



FuelCell Energy
Ultra-Clean, Efficient, Reliable Power

December 9, 2014

Melanie Bachman, Esq.
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: PETITION NO. 922 – DFC-ERG CT, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of a Fuel Cell generating facility located at 1835 Hebron Avenue, Glastonbury, Connecticut.

DOCKET NO. NT-2010 – Reopening of Final Decisions Pursuant to C.G.S. § 4-181(a)(b) for Jurisdictional Natural Gas-Fired Electric Generating Facilities Under C.G.S. § 16-50i(a)(3) and C.G.S. § 16-50k(a) Limited to Council Consideration of Changed Conditions and the Attachment of Conditions to the Certificates and Declaratory Rulings Consistent with the Findings and Recommendations in the Final Report Issued by the Kleen Energy Plant Investigation Review Panel (Nevas Commission) and the Findings and Recommendations in the Executive Report Issued by the Thomas Commission

Dear Ms. Bachman:

FuelCell Energy, Inc., as general contractor and agent for UIL Distributed Resources, LLC, owner of the above-captioned project (the “Project”), is writing to advise the Council, and request approval of, a de minimis change to the Project’s construction as follows:

1. Per the November 9, 2009 Petition and as noted in the December 3, 2009 staff report, the turbo expander and support infrastructure were to be installed within the existing gate station compound, while the fuel cell, switchgear/transformer, water treatment and water tank components would be located within an approximate 85-foot by 75-foot fenced compound north of the existing gate station. Since the time of the initial application and decision in this matter, a decision has been made by the gate station owner to expand the existing gate station buildings into the area where the turbo expander was to be located. Thus, the turbo expander and support infrastructure have been moved to be co-located with the the fuel cell components. The latest general arrangement drawing is attached for Council reference. Movement of the turbo expander will not result in any other changes to the proposed construction, including no change to the amount of land clearing to be done during construction. Please consider the enclosed



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general arrangement drawing to represent the final construction plans for purposes of this Project.

2. Also per the Council's March 17, 2011 Fuel Cell Decision and Order in Docket No. NT-2010 (the "Order"), enclosed please find an Emergency Response/Safety Plan for the Project.

FuelCell Energy, Inc. and UIL Distributed Resources, LLC respectfully request that the de minimis change identified in number one above be placed on the agenda of the Council's next regularly scheduled meeting for discussion and approval.

If you have any questions with respect to the foregoing, please contact the undersigned. Thank you for your consideration.

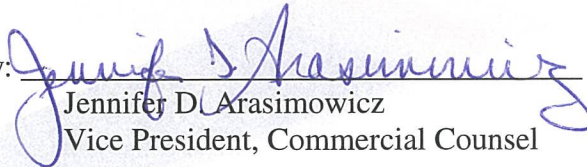
Respectfully submitted,

FUELCELL ENERGY, INC.

On behalf of

UIL DISTRIBUTED RESOURCES, LLC

By:


Jennifer D. Arasimowicz
Vice President, Commercial Counsel

FuelCell Energy, Inc.

3 Great Pasture Road

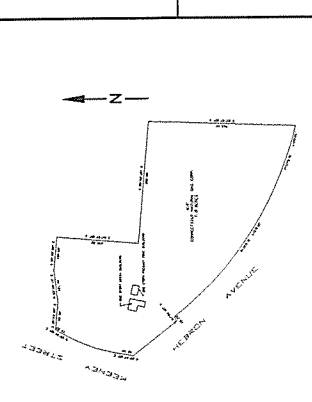
Danbury, CT 06810

(203) 825-6070

jarasimowicz@fce.com

c: Richard J. Johnson, Town Manager, Town of Glastonbury
Bruce McDermott, Esq., UIL Distributed Resources, LLC

| REV | DESCRIPTION | BY | APPROVED | DATE |
|-----|--------------------------------|-----|----------|----------|
| 1 | FOR INTERNAL REVIEW | KGK | CP | 05/22/08 |
| 2 | ISSUED FOR PROPOSAL | KGK | CP | 05/23/08 |
| 3 | GENERAL REVISIONS | MHB | CP | 07/20/09 |
| 4 | GENERAL REVISIONS | MHB | CP | 08/26/09 |
| 8 | REVISED FOR CONTRACT SUBMITTAL | MHB | L. ERNST | 10/27/14 |



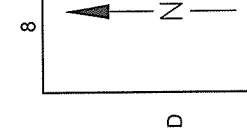
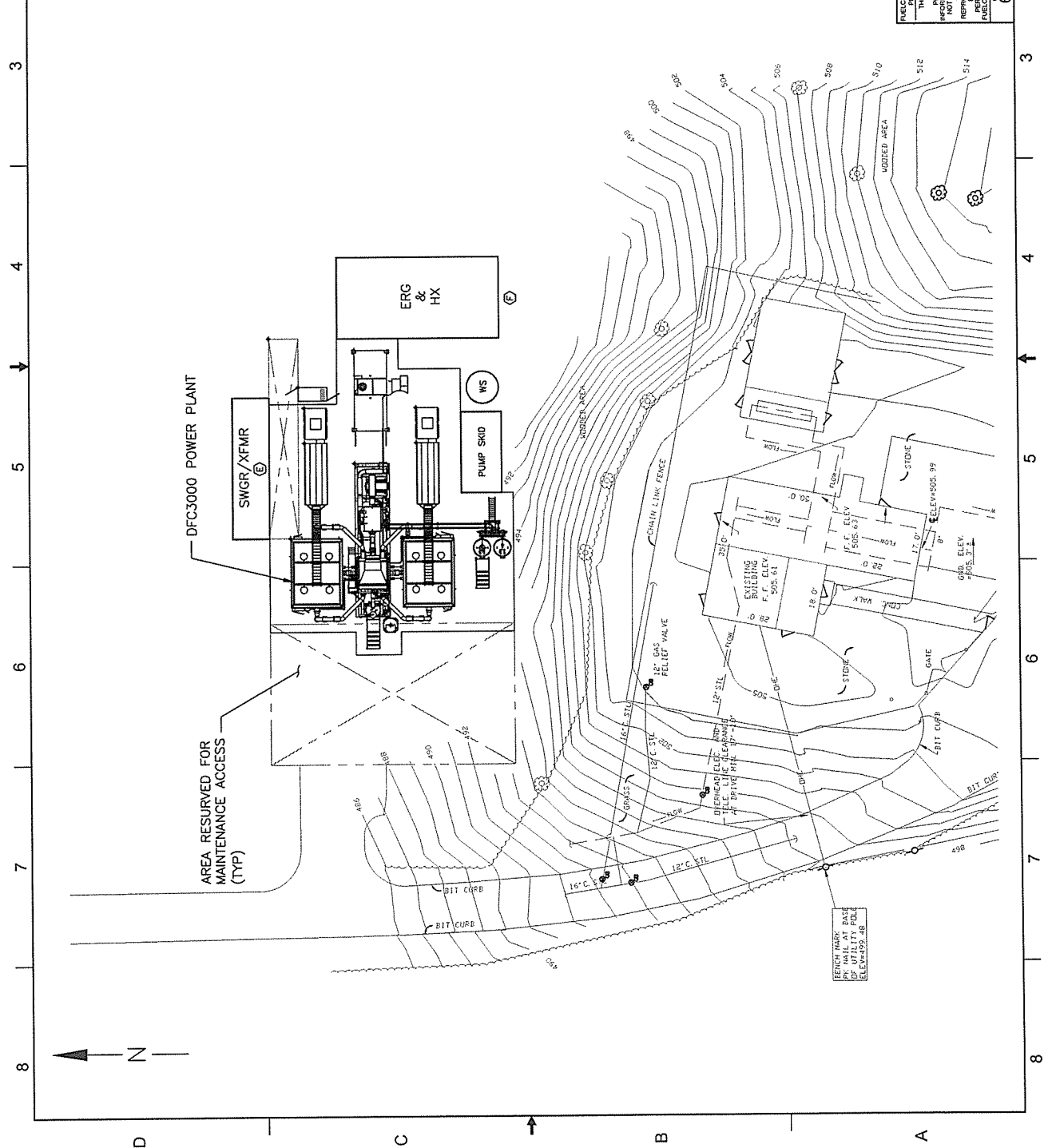
NOTE:
 PLANT BOUNDARY INCLUDES ALL MAINTENANCE ACCESS ZONES.
 1. AREA REQ'D. FOR FUEL CELLS = 0.135 ACRES
 2. AREA REQ'D. FOR ERG/HX = 0.016 ACRES
 3. AREA REQ'D. FOR ELECTRICAL = 0.007 ACRES
 TOTAL ACREAGE = 0.158 ACRES
 PROVISIONS FOR COMPRESSED GAS BOTTLE STORAGE, NEAR SITE REQUIRED.

- LEGEND:**
- CONTROL ENCLOSURE
 - DIRECT FUEL CELL
 - DESULFURIZATION SKID
 - ELECTRICAL BALANCE OF PLANT
 - EXHAUST TOWER
 - HEAT EXCHANGER
 - MAIN PROCESSING SKID
 - SWITCHGEAR
 - WATER TREATMENT SYSTEM
 - TRANSFORMER
 - POINT OF ELECTRICAL INTERCONNECT
 - POINT OF FUEL INTERCONNECT



INFORMATION FOR PROPOSAL PURPOSES ONLY.
 NOT FOR CONSTRUCTION.
 PRODUCT CONFIGURATION SUBJECT TO CHANGE.

| | | |
|---|-------------------------------|---|
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| PROJECT: FILE: BOYKIN 09/10/08 | DESIGNED BY: G. PARS 09/10/08 | TITLE |
| DATE: 09/10/08 | PROJECT NO: 09-0042 | PROPOSED DFC-ERG PROJECT GLASTONBURY GATE STATION PRELIMINARY GENERAL ARRANGEMENT |
| SCALE: AS SHOWN | DATE: 10/27/14 | REV: 8 |
| PROJECT NO: 09-0042 | SCALE: 1/8"=1'-0" | SHEET: 1 OF 1 |
| PROJECT NO: 09-0042 | SCALE: 1/8"=1'-0" | SHEET: 1 OF 1 |



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FuelCell Energy

EMERGENCY RESPONSE/SAFETY PLAN

Prepared for:

Glastonbury Fuel Cell ERG Project

Located at:

1835 Hebron Avenue
Glastonbury, CT 06033

Owned by:

UIL Distributed Resources, LLC

Prepared by:

FuelCell Energy, Inc.

3 Great Pasture Road
Danbury, CT 06813

Submitted to:

Connecticut Siting Council

10 Franklin Square
New Britain, CT 06051

November 2014

A current copy of this Plan is to remain in an accessible location on-site at all times

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Appendix A: Plant Layout, with Exit Pathways, Rally Area & Utility Shutoff Locations

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1 INTRODUCTION

The Glastonbury Fuel Cell ERG Project is a fuel cell power plant and natural gas pressure letdown turbine and energy recovery generator whose equipment is wholly owned by UIL Distributed Resources, LLC and will be operated by FuelCell Energy, Inc. The property is owned by Connecticut Natural Gas and the generated power from the facility will be sold in a power purchase agreement to Connecticut Light and Power. The net generating capacity of the site is 3.6 MW, nominal. This Emergency Response / Safety Plan has been prepared for submission to the Connecticut Siting Council in fulfillment of the requirements of the Decision and Order pursuant to Docket NT-2010. The NT-2010 order requirements for the preparation of an Emergency Response / Safety Plan are similar to the requirements imposed by other regulatory programs, namely, the Emergency Action Plan required by the Occupational Safety and Health Administration (OSHA) general industry standard, the Fire Prevention & Emergency Plan requirement of the National Fire Protection Agency Standard 853 and the development of safety programs required by OSHA. Accordingly, these plans, currently in DRAFT form, in addition to other information, are incorporated into this Plan in fulfillment of the NT-2010 requirements.

