STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
PETITION OF PEPPERIDGE FARM, INCORPORATED FOR A DECLARATORY RULING THAT A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS NOT REQUIRED FOR THE INSTALLATION OF A FUEL CELL AT ITS BLOOMFIELD FACILITY	:	PETITION NO. _____
	:	DECEMBER 4, 2015

PETITION FOR DECLARATORY RULING:
INSTALLATION HAVING NO SUBSTANTIAL ENVIRONMENTAL EFFECT

I. INTRODUCTION

Pursuant to Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50k, FuelCell Energy, Inc. ("FCE"), as agent for and on behalf of Pepperidge Farm, Incorporated ("PF") hereby petitions the Connecticut Siting Council (the "Council") for a declaratory ruling ("Petition") that a Certificate of Environmental Compatibility and Public Need ("Certificate") is not required for the installation of a 1.4 megawatt ("MW") fuel cell combined heat and power generating facility, including all associated equipment and related site improvements, as described herein (collectively, the "Project").

Conn. Gen. Stat. § 16-50k(a) provides, in pertinent part:

> Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdictions over the siting of generating facilities, approve by declaratory ruling . . . the construction or location of any fuel cell unless the council finds a substantial adverse environmental effect . . . .

FCE and PF respectfully submit that the construction and operation of the proposed Project satisfies the criteria of Conn. Gen. Stat. § 16-50k(a) and, as described in more detail below, will not have a substantial adverse environmental effect.

II. THE PETITIONER

FCE is a Delaware corporation with a principal location at 3 Great Pasture Road, Danbury, Connecticut. PF is a Connecticut corporation with a facility located at 1414 Blue Hills Avenue, Bloomfield, Connecticut (the "Facility"). PF and FCE have entered into an Engineering, Procurement and Construction Agreement whereby FCE will construct and install FCE's DFC1500 fuel cell power plant nominally rated at 1.4 MW (the "Project") at the Facility, and a Long Term Service Agreement whereby FCE will operate and maintain the Project for a term of fifteen (15) years. The Project was selected by the Connecticut Light and Power Company n/k/a Eversource ("Eversource") as a winning bidder in Eversource's third round request for proposals for the Low and Zero Emission Renewable Energy Credit Program established under the provisions of Public Act 11-80, "An Act Concerning the Establishment of the Department of Energy and Environmental Protection ("DEEP") and Planning for Connecticut's Energy Future." As a result of the Project selection, FCE entered into a Standard Contract for the Purchase and Sale of Connecticut Class I Renewable Energy Credits with Eversource ("Standard Contract"), which contract will be assigned to PF as owner of the Project. The Project selection and the Standard Contract were approved by the Public Utility Regulatory Authority in its Docket No. 11-12-06.

Correspondence and/or communications regarding this Petition should be addressed to:

Craig Stevenson
Project Manager
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810
(203) 205-2061 (office)
(203) 825-6100 (fax)
cstevenson@fce.com

A copy of all such correspondence or communications should also be sent to the Petitioner's attorney:

Jennifer D. Arasimowicz, Esq.
Vice President, Managing Counsel
FuelCell Energy, Inc.
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Danbury, CT 06810
(203) 825-6070 (office)
(203) 825-6069 (fax)
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III. FACTUAL BACKGROUND

A. Public Benefit

A public benefit exists if a project "is necessary for the reliability of the electric power supply of the state or for a competitive market for electricity." Conn. Gen. Stat. § 16-50p(c)(1). The State of Connecticut has further articulated its energy goals in the Comprehensive Energy Strategy as encouraging the provision of cheap, clean, reliable electricity, fostering the development of microgrids and promoting economic development and job growth. The Project is located at the PF bakery Facility in Bloomfield, Connecticut adjacent to an existing 1.2 MW fuel cell installed by FCE in 2008 and will be used in conjunction with the existing fuel cell to satisfy much of the electrical needs of the Facility. As a result, the electric load that PF will need

to obtain from the electric grid will be reduced; thereby, reducing the stress on the system and reducing load on overloaded transmission lines. The Project will provide PF with savings as compared to grid purchased electricity and thermal energy. The fuel cell will be manufactured in Connecticut, and installed and operated by FCE. Thus, the Project satisfies all of the articulated goals of the Comprehensive Energy Strategy.

