 CFR 1910.146 or the trained confined space

officials of the Fire Department and/or the Facility's Emergency Response Contractor have given the all clear signal; and

8. The Compliance Coordinator will complete a follow-up incident report.

4.2.24.3.2 Emergency Procedures for Power Outages

In the event of a power outage at the Facility, personnel should contact the Control Room begin shutdown procedures in accordance with the operations manual.

The Compliance Coordinator will directly notify personnel of specific procedures over the Facility intercom system (battery backup) of the status of the outage and incident specific procedural tasks.

4.2.34.3.3 Emergency Procedures for Oil and/or Hazardous Materials Spills

All spills due to container failure must be reported to the Compliance Coordinator. All non-container failure spills of 1 gallon or less that cannot be cleaned up within 30 minutes must be reported to the Compliance Coordinator.

Specifically, should a Facility employee observe a release from an aboveground storage tank, petroleum storage system, or associated tank truck unloading activities, the employee will immediately notify the control room and the Compliance Coordinator.

If the individual identifying the release is a trained emergency responder and the individual can control the spill at the time of the release without endangering themselves or any other person in any way, then the individual shall take action to mitigate the release. However, in most circumstances, the release shall be fully evaluated by the Compliance Coordinator prior to implementing response actions.

4.2.3.14.3.3.1 Oil and/or Hazardous Material Spill Response

In the event of an oil and/or hazardous (OHM) materials spill, personnel should take the following steps:

1. If an immediate threat to acute exposure or life is involved, personnel must immediately evacuate the area;
2. If it can be completed safely, attempt to control or stop the source of the spill. Satellite spill kits are located in every building using or storing OHM.
3. If possible, attempt to control the migration of the spill;
4. Prevent other personnel from entering the area of the spill, unless they are trained in emergency response and are present to assist;
5. Contact the Compliance Coordinator;

6. The Compliance Coordinator is responsible for identifying the extent of the incident and notifying the local officials and regulatory authorities; and
7. The Compliance Coordinator will determine if the Facility trained response team should be mobilized to the area and/or if the Facility's 24-hour emergency response contractor should be contacted. The Compliance Coordinator will determine if the Fire Department should be notified. The Compliance Coordinator will determine the method of response for the team (e.g., level of PPE, shutting off of feed systems, shutting off of electrical power to the area).

For a spill or leak of OHM which is small enough to be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel, and which does not pose an adverse exposure hazard to employees, then the spill will be handled in the following manner:

1. Make sure all unnecessary persons are removed from the hazard area. Workers involved in the cleanup shall put on protective clothing and equipment;
2. If flammable material is involved, remove all ignition sources, and use spark and explosion proof equipment and clothing;
3. If possible, try to stop the leak;
4. Use absorbent pads, booms, earth, bagged absorbent to contain, divert, neutralize and clean up the spill. Prevent the spilled material from leaving the containment area and reaching a storm drain;
5. Following source and release control, place all containment and cleanup materials in drums for proper disposal; and
6. Place all recovered liquid wastes in drums for removal to an approved disposal facility.

Following cleanup, all emergency equipment and spill containment equipment shall be returned to ready status (restocked).

If the OHM spill is large, the Facility's emergency response contractor and/or the Fire Department will be delegated the authority for directing the locations of the following:

- Exclusion Zone;
- Contaminant Reduction Zone;
- Support Zone; and
- Staging Area.

During this activity, the Compliance Coordinator will provide site security and qualified Facility staff to support the Emergency Response Contractor and/or the Fire Department.

| 4.2.3.24.3.3.2 *Aqueous Ammonia Spill Response*

For a release of aqueous ammonia, stay up wind, close transfer valves if possible, keep others out of the area, and notify the Compliance Coordinator.

If the source of the aqueous ammonia release has not been controlled or the release is greater than 1 gallon, or the incident is accompanied by a fire at any quantity, the Compliance Coordinator will immediately contact the Fire Department and the Facility's Emergency Response Contractor.

If the source of aqueous ammonia is controlled and the total released is 1 gallon or less, and fire does not accompany the incident, the Facility emergency response team should do the following:

1. Prepare an exclusion zone and allow the area to ventilate;
2. Approach the exclusion zone with full face respirators fitted with ammonia/ methylamine cartridges and neoprene and nitrile protective equipment. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres;
3. Monitor air concentrations of ammonia with a portable ammonia detector;
4. No personnel will advance into the area;
5. Contain and recover the liquid where possible. Do not flush to sewer system. Containerize, closed lid tightly, label, and place in the hazardous waste storage area; and
6. Absorb as necessary with clay or other bagged inert absorbent in the spill kit, and containerize, close lid tightly, label, and place in the hazardous waste storage area.

| 4.2.44.3.4 *Emergency Procedures for Natural Gas*

Possible signs of a natural gas leak at the Facility include the following:

- A blowing or hissing sound;
- Dust blowing from a hole in the ground;
- A gaseous or hydrocarbon odor;
- A spot of dead or discolored vegetation in an otherwise green area;
- Abnormally dry or hardened soil; and
- Flames, if a leak has ignited.