1.1 *General*

FCE Direct Fuel Cell (“DFC”) plants are designed and operated as unmanned power generation facilities. The control system for the plant is designed for the system to “fail safe” in the event of a process upset. For any event or upset condition that has a potential safety consequence, the plant control system initiates an emergency shutdown (“ESD”) sequence that isolates the external fuel source from the plant and trips the fuel cell inverters off the grid.

A DFC plant Emergency Shut Down event isolates the natural gas fuel supply from the plant through the use of dual fast-acting, spring-loaded block valves located at the plant fuel gas supply connection. An ESD event also triggers automatic isolation of the fuel desulfurizer vessels and initiates the purging of the downstream fuel train components through the module using the onsite supply of inert nitrogen gas. Purging the residual fuel train contents out through the module results in the fuel being oxidized to innocuous end products. An ESD event also results in the fuel cell module(s) and inverter(s) being disconnected from the electric utility grid. Process upset or equipment operation malfunctions that can only cause equipment damage but no possible safety consequences can result in the fuel cell plant switching off the electric grid while remaining operational (islanding) so as to allow time for either the electric grid or the fuel cell plant to stabilize, prior to resynchronizing with the grid. During any of these types of events, operators at FCE’s 24/7/365-manned Global Technical Assistance Center (“GTAC”), will immediately assess the operational condition of the plant and take appropriate actions to stabilize or recover the plant to operational status, whichever is appropriate for the situation. If any on-site response is appropriate for the situation, the GTAC operator will contact appropriate personnel, be they an FCE field service technician, or in the very unlikely event of a developing emergency response situation, local emergency response personnel.

Following, in Table 1, is an outline description of the fuel cell plant and other site equipment included in this project.

Table 1: Plant Equipment Description

Plant Model: DFC3000LAP/ERG

Each DFC3000 plant consists of two (2) DFC modules, a Mechanical Balance-of-Plant (MBOP – skids 1-3), and an Electrical Balance of Plant (EBOP). The “LAP” design relocates the MBOP fresh air blower onto an additional small Low Acoustic Profile skid/enclosure and the “ERG” version adds additional/appurtenant Energy Recovery Generator (pressure letdown turbine) equipment.

Number of Fuel Cell Plants:1

Fuel Cell Power Output: 2.8 Megawatts

Installation Location: Outdoors

Fuel type: Pipeline Natural Gas

Utility supply pressure: 20 psig to fuel cell plant

Plant reduced operating pressure: <15psig

Plant Output Voltage: 23 KV AC

EBOP Manufacturer: Rockwell

EBOP Transformer Type / Dielectric Fluid:

Oil Filled / FR3 “less-flammable” seed-based transformer oil

Nitrogen Supply: Liquid microbulk tank (~250 gal. liquid capacity)

Additional Appurtenant Equipment

Fuel Cleanup Equipment: None

Ancillary Equipment

Heat Recovery Unit (hot water/glycol solution, w/ pumps & trim radiator)

ERG Gas Preheat Heat Exchanger

Gas Pressure Letdown Energy Recovery Turbine Generator (ERG, in building)

ERG Power Output: 0.8 MW

ERG Operating Pressures: Inlet – up to 740 psig, max

Outlet – 130 psig

Equipment not described above is not covered by this plan

2 EMERGENCY RESPONSE / SAFETY – PLANS

Employers are required by the Occupational Safety and Health Administration (“OSHA”) Standard at 29 CFR 1910.38 to have a written Emergency Action Plan (“EAP”) for workplaces. The EAP can serve to fulfill the requirements of an Emergency Response Plan when the plan for emergency response activities is to evacuate the premises and to allow professional emergency responders to perform the required emergency response activities. Due to the nature of FCE DFC power plants being unmanned, remotely operated, and fail-safe in operational philosophy and control, it is the practice and policy of FCE to instruct workers, through a workplace EAP, to evacuate the premises in emergency situations and to summon professional emergency responders to perform required emergency response activities.

NFPA 853 requires the preparation of a written Fire Prevention and Emergency Plan for fuel cell installations. The Fire Prevention and Emergency Plan is to be prepared in accordance with the requirements of Section 8.2 of NFPA 853 and is to include descriptions of fire prevention procedures, inspections, housekeeping practices, flammable material storage, control of ignition sources, procedures for fire protection equipment impairment, fire emergency plans and other information.

The OSHA standards for General Industry (Part 1910) and Construction (Part 1926) at Title 29 of the Code of Federal Regulations require that employers comply with a host of health and safety standards. Such requirements are outlined in employer safety programs and policies. Summary statements of corporate health and safety policies are often prepared for employee quick reference on an individual plant or project-specific basis.

Copies of a DRAFT Emergency Action Plan, DRAFT Fire Prevention & Emergency Plan and a DRAFT Plant/Project Safety Plan follow.

2.1 Emergency Action Plan

Following is a DRAFT version of an EAP for the subject plant. As the plant is under construction, the DRAFT EAP will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and as construction progresses.

Emergency Action Plan

Site Name: **Glastonbury Fuel Cell ERG Project**

Site Address: **1835 Hebron Avenue
Glastonbury, CT 06033**

Plant Operator: FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

Plant Owner: UIL Distributed Resources, LLC
c/o UIL Holdings Corporation
157 Church Street
New Haven, CT 06510

A. Emergency Plan Coordinator & Other Contacts

Emergency Plan Coordinator –

Name: **Global Technology Assistance Center (GTAC)**
Company: **FuelCell Energy, Inc. (FCE)**
Description: **24 hour / 365 day Plant Monitoring**
Telephone No: **(800) 326-3052**

Additional Contact information –

Site Operator Contacts: *(NOTE: private telephone numbers redacted from public report to protect privacy)*

Name: Steve Ibanez
Co./Dept./Title: FCE / Field Service / Eastern Region Manager
Telephone No: (203) 830-7408 (FCE)
(XXX) XXX-XXXX (Home) *(available in user copies)*
(XXX) XXX-XXXX (Cell) *(available in user copies)*

Name: Steve Brown
Co./Dept./Title: FCE / Field Service / Director of Field Operations
Telephone No: (203) 205-2449 (FCE)
(XXX) XXX7-XXXX (Home) *(available in user copies)*
(203) XXX-XXXX (Cell) *(available in user copies)*

Name: Mark Benedict
Co./Dept./Title: FCE / Process Engineering /Principal Engineer, Product EHS
Telephone No: (203) 830-7429 (FCE)
(XXX) XXX-XXXX (Home & Cell) *(available in user copies)*

Name: Gordon Brookes
Co./Dept. /Title: FCE / FuelCell Energy Corporate EHS Director
Telephone No: (860) 496-2207 (FCE)
(XXX) XXX-XXXX (Cell) *(available in user copies)*

Additional Site Contacts:

Name: Dave Hennessy
Co./Dept./Title: UIL Distributed Resources, Project Manager
Telephone No: (203) 926-4698
(XXX) XXX-XXXX (Cell) *(available in user copies)*

Site Utility Contacts:

Company: **Connecticut Natural Gas**
Name/Dept /Title: Gas Leaks or Emergency 24-hr contact
Telephone No: (866) 924-5325 (24-hour)

Company: **Connecticut Light and Power**
Name/Dept /Title: CL&P Customer Care Phone Support Number - Emergency
Telephone No: (860) 947-2000 (24 hour)

Company: **Metropolitan District Commission**
Name/Dept /Title: MDC Service Center (answering service during non-business hours)
Telephone No: (860) 278-7850

Company: **Glastonbury Sanitary Sewer and Water Pollution Control Authority**
Name/Dept /Title: Michael J. Bisi / WPCA / Superintendent of Sanitation
Telephone No: (860) 652-7774

Company: **Airgas (Nitrogen)**
Name/Dept /Title: Jason Clinkscales / Bulk Gas Operations / Business Manager
Telephone No: (203) 624-0320 ext. 30
(603) 401-4411 (cell)

Government Official Contacts:

(Note: Government officials are only to be contacted by designated FCE personnel, per established FCE policy/procedure, described later in this Plan)

Town of Glastonbury –

Town Manager – Richard J. Johnson; (860) 652-7500

Emergency Management / Office of Civil Preparedness – Robert DiBella; (860) 652-7576

State Legislators –

State House Representative – Joe Diminico (District 13); (860) 240-8585

State House Representative – Prasad Srinivasan (District 31); (860) 240-8700

State Senator – Steve Cassano (Senate District 4); (860) 240-5302

Private Residences/Establishments requesting notification of emergency response incidents:

| Neighboring Resident or Establishment Name | Neighbor Street Address | Contact Information – Phone and/or email |
|---|--------------------------------|---|
| | | |
| | | |
| | | |

B. Preferred Means of Reporting Emergencies

GTAC is to contact local Emergency Responders in accordance with this Plan, if required, or when requested to do so by on-site personnel.

| Emergency | Make Initial Notification to: |
|--------------------------------------|--|
| Fire / Explosion | (860) 633-8301 <small>(verified 11/25/14 - mab)</small> (for calls originating from other than on-site) 9-1-1 (for calls originating on-site only) |
| Flammable/Hazardous Material Release | |
| Medical Emergency | |
| Threat / Violence | |
| Severe Weather | Coordinate with FuelCell Energy GTAC (800) 326-3052 |

C. Emergency Action Plan Elements

- **Emergency Escape Procedures and Routes**

Emergency escape routes, exits and rally areas are depicted in the Plant Layout drawing provided in Appendix A.

Upon discovery of the need for an evacuation (either self-initiated or in response to an evacuation call), all personnel on site shall immediately proceed to the nearest safe site exit and then proceed immediately to the designated rally area. Non-FCE contractors and guests shall be escorted by their host FCE employee to the nearest safe exit. The standard lock combination is known by operating /maintenance personnel for any exits that may be secured at times when the plant is occupied.

In the course of evacuation, ***a call shall immediately be placed to GTAC with a request/instruction for the second GTAC operator to immediately call local Emergency Responders (See Emergency Action Plan, Section II)*** to initiate action by the local emergency response organization(s). The caller is to stay on the line and provide all information requested, including name, location and nature of emergency and additional contact information, as may be requested.

With the exception of small 'incidental' spills (as defined by OSHA and per FCE employee training), FCE employees are not to perform chemical spill response activities. Emergency or private spill response contractors are to be retained for the cleanup of non-incidental spills.

All releases of ANY material are to be reported to the FCE Product EHS Principal Engineer and to the FCE EHS department as soon as practical.

- **Procedures for Employees who Remain to Operate Critical Operations Before Escape**

All employees are expected to proceed immediately to the designated primary or backup rally location during any call for site evacuation.