B. Project

FCE proposes to build and operate the Project to be located at the PF Facility in Bloomfield, Connecticut. The Project will be installed on a 79 foot x 50 foot area surrounded by an eight (8) foot high fence and gate immediately adjacent to the East side of the existing fuel cell to the North side of the PF bakery building (the "Site"). *See* Tab A for stamped issued for construction drawings.

The Project will include a natural gas-fired DFC1500 Direct Fuel Cell ("DFC") power plant provided by FCE. The Project will cogenerate a nominal 1.4 MW of Connecticut Class I renewable energy. The project will include a blind "T" flange for later addition of heat recovery. The electricity will be used by the PF bakery.

The installations associated with the Project include the fuel cell module, electrical balance of plant, main process skid, desulfurization skid, and water treatment skid.

C. Local Input

On December 1, 2015, representatives of FCE's prime subcontractor contacted Mr. Raymond Steadward, Building Official for the Town of Bloomfield, to discuss the Project and provide him with the drawing package attached as Exhibit A. Mr. Steadward acknowledged his familiarity with the Project and did not express any concerns.

D. Notice of Petition

A copy of this Petition has been sent to each person appearing of record as an owner of property that abuts the Facility and to relevant Connecticut state agencies, the Attorney General, regional planning agencies, legislators representing Bloomfield and representatives of the Towns of Bloomfield and Windsor, all as set forth on Exhibit B attached hereto.

IV. THE INSTALLATION WILL NOT HAVE A SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

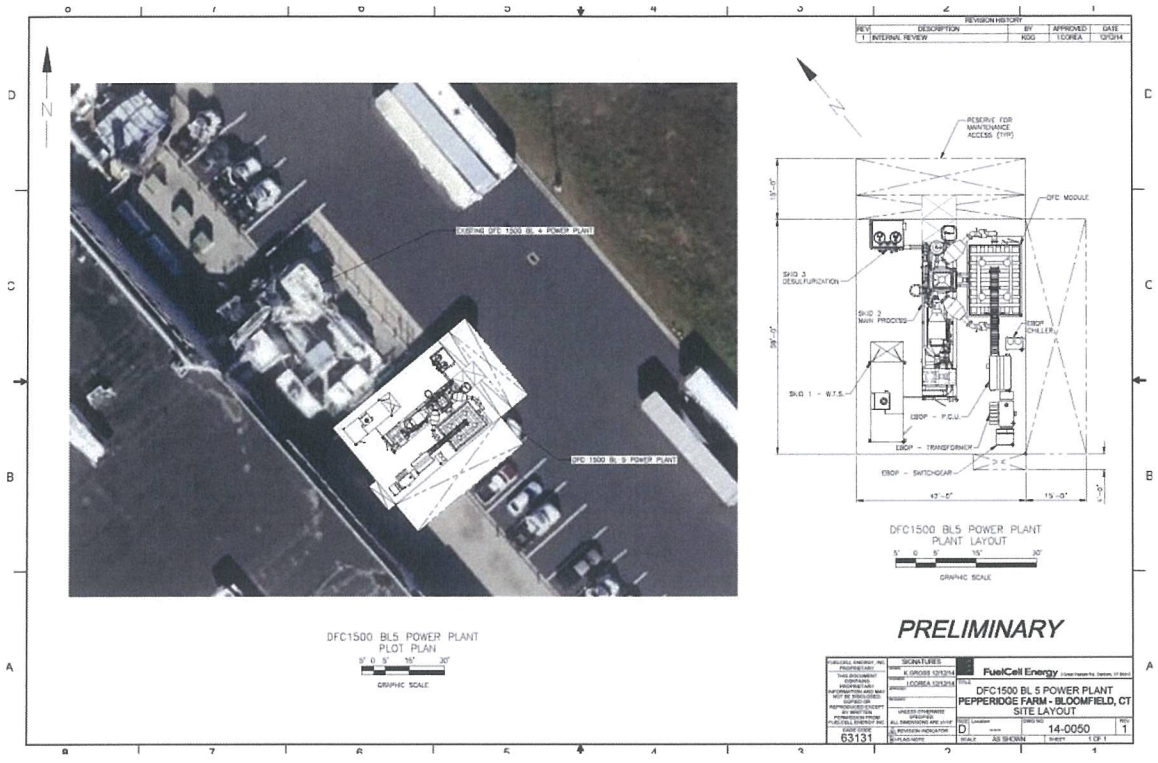
The Project will provide 1.4 MW of clean electrical energy without the environmental impacts normally associated with the use of natural gas as a fuel.