In the event an employee suspects a natural gas leak, complete the following:

- Avoid any open flames or other sources of ignition;
- Do not start up or shut down motor vehicles or electrical equipment;

- Evacuate the area and try to prevent unsuspecting people from entering;
- Abandon any equipment being used in or near the area. Your personal safety should be your first concern;
- Notify the Control Room and the Compliance Coordinator immediately so the leak can be verified and necessary corrective measures taken;
- Do not attempt to extinguish a natural gas fire; and
- Do not attempt to operate any pipeline valves without explicit direction from the Control Room Operator.

If a natural gas leak monitor, sensor, or operating parameter indicates a potential natural gas leak and/or if an employee notifies the Control Room of a leak, the Operator or Technician will immediately attempt to isolate the leak area and will contact the Compliance Coordinator. If necessary based on site conditions, this may include system shutdown.

If fire accompanies the leak detection, the Compliance Coordinator or the Control Room will immediately contact the Fire Department.

If the source of the leak cannot be identified or controlled by the Operator or Technician, the Compliance Coordinator or the Control Room will immediately contact the Fire Department and automatic shut down of the interconnection.

4.2.54.3.5 Emergency Procedures for Severe Weather

During a severe storm (e.g., hurricane, blizzard, etc.), a site-specific emergency may be realized. General emergency response procedures required as a result of the severe weather are addressed in other sections of this plan (e.g., spill, power outage). In the event of severe weather, Facility personnel shall initiate the following procedures.

1. Notify the Plant Manager and Compliance Coordinator as soon as a severe weather warning has been announced.
2. The Compliance Coordinator will monitor the severe storm warning and alert the Facility personnel of the situation.
3. The Compliance Coordinator will request all loose equipment be secured to minimize damage from high winds.
4. As time permits and as determined by the Compliance Coordinator for the specific situations, tanks will be filled to design capacity to reduce lift load.
5. Exterior storage of materials will be relocated to interior locations where possible, and as needed.
6. A decision for key staff only operations will be made at least 12 hours in advance when possible.

7. The Compliance Coordinator will coordinate any required shut down procedures necessary based on a key staff only schedule.
8. The Compliance Coordinator will perform a safety inspection following the implementation of this plan.
9. Once complete, the Compliance Coordinator will notify the Facility personnel of the status of this operation.
10. Following the severe weather emergency, the Compliance Coordinator will complete a safety inspection of the Facility and implement and direct any necessary remedial actions.

| 4.2-64.3.6 *Emergency Procedures for Hostile Threat*

The Facility shall be designed to prevent unauthorized access. However, a hostile threat may be delivered via in-person, off-site, by telephone, package delivery, or internet.

A hostile threat constitutes a site-specific emergency. In the event of a hostile threat, Facility personnel will respond as follows:

1. Get detailed information on the source of the threat as may be available, including the description of the suspicious items, markings, or identifying addresses, **BUT DO NOT TOUCH OR MOVE ANY SUSPICIOUS PACKAGE OR ITEM**. Save any e-mail threat;
2. Notify the Plant Manager and Compliance Coordinator;
3. The Compliance Coordinator will immediately contact the Fire Department and the State Troopers;
4. The Plant Manager or Compliance Coordinator will make the decision whether to evacuate all or a portion of the Facility and immediately inform Facility personnel via the in-plant public address system. This response action will be coordinated with the Fire Department and the State Troopers. All employees will follow the Emergency Evacuation Procedures outlined in Section 4.2 and proceed to the Emergency Evacuation Meeting Point;
5. At this point, the primary responsibility for the situation will be delegated to the Fire Department and the State Troopers;
6. The Compliance Coordinator will be in direct contact with the emergency responders; and,
7. Facility personnel will not re-enter the Facility unless directed by the Compliance Coordinator. The Compliance Coordinator will not allow Facility personnel to re-enter the Facility until the Fire Department and/or the State Troopers give the all clear signal.

| 4.2-74.3.7 *Vehicular Accidents*

Vehicles transporting OHM will only be unloaded in areas designed for OHM unloading, with secondary containment systems.

In the event of a release in or out of the unloading area, but on the Facility property, Facility personnel will immediately contact the Control Room and Compliance Coordinator. The Compliance Coordinator will manage the spill in accordance with the spill control procedures outline above in Section 4.3.

4.34.4 Sustained Actions

If sustained response actions are required, CPV Towantic will contract the activity to the Emergency Response Contractor. The Facility staff will support the sustained response action by providing the following:

- **Personnel.** Facility response team members will be directed by the Compliance Coordinator to complete 8-hour oversight shifts. Due to the limited size of the Facility response team, alternating 8-hour shifts may be required;
- **Equipment and Supplies.** The Emergency Response Contractor shall have sufficient equipment and supplies for a sustained response. The Compliance Coordinator will coordinate with Facility staff to provide equipment laydown areas and to integrate site security;
- **Financial.** The Compliance Coordinator will involve the Plant Manager for funding to support the sustained response action;
- **Business Interruption.** The Compliance Coordinator will identify any impacts to day-to-day operations and report to the Plant Manager. Any impacts to staff schedule will be directed by the Plant Manager; and
- **Public Relations.** The Plant Manager will provide information to the local press and will be regularly updated by the Compliance Coordinator.