- **Employee Accountability Procedures after Evacuation**

The Glasontbury Fuel Cell ERG Project is a normally unmanned site; however, one or several FCE, owner or visiting personnel may be present on site at any time to perform operating, maintenance or other tasks. Per established site work/visitation procedure, all FCE and other personnel present on-site will be known by both the

senior FCE Field Service employee present at the site as well as by the off-site GTAC operator. Upon the implementation of an evacuation, cell phone contact is to be established immediately with GTAC to update or confirm the list of on-site personnel. Accounting of all on-site personnel is to then be made at the rally area, or backup rally area, wherever the situation dictates that assembly occur.

- **Rescue and Medical Duties**

FCE employees are not routinely provided with rescue or in-depth medical training, and as such are not required or expected to perform rescue or medical duties. FCE employees are NOT to reenter the site following an evacuation prior to an 'all-clear' call being made from the professional first responder person in charge.

- **Alarm System**

FuelCell Energy plants are normally unmanned sites, with only a small number of workers present on site at any given time. Typically one, sometimes two, and on rare occasions more than two workers are present on site when work is being performed. When multiple workers are on site, they will typically be working together.

The employee alarm system to be used at the Glastonbury Fuel Cell ERG Project site is direct voice communication. *The OSHA standard for employee alarm systems at 29 CFR 1910.165 allows the use of direct voice communication as an acceptable procedure for sounding an alarm system for workplaces of 10 or fewer employees, provided all employees can hear the alarm.*

Upon discovery of a situation requiring evacuation, the discovering employee shall directly communicate the evacuation requirement to his/her fellow employees. Any non-employee guests on-site will be escorted by their host employee to the nearest clear exit at that time. It is envisioned that all employees present on site at any time will be capable of hearing a call for evacuation under foreseeable circumstances.

- **Training**

All employees and contractors working at, and visitors to FCE fuel cell power plants are to be trained in the elements, policies and procedures of this Emergency Action Plan prior to, or at the time of their first visit. All persons present at FCE plant sites are expected to comply with all elements of this plan in emergency situations.

D. Emergency ShutDown (ESD) Procedures

All FCE fuel cell power plants are equipped with multiple ESD pushbuttons.

- Each DFC3000 plant is equipped with 7 ESD pushbuttons:
 - 2 on Skid 2 (one on each end)
 - 2 on Skid 1 (one inside and one outside)
 - 2 on the EBOP PCUs (1 one each of the 2 PCUs)
 - 1 on the EBOP Tie Breaker Switchgear

Depressing any one of these pushbuttons shuts down the respective fuel cell plant and will in turn also trip the ERG turbine. In addition there will be one or more emergency stop pushbuttons specifically for the ERG turbine located in the vicinity of the turbine building. Depressing the ERG turbine ESB pushbutton will trip the turbine off, but the fuel cell plant will be able to remain operational.

NOTE: Fuel Cell Plant Electrical Balance of Plant switchgear and transformer equipment will remain energized even after depressing an ESD. Note also that the some Mechanical Balance of Plant electrical devices are UPS (uninterruptable power supply) fed, so some low voltage equipment may remain energized even after engaging an ESD pushbutton.

The locations of the plant ESD pushbuttons are depicted in the drawing in Appendix B.

E. Special Training

FuelCell Energy personnel who work at fuel cell plants receive Hazcomm training in the chemical hazards that are present on site. Operating personnel also receive training in other occupational safety and health (OSHA) standards, as appropriate for the tasks to which they are assigned.

F. Personnel Accounting Following Evacuation

All personnel present on site at the time of an evacuation are to proceed to the designated rally area, depicted on the drawing in Appendix A, in order to be accounted for. Contact will be made with GTAC and the ranking supervisor on site will determine if all personnel are accounted for or if any personnel are missing. The results of the accounting determination will be reported to the professional first responder in charge of the emergency response.

G. Rescue And Medical Duties

All rescue and medical duties required at any FCE fuel cell plant will be performed by professional emergency response personnel.

2.2 Fire Prevention & Emergency Plan

Following is a DRAFT version of a Fire Prevention & Emergency Plan for the subject plant. As the plant has not yet been constructed, the DRAFT Fire Prevention & Emergency Plan will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and construction progresses.

Fire Emergency Plan

Purpose:

This document provides information specific to FuelCell Energy's Direct FuelCell (DFC) power plant, as described in the Plant Description section earlier in this Plan (Table 1). The document has been prepared in accordance with the requirements of Section 8.2 of NFPA 853-2010.

A. Response to Fire or Other Emergency Condition

- **Overview of fire hazards present**

Natural gas (odorized) at a nominal pressure of 20 psig is supplied to the fuel cell power plant gas meter via an underground pipe from a connection in the street. The aboveground gas meter and manual shutoff valves that supply the fuel cell are located approximately 10 feet north of the fuel cell plant at the northwest corner of the plant security fence enclosure. The piping runs underground from the shutoff valve/metering station to the interior of the plant enclosure where it emerges above grade and connects to the plant. The fuel cell plant immediately reduces the fuel gas pressure to less than 15 psig and directs the gas flow to the plant desulfurization equipment.

Natural gas is de-odorized by flowing through the two desulfurizer vessels of the fuel cell power plant. The desulfurizer vessels are each equipped with a safety pressure relief valve (PRV), sized for both a failed pressure reducing valve and a fire exposure condition. The PRVs discharge to a vent termination approximately 25' above grade over the desulfurizer vessels. Any flow through a PRV is immediately detected by an in-line flow sensor, which in turn immediately initiates a plant ESD. De-odorized fuel flows through the fuel cell power plant equipment, including the fuel humidifier and the preconverter and the into the fuel cell module. The air heater also operates on an intermittent basis on de-odorized fuel. All fuel gas is confined within code

complying process piping and vessels. All fuel sample valve taps are small bore and “double blocked” by virtue of tethered caps.

The fuel cell power plant operates at high internal temperatures. Temperatures inside the insulated fuel cell module are approximately 1200°F and the fuel fired air heater also operates at temperatures of up to 1200°F. The fuel humidifier and connecting pipes also operate at high temperature. Insulation or guards are provided to maintain external skin surfaces at safe temperatures.

The ERG energy recovery generator reduces the pipeline gas pressure from a maximum of 740 psig down to 130 psig and in so doing powers a turbine that drives the generator. The ERG system processes a substantial flow of flammable gas at high pressures. The ERG system is located in a separate secured building inside the secured fence area of the site. The building is constructed in accordance with hazardous area electrical codes and is equipped with heat and flammable gas leak detectors. Only operators that are certified as properly and adequately by the Northeast Gas Association (NGA) are allowed to enter the ERG area of the plant.

Ancillary pieces of electrical equipment are provided with or are appurtenant to the fuel cell power plant. Some electrical equipment operate at high current and/or medium voltage (>500V) and therefore generate appreciable heat. All electrical equipment are designed to applicable codes, including provisions for adequate heat dissipation.

- **Notifications and coordination**

Upon discovery of a fire or other emergency condition, or acknowledgement of a fire alarm associated with the fuel cell power plant, the discovering or acknowledging person shall make notifications to the appropriate persons as outlined in the site Emergency Action Plan.

An on-site discovering person who is trained in the operation and maintenance of the fuel cell power plant and who has evacuated the site for an emergency situation shall remain stationed in proximity to the site and accessible to emergency responders through the emergency response time frame in order to assist and support responders with technical expertise as they may request or require.

An on-site discovering person who is a representative of the plant/facility owner shall remain on-site through the emergency response time frame to assist and support responders with plant/facility owner information and resources, including access to required resources and traffic control as emergency responders may request or require.

- **Plant security**

Public access to the fuel cell equipment is restricted by an eight foot high enclosure surrounding the site. The enclosure is equipped with personnel and equipment doors or gates for necessary access. All doors/gates are kept locked when facility personnel are not present. All doors/gates are equipped with Local Fire Department specified and keyed Knox Locks, daisy-chained to the operator-provided combination lock. The daisy-chained locks provide the necessary security, while at the same time they also provide the means for required access by both authorized owner and operator personnel as well as Emergency Response personnel.

- **Evacuation and restriction of non-response personnel**

Upon discovery of a fire or other emergency condition associated with the fuel cell power plant, the plant area shall be immediately evacuated of all non-response personnel to a minimum distance of 100 feet. Plant host facility representatives and qualified plant operating personnel shall identify themselves to Emergency Response personnel and remain nearby and available to assist in response activity support, as necessary. Notifications of nearby residents as required by the Emergency Responses Person in Charge, shall be undertaken as directed, per the EAP.

- **Operator activities**

On-site personnel:

- Upon discovery of a fire or other plant emergency condition with the plant still running, while immediately evacuating the area of self and others, depress any Emergency ShutDown (ESD) pushbutton, if it is safe to do so. ESD buttons are situated at several locations around the plant as indicated in Appendix B, and can be identified by their red mushroom caps and labeling, as depicted in Figure 1, below.
- Upon discovery of a fire or other emergency condition with a plant that has experienced an Emergency ShutDown (ESD), immediately evacuate others and self.
- Contact GTAC and instruct GTAC to in turn contact local Emergency Responders. As an emergency situation, advise GTAC to make other required notifications to management personnel, owner, and others, per Emergency Action Plan.
- Remain on-site at a safe distance to assist and support responding personnel, including providing plant access, restricting access to non-responding personnel or controlling traffic.

Remote GTAC (Global Technology Assistance Center) operators:

- Upon advisement or acknowledgement of a *fire-related* Emergency Shutdown or knowledge of other emergency condition, make Emergency Responder and all other required notifications as described in Emergency Action Plan.
- If not already present, dispatch field service personnel to the site to assist and support response personnel with fuel cell technical expertise.

B. Fire Extinguishment / Emergency Plant Shutdown

- **Fire water application concerns**

FIRE WATER SHALL NOT BE APPLIED TO COMPONENTS OF THE FUEL CELL POWER PLANT AT ANY TIME. Certain fuel cell components may remain electrically energized with either alternating current or direct current voltage even after a system shutdown via one of the Emergency ShutDown (ESD) pushbutton switches.

- **Appropriate extinguishing media**

Only fire extinguishing medias appropriate for live electrical equipment shall be applied to fuel cell power plant components. Only listed fire extinguishers for Class A:B:C type fire are provided inside the plant enclosed area.

Upon Emergency ShutDown (ESD) of the fuel cell power plant, all fuel supplies to the plant are automatically shut off via two in-line fast-acting spring-loaded isolation valves.

Following an ESD, **ELECTRICAL ISOLATION IS NOT ASSURED.** Substantial AC and/or DC voltages may still remain for significant durations following an Emergency ShutDown event.

FOLLOWING AN ESD SOME NATURAL GAS WILL REMAIN ISOLATED WITHIN THE FUEL DESULFURIZER VESSELS, however, these vessels are protected from overpressurization by pressure safety valves sized for fire exposure conditions. Following an ESD, nitrogen gas supplied from an on-site liquid source will flow through the fuel cell plant equipment. As with the desulfurizers, the nitrogen source supply is protected against overpressurization by a safety relief valve provided by the gas supplier.

A Plant Layout drawing is provided in Appendix A. The locations of key utility shutoffs (fuel gas(es), electricity) are indicated on the layout drawing.