A. Natural Environment and Ecological Balance

Approximately 22,000 standard cubic feet ("scf") of nitrogen will be stored on-Site to be used in the Project. Nitrogen is non-toxic; however, it is a Department of Transportation Division 2.2 (non-flammable gas) hazardous material. There are no U.S. Environmental Protection Agency ("EPA") reporting requirements for nitrogen.

B. Public Health and Safety

The Project will be located adjacent to the existing fuel cell located at the Facility as depicted in Figure 1 below. The roadways in the area are adequate for all deliveries to support the construction and operation of the Project. These same roadways have been used in the past to deliver major equipment, including the existing fuel cell, to the Facility. The limited number of truck trips necessary to support installation will not have any adverse impacts on local roadways or traffic conditions. Operational personnel trips will be insignificant, as the Site will be unmanned and only visited periodically by technicians.



The Project has been designed with significant attention to protecting the community sound environment. The core of the fuel cell technology (*i.e.*, the Direct Fuel Cell® modules) will produce no significant sound. Ancillary equipment associated with the Project includes a blower that will pump fresh air through a silencer into the main process skid. An air conditioning unit, which is similar to many used in residential applications, will be located above the water treatment cabinet to support equipment inside the cabinet and will produce sound only when the fan is actively providing cooling for the system. Relatively small transformers and electrical buses and inverters, as well as fans providing ventilation to some of the equipment, will produce modest sound. Under normal conditions, these few acoustic sources would produce consistent sound throughout the day and night.

The acoustic levels associated with the Project were estimated at community receptors per the Regulations of Connecticut State Agencies ("R.C.S.A.") § 22a-69-1 *et seq.* The Project Site is categorized as a Class C Noise Zone, where the sound level is limited to 70 dBA at Class C receptors, 66 dBA at Class B receptors, and 61 dBA at Class A receptors during the daytime and 51 dBA at Class A receptors during the nighttime

The zoning and land uses for the Project Site and all surrounding properties to a distance of well over 2000 feet is industrial. To the west and slightly north, at approximately 2500 feet away from the Project Site is the Metropolitan Learning Center Magnate School. Educational institutions are classified as Class B receptors. No Class A receptors or other Class B receptors were identified in the vicinity of the Project Site.

Using noise the results of noise modeling performed for previous DFC1500 projects and extrapolating the results using the standard sound level attenuation with distance relationship, sound level predictions were calculated for neighboring uses including the Metropolitan Learning Center and abutting industrial land. The results of the analytical predictions are provided in the table below.

Receptor	Direction & Distance from DFC1500 source	Predicted Sound Level from Source	Noise Criterion
Metropolitan Learning Center	Approximately 2500' West-Northwest	25 dBA	66 dBA
Industrial Land Use Buildings	Approximately 1000' NW, North and South	<35dBA	70 dBA

The results of the sound evaluation clearly indicate that the Project can be operated at the Site within the applicable noise performance criteria.

Prior to operation, FCE will discuss the Project with the Bloomfield Fire Department. In addition, in accordance with the Council's Final Decision in Docket NT-2010, FCE is attaching an Emergency Response Plan ("ERP") for the Council's review. *See* ERP attached as Exhibit C. The ERP includes the following information:

- A description of any simulated emergency response activities with any state and/or local emergency response officials;
- Details of any facility Site access system; and
- Establishment of an emergency responder/local community notification system for on-Site emergencies and planned construction-related activities that could cause community alarm.