4.44.5 Termination, Decontamination, Waste Management, and Follow-up Actions

Following completion of the response action, the Compliance Coordinator will direct the completion of the following activities:

1. Ensure proper characterization and temporary storage of any containerized waste material.
2. Arrange for waste disposal.
3. Ensure Facility workers following the decontamination procedures for personnel equipment and tools. The Emergency Response Contractor will follow their company specific decontamination plan
4. Replace and restock response equipment;
5. Confirm all officials have been contacted, as required;

6. Review the response action with the Facility's Emergency Response Team, file meeting notes, modify this Plan as necessary;
7. Completion of an internal Incident Report form and maintain these reports on file.
8. As needed, prepare the required OSHA documentation, including the OSHA 300 log if personal injury was part of the incident;
9. Review the response action with the Plant Manager and area supervisor(s); and
10. Notify all response team members that they are entitled to seek a medical examination anytime there is a possibility of exposure resulting from the response to an incident.

5.0 TRAINING AND EXERCISES

CPV Towantic will complete OSHA emergency response training of its emergency response team members and will continue working with the Fire Department to develop an understanding of Facility processes, OHM storage, and confined space entry.

CPV Towantic will provide emergency response training (minimum of 24 hours) to all new (non-administrative) employees, job specific training, and annual emergency response refresher training. Additionally, training will be provided whenever the following occurs:

- There are changes to materials or equipment within the Facility;
- When the this Plan is updated;
- When Employee's responsibility or designated actions under this plan change; and
- Whenever exercises and drills indicate that employees do not understand their responsibilities.

The Compliance Coordinator, Plant Manager, and Operators will be trained to OSHA 40 hour level and will undergo 8-hour Site Supervisor Training.

All trained emergency response employees will be provided with 8-hours of annual refresher training.

CPV Towantic shall make AED training available to all employees who desire to be certified. At least one AED-certified employee will be on-site at all times.

CPV Towantic will complete specific emergency response exercises to test, enforce, and refine the procedures outlined in this Plan. CPV Towantic will also conduct annual on-site exercises with the Oxford Fire Department as part of pre-incident planning and Facility awareness training.

6.0 MEDICAL SURVEILLANCE

Facility Response Team members will receive a baseline physical examination and undergo routine medical surveillance.

6.1 Employees Included in the Medical Surveillance Program

The medical surveillance program shall be instituted for the following employees:

- All employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year;
- All employees who wear a respirator for 30 days or more a year or as required by 1910.134;
- All employees who are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation; and
- Designated employees expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance.

6.2 Frequency of Medical Examinations and Consultations

Medical examinations and consultations shall be made available to each employee designated as an emergency responder on the following schedules:

- Prior to assignment;
- At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) is appropriate;
- At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months;
- As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation during the course of an emergency incident; and
- At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

6.3 Physicians Opinion

Each employee designated as an emergency responder shall be furnished with a copy of a written opinion from the attending physician containing the following:

- The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use;
- The physician's recommended limitations upon the employee's assigned work;
- The results of the medical examination and tests if requested by the employee; and
- A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions, which require further examination or treatment.

The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures.

6.4 Recordkeeping

An accurate record of the medical surveillance shall be retained. This record shall be retained for the period specified and meet the criteria of 29 CFR 1910.20. This shall include at least the following information:

- The name and social security number of the employee;
- Physician's written opinions, recommended limitations, and results of examinations and tests;
- Any employee medical complaints related to exposure to hazardous substances; and
- A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

7.0 PLAN CRITIQUE AND MODIFICATIONS

After any event which requires activation of this Plan, a formal critique will be performed. At a minimum, the Compliance Coordinator will evaluate the effectiveness of this Plan and the employee's actions.

Additionally, the Facility will offer each outside agency which was involved in the event, to take part in this critique. The results of the critique will be formalized and submitted to the Plant Manager with any recommendation for improvement. Improvement areas will be incorporated into the formal plan review and modification process.

A documented review and evaluation of this Plan, including a Facility walk through, shall be completed at least once per year from the date of commercial operation. As a result of this review and evaluation, the owner or operator shall amend this Plan to include more effective prevention and control technologies if existing practices are determined to be insufficient in controlling or minimizing risk. The Compliance Coordinator will maintain results of the annual site evaluation.

Based on the annual comprehensive evaluation, any necessary changes to the measures implemented at the Facility will be incorporated into this Plan. If the evaluation indicates that changes in good housekeeping or materials management practices are necessary, they will be implemented in a timely manner but not more than six months from the date the evaluation was completed.

APPENDIX A

FIGURES

Comment [KK3]: Figures to be finalized and submitted to council in accordance with D&O condition 1.h.

APPENDIX B

OHM STORAGE AND MATERIAL SAFETY DATA SHEETS

Comment [KK4]: Figures to be finalized and submitted to council in accordance with D&O condition 1.h.