- **Other Emergencies**

Hazardous material spills – Hazardous materials that may be temporarily present on-site other than natural gas are typically solids, and usually only in small quantities. Trained hazardous material operations and response personnel are on-site for any operations or maintenance activities that involve the handling of bulk or containerized hazardous materials. Small quantities of water treatment chemicals are contained in the water treatment (Skid 1) enclosure.

Personnel injuries – For injuries requiring medical attention, the injured party or his/her companion shall seek appropriate medical attention for the injured. For serious injuries, call GTAC to summon local Emergency Responders per the Emergency Action Plan. For less serious injuries that require medical attention the injured shall obtain medical treatment at the nearest emergency medical care facility. All accidents and injuries (and near misses) shall be reported to FCE EHS.

C. Plan Validation

The executable elements of this Fire Emergency Plan consist of the manual activation of an Emergency ShutDown upon discovery, evacuation of the power plant area and notifications.

ESD buttons are all hard-wired in a fail-safe circuit. All fuel cell operating personnel are trained and regularly re-trained in a complete suite of safety programs.

Fire Prevention Plan

A. Egress

A Plant Layout drawing is provided in Appendix A. The plant emergency egress paths are depicted on the drawing.

B. Emergency alarms and ShutDowns

The fuel cell power plant is provided with Emergency ShutDown (ESD) pushbuttons. ESD pushbuttons have red mushroom caps and are clearly labeled. ESD pushbutton locations are indicated on the drawing in Appendix B. Photos of typical ESD pushbuttons are shown in Figure 1. Depressing an ESD pushbutton will immediately shut down fuel flow to the power plant as well as shut down all of the mechanical balance of plant equipment. **HOWEVER, THE ESD DOES NOT OPEN THE ELECTRICAL GRID TIE BREAKER, SO ELECTRICAL BALANCE OF PLANT COMPONENTS WILL REMAIN ENERGIZED. ADDITIONALLY, UNINTERRUPTABLE POWER SUPPLIES (UPS) WILL PROVIDE POWER TO A NUMBER OF MECHANICAL BALANCE OF PLANT COMPONENTS AND THE FUEL CELL MODULE WILL RETAIN SIGNIFICANT DC VOLTAGE POTENTIAL ENERGY IF OPERATING OR HOT PRIOR TO THE ESD.**

The following types of automatic acting emergency sensors are provided with the fuel cell power plant:

- Combustible gas detectors
- UV/IR Flame detectors
- Smoke detectors

The following types of automatic acting emergency sensors are provided with the ERG Turbine:

- Combustible gas detectors
- Heat detectors

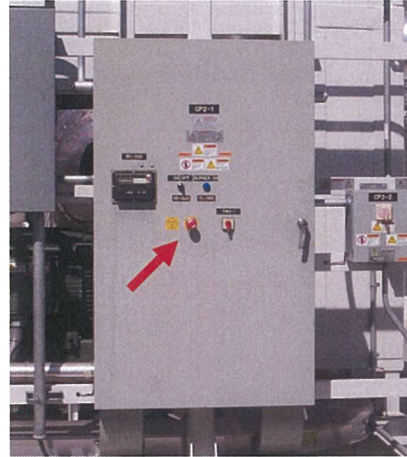
In addition process flows, temperatures, pressures and voltages are continuously monitored for deviations from expected values. Process sensors are used to verify proper operation of the process and will quickly sense and shutdown the process upon severe deviations, such as would occur in the case of excessive seismic activity. Emergency sensors have either supervisory signals or are wired to alarm on sensor failure such that the plant will ESD on the loss of any one of these devices. Emergency

sensors are calibrated in accordance with an established schedule as described in the maintenance manual. Sensor locations are depicted in the drawing in Appendix B.

Sensor detection of flame, MBOP smoke, or presence of excessive combustible gas concentration (45% of Lower Explosive Limit [LEL]) will result in an Emergency ShutDown (ESD) of the fuel cell plant. In the case of combustible gases, detection of a concentration of approximately 25% LEL will result in a high LEL warning alarm. EBOP smoke detectors provide an alarm function only as other performance shutdowns protect the equipment in case of actual fire.



Tie Breaker Switchgear



Skid 2, Main Process Skid,
Control Panel



Electrical Balance of Plant
Power Conditioning Unit



Skid 1, Electric & Controls /
Water Treatment System Skid

Figure 1: Typical Emergency ShutDown (ESD) Pushbuttons

Fuel cell plant operating personnel are provided with portable gas detectors for use in operating and maintenance tasks including surveillance for gas leaks should such be necessary.

C. Fire prevention

The fire prevention strategy for the fuel cell power plant consists of the following Plan elements:

- **Housekeeping**

The area around the fuel cell power plant shall be kept orderly and free of combustible and flammable materials, including combustible and flammable liquids, flammable gases and combustible and flammable solid materials. Trash shall not be allowed to accumulate. The water treatment system container shall not be used for general material storage.

- **Storage and Handling of flammables/combustibles**

STORAGE OF FLAMMABLE AND COMBUSTIBLE MATERIALS IS PROHIBITED WITHIN THE PLANT ENCLOSURE WITHOUT PRIOR WRITTEN PERMISSION FROM THE LOCAL AUTHORITY HAVING JURISDICTION. Transient flammables and combustibles may include gases, small containers of flammable liquids such as solvents, trash and virgin and spent consumables used in the fuel cell process. These materials are to always be stored in packaging appropriate for their material properties and retained on site for as short of a duration as feasible. Flammable and combustible materials are to be kept separated from sources of ignition, fuel piping and processing equipment and electrical equipment and shall be protected from weather. Appropriate packaging materials for consumable materials are as follows:

- Catalysts, virgin or spent – steel drums
- Desulfurizer media, virgin – manufacturer’s original packaging
- Desulfurizer media, spent – steel drums

- **Flammable/combustible materials and potential ignition sources**

The following are flammable/combustible materials *potentially* present at the fuel cell power plant:

- Natural gas (present in piping and desulfurizer vessels only - no on-site storage)
- Turbine lubrication oil
- Electrical equipment
- Plastics
- Insulation jacketing
- Desulfurizer media (activated carbon)

- MBOP and EBOP Transformer oil (FR3 “less flammable” transformer oil)
- 50% aqueous solution Propylene Glycol EBOP chiller coolant and heat transfer medium
- Misc. new and used filter elements, PPE, packaging, etc.
- Granular nickel based catalyst (DOT Div. 4.2, PG II/III; transient, never long-term)

Natural gas piping within the plant security fencing is identified with yellow “Natural Gas” pipe markers, complying with ANSI A13.1 requirements.

The following are potential ignition sources present at the fuel cell power plant:

- Heat from process
- Electrical equipment
- Catalysts
- Hot work
- Unauthorized Smoking or open flame
- Internal combustion equipment/vehicles

The fuel cell power plant design and procedures established to operate and maintain the plant have been formalized to minimize any potential for fire.

- The entire plant has been designed to and complies with the provisions of the ANSI/CSA safety code FC-1 (2004).
- The plant is equipped with automatic safety sensors to safely shut down the process in cases of leaking fuel or fire (Section 2.)
- All fuel is pipeline supplied with minimal fuel holdup within the process.
- Desulfurizer vessels have been provided with pressure safety relief valves sized for fire emergencies.
- All of the plant piping has been designed in accordance with ASME B31.3 standard for process piping code. Piping is marked in accordance with ANSI A13.1.
- Areas of potential hazardous (classified) atmospheres have been identified and sources of potential ignition have been removed and any electrical equipment within complies with the area classification designation.
- Electrical equipment is designed to and complies with the provisions of UL1741.
- Smoking is NOT allowed within the fuel cell plant area.
- Hot Work within the fuel cell plant area is by Permit only, with potential sources of flammable materials removed from the area of potential ignition when hot work is conducted. Hot Work Permits are to be issued by the plant owner. Additionally, any hot work conducted under the supervision of FuelCell Energy will also be permitted under the FCE Hot Work Permit program.

- **Portable Fire Extinguisher**

Sufficient type A:B:C portable fire extinguishers (20 lb. minimum) are provided and installed by the plant owner for this power plant such that the travel distance to nearest extinguisher does not exceed 50 feet. Portable fire extinguishers required for specific maintenance procedures are brought to site by service personnel as special equipment for that procedure.

- **Inspections of plant area and fire prevention equipment**

All inspections and maintenance of fuel cell components and systems are to be performed in accordance with the latest revision of the plant maintenance manual. Operating personnel also conduct an informal “walk around” inspection every time they visit the plant site. As the plant operates remotely without the presence of operators, the walk around inspection is simply to check for any out of the ordinary situations or accumulated materials. FuelCell Energy operators log any negative findings into a Computerized Maintenance Management System (CMMS) database. Sensors are calibrated or replaced in accordance with an established maintenance schedule based on equipment manufacturer’s instructions; with work orders scheduled and records maintained by the database.

If, during an operator site visit or walkaround inspection a fuel leak is discovered, an immediate evaluation and disposition shall be undertaken. For sizeable leaks, an immediate plant shutdown may be necessary, while leaks of a very minor nature may be able to be addressed by such remedies as flange bolt retorquing or other measures. Contracted operators are equipped with portable fuel gas (LEL) meters to assist in the evaluation of leak severity. Any discovered leak and its corrective measures shall be recorded in the CMMS database.

UV/IR flame detectors, combustible gas (LEL) sensors and smoke detector automatic sensors shall be tested, calibrated, maintained and/or replaced at the frequency provided in the DFC1500B plant maintenance manual. A summary of these requirements is provided below:

| Automatic Sensor | Frequency | Maintenance Action |
|---------------------------|------------------|----------------------------|
| Skid 1 Smoke Detectors | 18 mos. | Test & replace if required |
| EBOP Smoke Detectors | 18 mos. | Test & replace if required |
| Combustible Gas Detectors | 18 mos. | Clean & calibrate |
| UV/IR Flame Detector | 12 mos. | Clean & Test |

- **Fire protection system/equipment impairment**

Unintended impairment of any fire protection sensor system will automatically ESD the plant. Manual short-term sensor impairment for the purpose of on-site maintenance occurs only at times when maintenance personnel are on-site and vigilant for signs of fire or potential fire. As a policy, extended system impairment is not permitted with rare exceptions and only when alternative monitoring methods can be implemented by remote monitoring and for as short of a duration as possible.

- **Incident investigation and reporting**

Any fire-related incident shall be immediately reported to the local fire department as “lead investigator.” Plant owner representatives as well as FuelCell Energy qualified personnel will be called upon to assist the department in the site and technical aspects of the investigation. Such incidents will also be investigated by the fuel cell operator/manufacture as required by the manufacturer’s Certifying Agency. Results/conclusions of the investigation will be reported to the plant owner. External reporting to other agencies will be as directed by the responding department commanders and as required by regulation, as established at the time of incident.

2.3 Plant/Project Safety Plan

Following is a DRAFT version of a Safety Plan for the subject plant. As the plant has not yet been constructed, the DRAFT Safety Plan will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and as construction progresses.

Safety Plan

FCE will address site security and personnel safety as the highest priority to ensure a safe and healthy work environment. Minimum safety requirements and policies have been identified and will be provided and enforced on all levels and for all organizations performing work at the facility during both the construction and operation phases of the project.

In addition, all contractors and subcontractors will be required to provide, adhere to, enforce, and report on their own safety policies and practices. Such policies, procedures and/or handbook will be provided to FCE prior to contract execution for FCE’s review and consideration.

A. Site Supervision

FCE, or their prime construction subcontractor, will provide a construction/safety manager to be present while any work is being performed on site at any time. FCE

Project Management representatives and EHS professionals will perform additional on-site review and inspections to further enforce all safety policies and practices.

Further, contractors and subcontractors will be required to have their own safety supervisor on site at all times when work is being performed. The safety supervisor is responsible for their personnel's adherence to all required and prudent safety policies and practices. The supervisor is to be responsible for:

- Enforcing safety policies and practices,
- Providing safety orientation for any new personnel onsite,
- Daily safety "toolbox" meetings covering daily activities and associated risks, by trade,
- Recording the daily safety meetings,
- Weekly safety status meetings and discussion topics,
- Performing and reporting on weekly safety audits,
- Maintaining a daily personnel attendance log (for personnel accounting),
- Site walks with FCE's safety and construction managers on request, and
- Monthly formal reports including labor hours worked, incidents (including near misses, recordable events, and reportable events) along with a detailed description of corrective actions, audit results, and a summary of any site walks that occurred during that period.

At any time, FCE or subcontractor's safety or construction management personnel can enforce a stop work directive to correct any safety infractions.

B. FCE Safety Program Policies

Construction contractor and plant operator shall plan and conduct all work to safeguard persons and property from injury and will direct performance of work in compliance with reasonable safety and work practices and with applicable federal, state and local laws, rules, and regulations including but not limited to "Occupational Safety and Health Standards" promulgated by the U.S. Department of Labor. Work in areas adjacent to electrically energized equipment and/or operating natural gas equipment shall be performed in accordance with said practices, laws, rules, and regulations.

As part of FCE's continuing efforts to provide a safe and healthy workplace, it is required that all work activities be performed in accordance with all applicable regulatory requirements. While impossible to foresee all potential circumstances, the

below list of Environmental, Health and Safety requirements constitutes the minimum basic elements to be followed during both the construction and operation phases of the fuel cell power plant project.

- SIGN IN: All individuals must sign in/out at the office each day that they are on site.
- ACCIDENT, ILLNESS & INJURY: All accidents and injuries occurring on the premises shall be reported immediately to the Construction Manager in charge of the work being performed, or during operation phase of plant, to the FCE EHS department as soon as possible.
- CHEMICAL RELEASE OR SPILL: Any release of chemicals on site, regardless of volume, must be immediately reported to the Construction Manager, or during operation phase of plant, to the FCE EHS department as soon as possible.
- COMPRESSED GAS MANAGEMENT: The management and use of compressed gas is to be performed in accordance with OSHA standard 29 CFR 1910.0101 "Compressed Gasses, General Requirements."
- CONFINED SPACES: All work in "confined spaces" is to be managed in accordance with OSHA standard 29 CFR 1910.146.
- CRANE HOIST & SLING SAFETY: The operation of cranes and hoists is to be performed in accordance with OSHA standard 29 CFR 1910.179; and the use of slings is to be in accordance with OSHA standard 29 CFR 1910.184.
- ELECTRICAL SAFETY: All work involving electricity is to be performed in accordance with OSHA standards 29 CFR 1910 Subpart S, "Electrical Safety"; 1910.269 "Electric Power Generation, Transmission & Distribution; and NFPA 70E-2004 "Electrical Safety In The Workplace" as applicable.
- EYE PROTECTION: During all times that ANY work is being performed anywhere on the facility, all personnel at the facility must be wearing eye protection.
- FALL PROTECTION: All work performed at heights of six feet or greater must be provided with at least one form of fall protection that will either prevent a fall from occurring, or properly arrest a person's fall once the event has occurred. However, platforms, or other surfaces designed primarily for walking, shall be provided with an approved guardrail system when they are either; >4' above the adjacent floor or ground level, or, above dangerous equipment (conveyor belts, chemical baths, exposed rebar, etc...) regardless of height. In all cases, work at height must be performed in accordance with OSHA standards 29 CFR 1910.23, 132, and 503.
- HAND & PORTABLE POWER TOOL SAFETY: Hand and portable power tools are to be used in accordance with OSHA standard 29 CFR 1910 Subpart P.
- HAZARD COMMUNICATION; RIGHT to KNOW: 29 CFR OSHA standard 29 CFR 1910.1200: Employees shall not be exposed to Hazardous Chemicals without first

receiving training on the associated physical and health hazards and the measures needed to protect the employee from these hazards.

- FCE utilizes green on white Target Organ Labels identifying the Name and the Physical & Health hazards of a material; these labels shall be used for all containers not otherwise adequately labeled by the manufacturer.
 - Hazardous materials brought on site shall be labeled and a Material Safety Data Sheet (MSDS) supplied to the Environmental Health and Safety (EHS) Department prior to working with the chemical.
 - An MSDS station detailing all chemicals currently onsite is available for review.
- HAZARDOUS MATERIALS: FCE EHS is to be notified in advance of all hazardous materials to be brought on site. Storage, use and off-site transportation of these materials shall be performed in accordance with applicable requirements of the Connecticut General Statutes, the Regulations of Connecticut State Agencies and Titles 29 (OSHA), 40 (EPA), 49 (DOT) of the Code of Federal Regulations.
 - HOT WORK PERMIT SYSTEM: As part of FCE's overall Fire Prevention Program, Client utilizes a formal "Hot Work Permit" program. Hot work is any operation that introduces a potential ignition source, which in the presence of combustible or flammable materials can result in a fire. HOT WORK includes, but is not limited to, operations such as brazing, cutting, grinding, soldering, torching, and welding. The use of a Hot Work Permit is required for all hot work operations outside of designated hot work areas. Hot work can be performed without a permit only in areas specifically designated and posted as a "Hot Work" area.
 - LADDER SAFETY: The use of ladders is to be done in compliance with the following OSHA standards:
 - 29 CFR 1910.25 - PORTABLE WOOD LADDERS
 - 29 CFR 1910.26 - PORTABLE METAL LADDERS
 - 29 CFR 1910.27 - FIXED LADDERS
 - 29 CFR 1910.29 - MANUALLY PROPELLED MOBILE LADDER STANDS & SCAFFOLDS
 - LOCKOUT TAGOUT PROGRAM: All servicing and maintenance of equipment is to be performed in accordance with the requirements of OSHA standard 29 CFR 1910.147 or 269 as applicable. These standards require locking out all potential energy sources prior to the performance of work.
 - PERSONAL PROTECTIVE EQUIPMENT: In accordance with OSHA standard 29 CFR 1910.132-138 and Subpart I, work is to be performed using all necessary PPE. Hazard Assessments and Training in the use of required PPE are to be performed and documented prior to performance of work. PPE shall be removed

before leaving the work area and disposed of according to waste management procedures to ensure that contaminants are not spread to personnel, through the facility(s), and/or to the environment.

- **POWERED INDUSTRIAL TRUCKS:** Forklifts and other industrial lift trucks are to be operated only by personnel trained in accordance with OSHA standard 29 CFR 1910.178.
- **POWERED PERSONAL LIFT TRUCKS:** Powered personal lift trucks are to be operated only by personnel trained in accordance with OSHA standard 29 CFR 1910.67 and 29 CFR 1926.453.
- **SAFETY DEVICES:** Equipment safety devices are not to be removed, bypassed or otherwise modified without review and approval by Client.
- **SCAFFOLDING:** All use of scaffolding shall be in accordance with the following OSHA standards:
 - 29 CFR 1910.28 – "Safety Requirements for Scaffolding"
 - 29 CFR 1910.29 – "Manually Propelled Mobile Ladder Stands & Scaffolds"
- **STORMWATER POLLUTION PREVENTION:** In accordance with the Connecticut Department of Environmental Protection (CTDEP) "General Permit for the Discharge of Stormwater Associated with Industrial Activity"; activities which will directly or indirectly release hazardous or non-hazardous materials into the storm water system are not permitted.
- **WASTE MANAGEMENT:** FCE is to be notified in advance of all waste to be generated. Under state and federal rules, FCE, as the site operator, is the "Generator" of all waste generated/created on site(s). As such, FCE is responsible for the proper Management, Storage, Transportation and Disposal of all wastes generated at site. This is to be done in accordance with all applicable requirements of the Connecticut General Statutes, the Regulations of Connecticut State Agencies and Titles 29 (OSHA), 40 (EPA) and 49 (DOT) of the Code of Federal Regulations.
- **WORKING ALONE:** Working alone can introduce additional hazards not necessarily present during the course of performing work with other personnel. The biggest risk in working alone is during the occurrence of an incapacitating injury to the lone employee; a lack of timely medical attention could exacerbate the injury leading to greater harm. To prevent this, tasks must be assessed for hazards before assigning the employee(s) to perform them alone. If hazards do exist, either periodic monitoring, assignment of additional personnel, or re-scheduling of the work must be done. Further, it is important that task limitations be clear in order that new hazards are not introduced during any work performed alone.

- **GENERAL DUTY CLAUSE:** The General Duty Clause of the Occupational Safety and Health Act requires that employers provide a place of employment that is free of recognized health or safety hazards to employees. It is FCE policy to provide such a workplace.

3 SITE SECURITY & ACCESS

Public access to the fuel cell equipment is restricted by an eight foot high enclosure surrounding the site along with private property / no trespassing warning signs. The enclosure is equipped with personnel and equipment doors or gates for necessary access. All access door/gates are kept locked when facility personnel are not present. **All access door/gates are equipped with Local Fire Department specified and keyed Knox Locks, daisy-chained to the operator-provided combination lock. The daisy-chained locks provide the necessary security, while at the same time they also provide the means for required access by both authorized owner and operator personnel as well as by Emergency Response personnel.**

All FCE power plants are remotely monitored 24 hours per day, 7 days per week, year round by FCE's GTAC operations center. Any tampering or unauthorized manipulation of fuel cell components that would result in any significant performance change for the plant will be immediately detected by the GTAC operator and/or result in an Emergency ShutDown of the plant, restoring the plant to a safe condition. All FCE fuel cell power plants are designed for "fail-safe" operation, where all foreseeable process deviations have been considered and the consequences minimized, through a hazard and operability (hazop) analysis.

4 EMERGENCY RESPONDER / LOCAL COMMUNITY COORDINATION & NOTIFICATION SYSTEM

FCE will coordinate with local emergency response departments to familiarize personnel with the operations and equipment installed at the site. At a point prior to plant mechanical completion, FuelCell Energy will contact the Local Fire Department to schedule a walk around tour and training event for the near-completed installation. Either prior to or at this time, a compilation of Safety Data Sheets for chemicals used on the site can be provided to the Fire Department. It is not anticipated that any chemical quantities on-site will exceed Emergency Planning and Community Right-to-know Act (EPCRA) notification or reporting thresholds at any time, so therefore Tier II notifications and reporting will not be required.

During the construction phase, prior to a scheduled delivery of any piece of major equipment, the police department will be notified and contracted to manage and, as required, control local traffic. Prior to connecting or making natural gas available at the facility, FCE will coordinate with the local fire department, provide training regarding the

facility equipment and facility safety features, tour Department personnel and provide description of how the plant facility will respond should a fire, smoke, or volatile gas release occur.

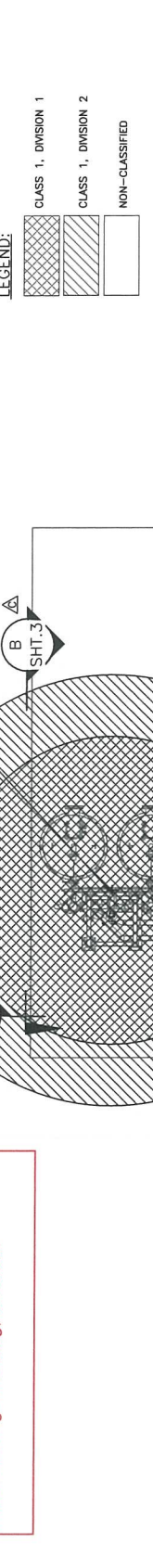
FuelCell Energy will solicit the names and contact information of those local residents that wish to be informed of any actual emergency response situation that may develop at the subject power plant which may affect them. The names and contact information of the local residents will be incorporated into the Emergency Action Plan in the table provided for notification in an emergency response situation that could potentially affect these residents. Responsibility for making such notifications will be the on-site manager during the construction phase of the project, and GTAC during the operation phase of the project.

8 7 6 5 4 3 2 1

D C B A

| REV | DESCRIPTION | BY | APPROVED | DATE |
|-----|------------------------------------|-----------|-----------|----------|
| A | ISSUED FOR PRODUCTION PER ECN-1427 | H.E.B. II | R. KENT | 03/02/09 |
| B | REVISION PER ECN #5321 | MHB | C. THOMAS | 6/13/11 |
| C | REVISION PER ECN #5971 | MHB | R. KENT | 08/01/12 |

Note: ERG Area Classification not included in this drawing. Pending, to follow.



- LEGEND:**
- CLASS 1, DIVISION 1
 - CLASS 1, DIVISION 2
 - NON-CLASSIFIED
 - UV/IR FLAME DETECTOR (2)
 - COMBUSTIBLE GAS DETECTOR (LEL) (3)
 - E-STOP (5) (4)
 - HEAT OR PHOTO ELECTRIC SMOKE DETECTOR (5)
 - RECOMMENDED FIRE EXTINGUISHER LOCATION. (SEE DETAIL SHEET 3)
 - (TYPE A.B.C. 20LB MIN. (1))
 - (SEE NOTE 6)

- NOTES:**
- GRADE ELEVATION = 0'-0" (DATUM).
 - ROCKWELL EBOP SHOWN. DIVISION DETERMINATIONS ARE IDENTICAL FOR OTHER EBOPS.
 - DIVISION DETERMINATIONS ARE FOR NATURAL GAS (GROUP D) AND ANAEROBIC DIGESTER GAS (ADG, GROUP D) FUELED PLANTS. NATURAL GAS AND ADG (55% METHANE, MIN.) HAVE AUTO IGNITION TEMPERATURES > 1000°F. ELECTRICAL EQUIPMENT PRESENT IN DIVISION 1 AND DIVISION 2 LOCATIONS MUST BE RATED FOR CLASS 1 USE AND APPROPRIATE DIVISION.
 - CLASSIFICATION DRAWING DOES NOT ASSESS LEAK SOURCES FROM CUSTOMER SUPPLIED NG OR ADG FUEL UTILITY TIE-INS IN THE VICINITY OF PLANT.
 - PCU HEAT & SMOKE DETECTORS ARE ALARMS ONLY.
 - FIRE EXTINGUISHER(S) SUPPLIED BY CUSTOMER.
 - THIS DRAWING APPLIES TO OUTDOOR INSTALLATION.
 - SP-203 SHALL NOT BE DIRECTED TOWARDS, OR LOCATED WITHIN 15 FT OF ANY HEATING, VENTILATION OR AIR-CONDITIONING AIR INTAKE, WINDOWS, DOORS OR OTHER OPENINGS INTO BUILDINGS.

REFERENCE SHEETS — THIS DRAWING

- SHEET 2 — YARD — AREA CLASSIFICATION ELEVATION & DETAILS
- SHEET 3 — YARD — AREA CLASSIFICATION ELEVATION & DETAILS
- SHEET 4 — YARD — AREA CLASSIFICATION ELEVATION & DETAILS
- SHEET 5 — YARD — AREA CLASSIFICATION ELEVATION & DETAILS
- SHEET 6 — YARD — AREA CLASSIFICATION ELEVATION — DUAL FUEL OPTION

REFERENCE DRAWINGS

486S-01-01 — LIST OF DRAWINGS

Appendix B

| FUELCELL ENERGY, INC. | | SIGNATURES | |
|--|-----------------------------------|----------------|-----------------|
| PROPRIETARY INFORMATION AND MAY NOT BE REPRODUCED, REPRODUCED EXCEPT BY PERMISSION FROM FUELCELL ENERGY, INC. | PROJECT: DFC3000 BL 3 POWER PLANT | DATE: 03/02/09 | SCALE: AS SHOWN |
| THESE DRAWINGS CONTAIN INFORMATION AND MAY NOT BE REPRODUCED, REPRODUCED EXCEPT BY PERMISSION FROM FUELCELL ENERGY, INC. | DRAWING NO: 486S-51-00 | DATE: 03/02/09 | SHEET: 1 OF 6 |
| PROJECT: DFC3000 BL 3 POWER PLANT | DRAWING NO: 486S-51-00 | DATE: 03/02/09 | SHEET: 1 OF 6 |
| PROJECT: DFC3000 BL 3 POWER PLANT | DRAWING NO: 486S-51-00 | DATE: 03/02/09 | SHEET: 1 OF 6 |
| PROJECT: DFC3000 BL 3 POWER PLANT | DRAWING NO: 486S-51-00 | DATE: 03/02/09 | SHEET: 1 OF 6 |

SITE OVERALL AREA CLASSIFICATION PLAN

3" = 10'

GRAPHIC SCALE

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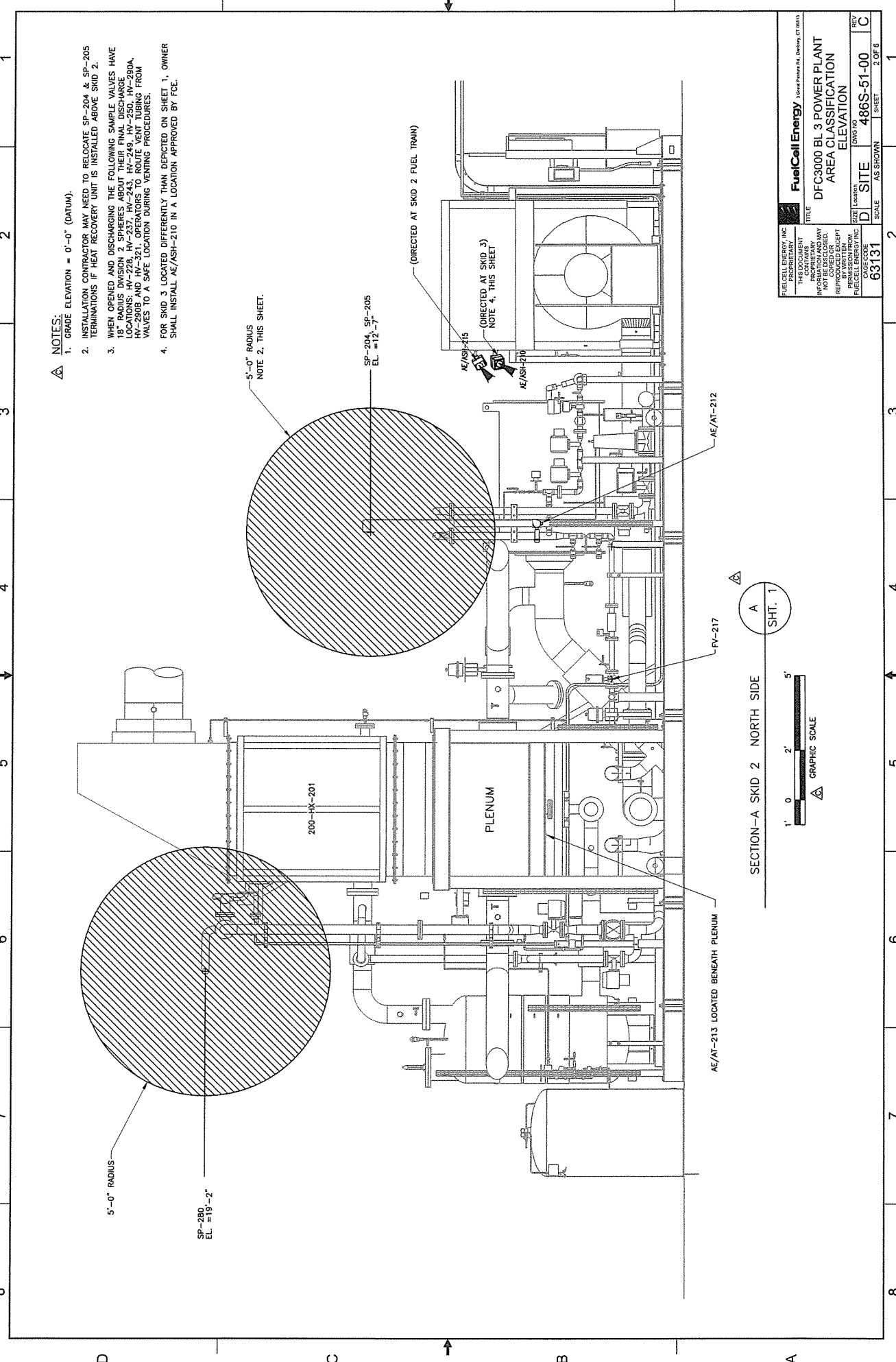
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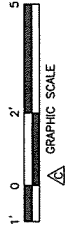
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NOTES:

1. GRADE ELEVATION = 0'-0" (DATUM).
2. INSTALLATION CONTRACTOR MAY NEED TO RELOCATE SP-204 & SP-205 TERMINATIONS IF HEAT RECOVERY UNIT IS INSTALLED ABOVE SKID 2.
3. WHEN OPENED AND DISCHARGING THE FOLLOWING SAMPLE VALVES HAVE TO BE OPENED FOR 2-3 MINUTES ABOUT THEIR FINAL DISCHARGE LOCATIONS: SP-208 & SP-217. OPERATORS MUST BE TRAINED IN THE USE OF HV-2908B AND HV-321. OPERATORS TO ROUTE VENT TUBING FROM VALVES TO A SAFE LOCATION DURING VENTING PROCEDURES.
4. FOR SKID 3, LOCATED DIFFERENTLY THAN DEPICED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN A LOCATION APPROVED BY TCE.

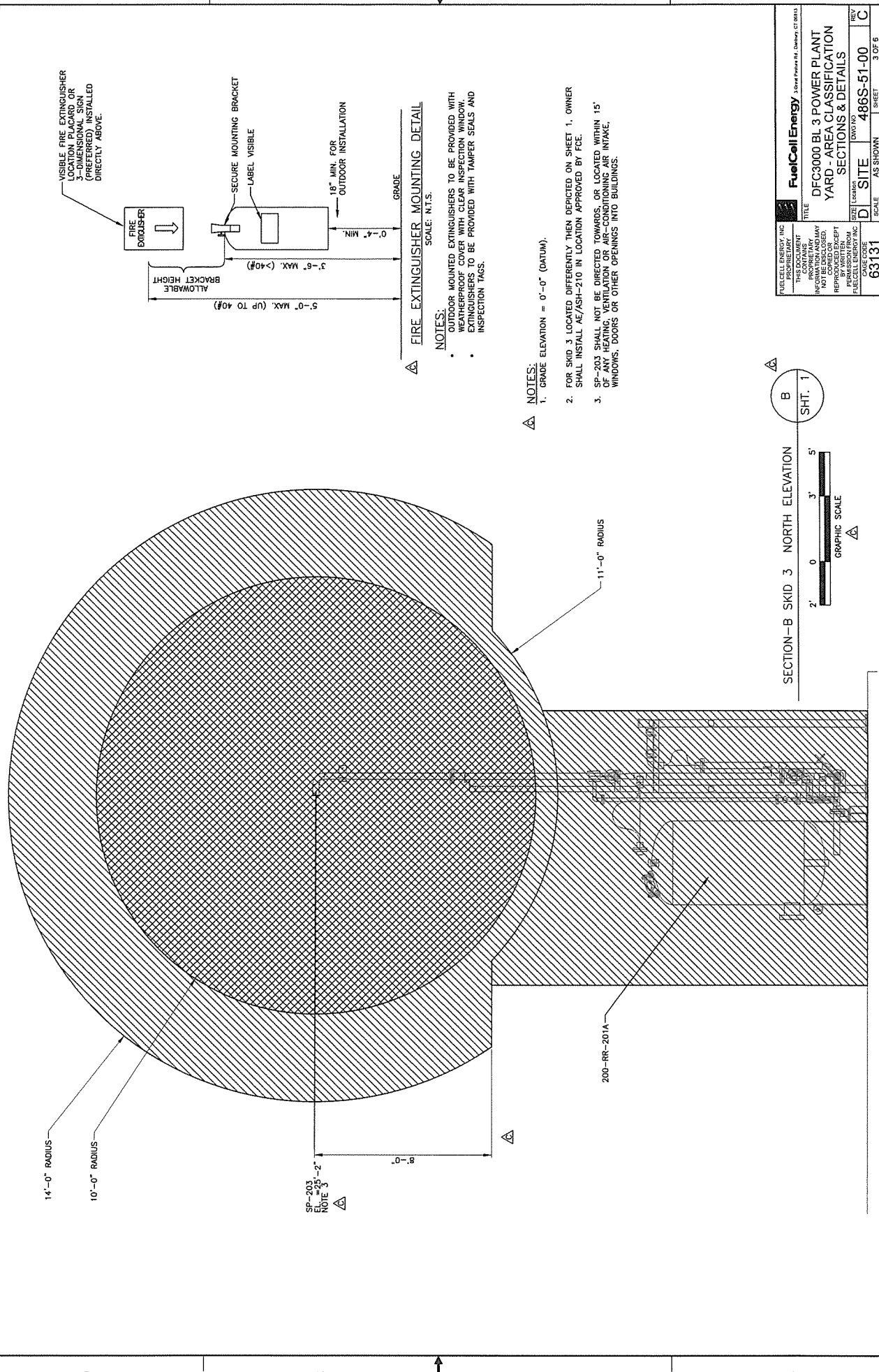


SECTION-A SKID 2 NORTH SIDE
A
SHT. 1



| | |
|--|-----------------------------------|
| FuelCell Energy 3, Canal Park Rd., Danbury, CT 06813 TITLE: | |
| THIS DRAWING IS THE PROPERTY OF FUELCELL ENERGY INC. IT CONTAINS INFORMATION AND MAY NOT BE DISCLOSED, REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT PERMISSION FROM FUELCELL ENERGY INC. | |
| PROJECT NO.: 63131 | DRAWING NO.: 486S-51-00 |
| SHEET NO.: 1 | SHEET TOTAL: 2 OF 6 |
| SCALE: AS SHOWN | DATE: C |

1 2 3 4 5 6 7 8



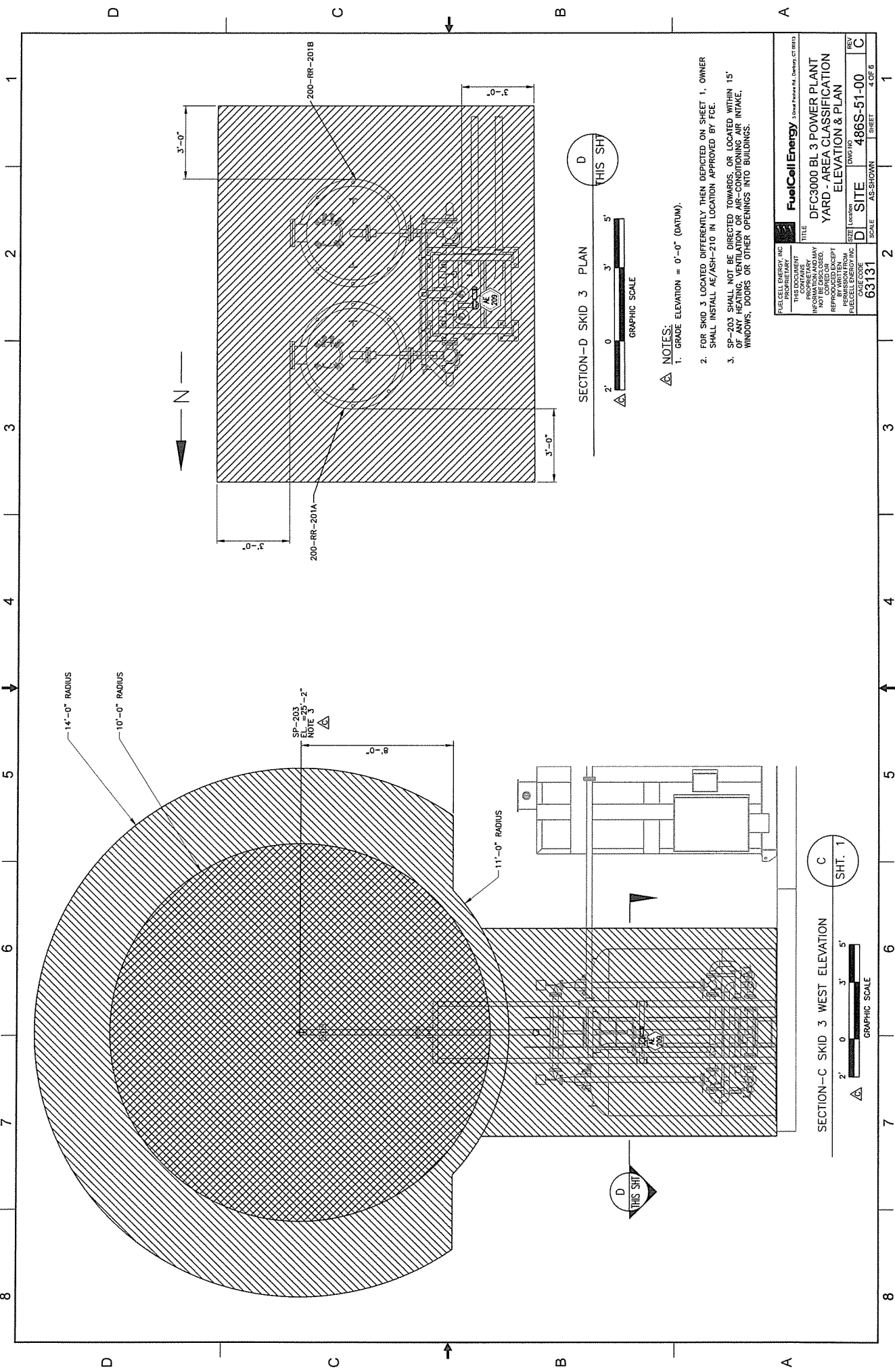
NOTES:

- MOUNTED EXTINGUISHERS TO BE PROVIDED WITH WEATHERPROOF COVER WITH CLEAR INSPECTION WINDOW.
- EXTINGUISHERS TO BE PROVIDED WITH TAMPER SEALS AND INSPECTION TAGS.

NOTES:

1. GRADE ELEVATION = 0'-0" (DATUM).
2. FOR SKID 3 LOCATED DIFFERENTLY THEN DEPICTED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN LOCATION APPROVED BY FCE.
3. SP-203 SHALL NOT BE DIRECTED TOWARDS, OR LOCATED WITHIN 15' OF ANY HEATING, VENTILATION OR AIR-CONDITIONING AIR INTAKE, WINDOWS, DOORS OR OTHER OPENINGS INTO BUILDINGS.

| | |
|---|--|
| FuelCell Energy <small>Local Partner of, Danbury CT 06813</small> | |
| FUELCELL ENERGY, INC. PROPRIETARY INFORMATION NOT TO BE DISCLOSED, REPRODUCED OR EXCEPT BY PERMISSION FROM FUELCELL ENERGY, INC. | TITLE DFC3000 BL 3 POWER PLANT YARD - AREA CLASSIFICATION SECTIONS & DETAILS |
| PROJECT NO. 63131 | DRAWING NO. 486S-51-00 |
| SCALE AS SHOWN | SHEET 3 OF 8 |



THIS SH. D

SECTION-D SKID 3 PLAN

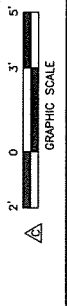


NOTES:
 1. GRADE ELEVATION = 0'-0" (DATUM).

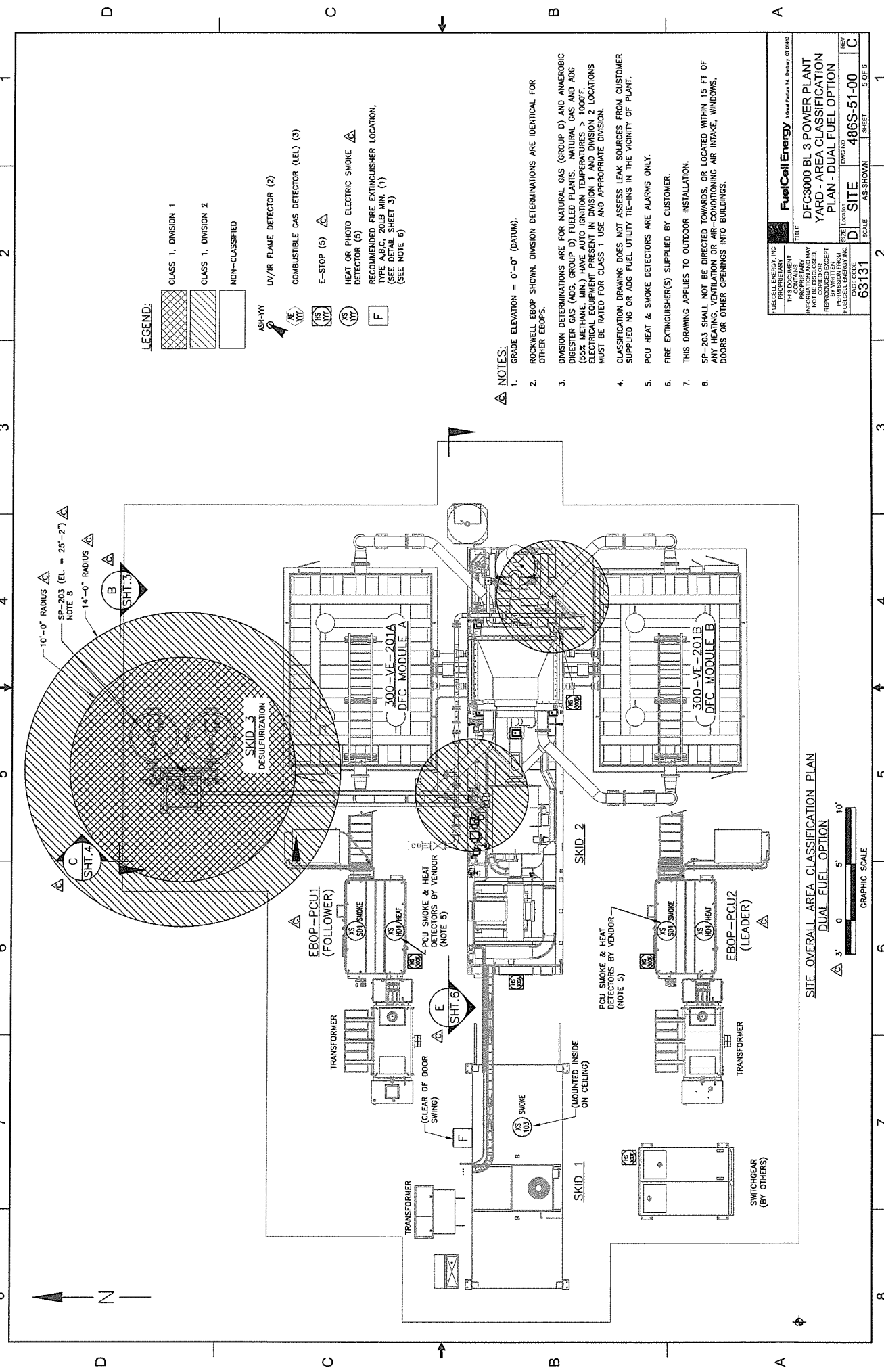
- FOR SKID 3 LOCATED DIFFERENTLY THEN DEPICTED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN LOCATION APPROVED BY FCE.
- SP-203 SHALL NOT BE DIRECTED TOWARDS, OR LOCATED WITHIN 15' OF ANY HEATING, VENTILATION OR AIR-CONDITIONING AIR INTAKE, WINDOWS, DOORS OR OTHER OPENINGS INTO BUILDINGS.

THIS SH. C

SECTION-C SKID 3 WEST ELEVATION



| | |
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| FuelCell Energy 3 Union Park Rd., Danbury, CT 06813 | |
| PROJECT NO. | 63131 |
| TITLE | DFC3000 BL 3 POWER PLANT YARD - AREA CLASSIFICATION ELEVATION & PLAN |
| DATE | 08/16/10 |
| SCALE | AS SHOWN |
| DESIGNER | 486S-51-00 |
| CHECKED BY | |
| DATE | |
| REV | C |



LEGEND:

| | |
|---------------------|---------------------|
| [Hatched Pattern 1] | CLASS 1, DIVISION 1 |
| [Hatched Pattern 2] | CLASS 1, DIVISION 2 |
| [Hatched Pattern 3] | NON-CLASSIFIED |

- ASH-MY
- UV/IR FLAME DETECTOR (2)
- COMBUSTIBLE GAS DETECTOR (LEL) (3)
- E-STOP (5) Δ
- HEAT OR PHOTO ELECTRIC SMOKE DETECTOR (6)
- RECOMMENDED FIRE EXTINGUISHER LOCATION, TYPE A.B.C. 20LB MIN. (1) (SEE DETAIL SHEET 3)
- F

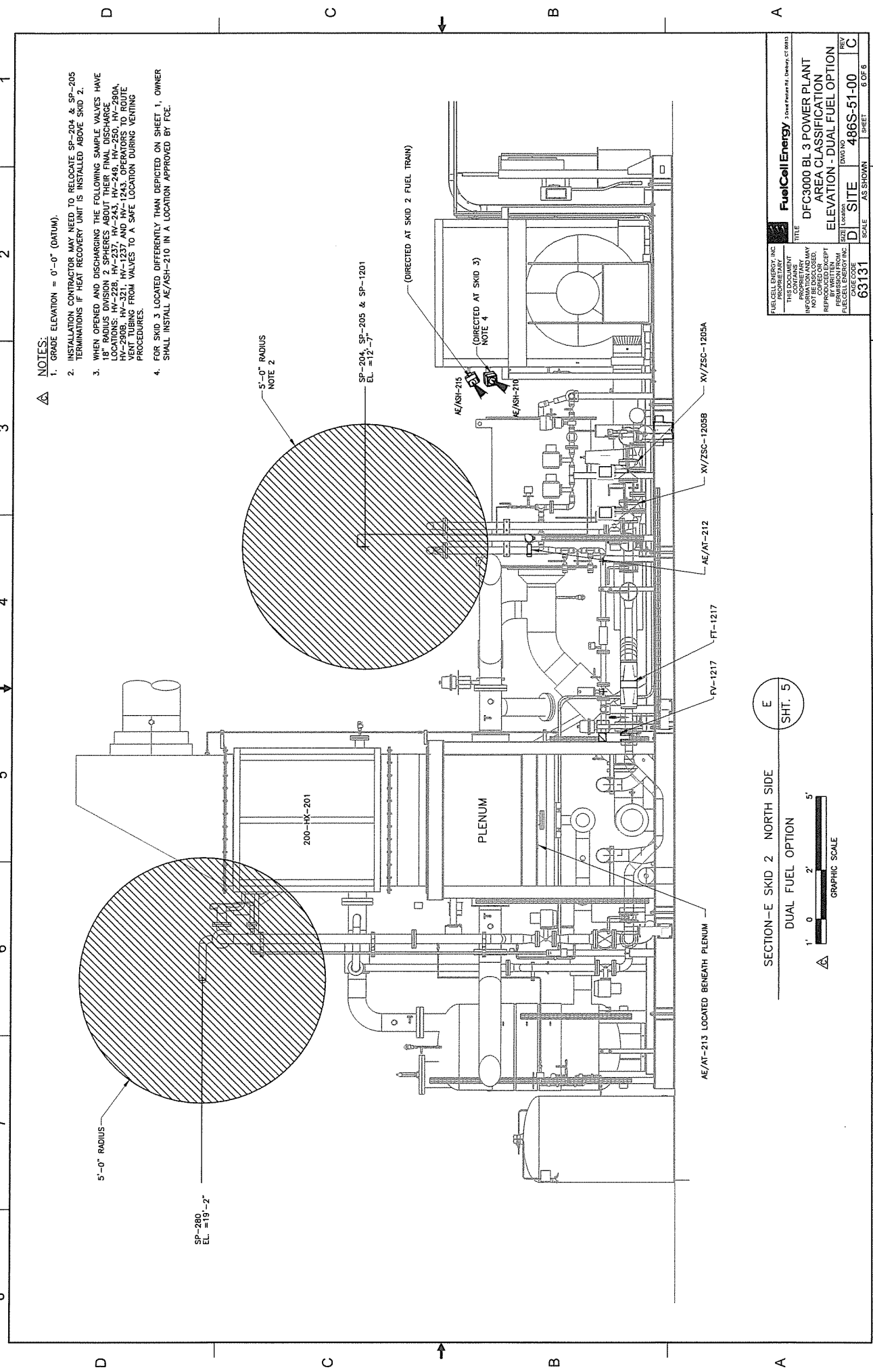
NOTES:

1. GRADE ELEVATION = 0'-0" (DATUM).
2. ROCKWELL EBOP SHOWN. DIVISION DETERMINATIONS ARE IDENTICAL FOR OTHER EBOPS.
3. DIVISION DETERMINATIONS ARE FOR NATURAL GAS (GROUP D) AND ANAEROBIC DIGESTER (AGC, GROUP D). FUELED PLANTS, NATURAL GAS AND AOG (GAS METHANE MIN.) HAVE AUTO IGNITION TEMPERATURES > 1000F. ELECTRICAL EQUIPMENT PRESENT IN DIVISION 1 AND DIVISION 2 LOCATIONS MUST BE RATED FOR CLASS 1 USE AND APPROPRIATE DIVISION.
4. CLASSIFICATION DRAWING DOES NOT ASSESS LEAK SOURCES FROM CUSTOMER SUPPLIED NG OR AOG FUEL UTILITY TIE-INS IN THE VICINITY OF PLANT.
5. PCU HEAT & SMOKE DETECTORS ARE ALARMS ONLY.
6. FIRE EXTINGUISHER(S) SUPPLIED BY CUSTOMER.
7. THIS DRAWING APPLIES TO OUTDOOR INSTALLATION.
8. SP-203 SHALL NOT BE DIRECTED TOWARDS OR LOCATED WITHIN 15 FT OF ANY HEATING, VENTILATION OR EXHAUSTING AIR INTAKE, WINDOWS, DOORS OR OTHER OPENINGS INTO BUILDINGS.

**SITE OVERALL AREA CLASSIFICATION PLAN
DUAL FUEL OPTION**



| | |
|--|-----------------|
| FuelCell Energy | |
| PROJECT NO. 63131 | SHEET AS-SHOWN |
| TITLE: DFC3000 BL 3 POWER PLANT YARD - AREA CLASSIFICATION PLAN - DUAL FUEL OPTION | |
| DATE: 08/20/2013 | SCALE: AS-SHOWN |
| PROJECT: 486S-51-00 | SHEET: 3 OF 6 |



- NOTES:**
1. GRADE ELEVATION = 0'-0" (DATUM).
 2. INSTALLATION CONTRACTOR MAY NEED TO RELOCATE SP-204 & SP-205 TERMINATIONS IF HEAT RECOVERY UNIT IS INSTALLED ABOVE SKID 2.
 3. WHEN OPENED AND DISCHARGING THE FOLLOWING SAMPLE VALVES HAVE 18" RADIUS DIVISION 2 SPHERES ABOUT THEIR FLANK DISCHARGE LOCATIONS: HV-228, HV-237, HV-243, HV-249, HV-250, HV-250A, HV-280B, HV-321, HV-1237 AND HV-1243. OPERATORS TO ROUTE VENT TUBING FROM VALVES TO A SAFE LOCATION DURING VENTING PROCEDURES.
 4. FOR SKID 3 LOCATED DIFFERENTLY THAN DEPICTED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN A LOCATION APPROVED BY FCE.

E
SHT. 5

SECTION-E SKID 2 NORTH SIDE
DUAL FUEL OPTION

1' 0 2' 5'
GRAPHIC SCALE

| | |
|---|-----------------------------------|
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| PROJECT NO.: 63131 | DRAWING NO.: 486S-51-00 |
| SHEET: 5 OF 6 | SCALE: AS SHOWN |