All other requirements of the NT-2010 Decision will be adhered to.

Project design has been complete, and the drawing package attached as Exhibit A represents issued for construction drawings.

C. Scenic Values

The proposed Project will have little impact on the visual character of the community. Generally, the potential visual impact is inherently small due to the low profile of the Project in the context of the existing bakery building at the Facility. Views to the South will be obstructed by the existing bakery. Views to the West will be obstructed by wooded land. Views to the North will be obstructed by the existing fuel cell.

D. Historical Values

On November 10, 2015 a request was overnight mailed to the Connecticut State Historic Preservation Office ("SHPO") requesting a determination regarding the Project's effect on historic, architectural or archaeological resources listed on or eligible for the National Register of Historic Places. *See* Correspondence attached as Exhibit D. As of the date of filing of this

Petition, the SHPO has not responded. However, given the location of the Project adjacent to the existing fuel cell in the PF parking lot, FCE is confident that there will be no impact to the State's historic, architectural or archaeological resources.

E. Air Quality

Air emissions from the fuel cell associated with the Project, assuming continuous year-round operation, is expected to be:

Pollutant	Total Potential Emissions (tpy)
Oxides of Nitrogen ("NO_x")	0.06
Oxides of Sulfur ("SO_x")	0.0006
Particulate Matter ("PM")	0.0001
Carbon Monoxide ("CO")	0.61
Volatile Organic Compounds ("VOC")	0.12
Carbon Dioxide ("CO_2")	6,009

In addition to the emissions from the fuel cell itself, there will also be minor emissions associated with a 5 MMBtu/hr gas-fired startup burner that will be included with the fuel cell power plant. The burner is used at start-up only to heat the plant to its required operating temperature. The criteria pollutant potential emissions (assuming 8,760 hours of operation) associated with the gas-fired burner along with the fuel cell are less than 15 tpy using conservative EPA AP-42 emission factors.

Total emissions from the proposed Project will be below levels that would render the Project a "major stationary source" as defined at R.C.S.A. § 22a-174-1(57). The Project's maximum emissions will operate well below the serious non-attainment area thresholds for VOC and NO_x. Thus, the Project will be a minor source and is not subject to Federal Non-Attainment

New Source Review ("NSR"). Also, there is no requirement for emission offsets for this Project as it will be below the non-attainment NSR major source thresholds.

A Permit to Construct and Operate Stationary Sources is not required for the Project because the potential emissions of any individual criteria air pollutant are less than 15 tpy; the source is not a new major stationary source; and, the source is not a new major source of hazardous air pollutants. The Project is also not subject to DEEP's "permit by rules" because the potential emissions from each of the fuel cells are less than 15 tpy. Thus, there are no registrations or applications required to be submitted to the DEEP; nor are there anticipated to be any approvals from the DEEP Air Bureau required prior to the construction and operation of the Project.

On May 13, 2010, EPA issued the final greenhouse gas ("GHG") Tailoring Rule. This rule effectively raised the thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. However, since the potential GHG emissions from the Project will be well below the 75,000 tpy trigger established by the Tailoring Rule, those emissions will not trigger the requirement for an air permit.

On average, the Project will offset power from the utility grid, which has an average CO_2 footprint of 1,107 lbs CO_2 per MWh (EPA EGRID 9th Edition (February 2014) NEWE New England subregion, non-baseload). As a result, operation of the Project will result in the following net reduction of CO_2 GHG:

- CO_2 produced from power generation: 980 lbs/MWh
- CO_2 avoided by not using grid power: 1,107 lbs/MWh

Net CO_2 impact: 127 lbs/MWh or approximately 779 tpy **reduction**

F. Water Quality

The Project Site is not located within either 100- or 500-year floodplains or the coastal zone. There are also no surface water bodies, wetlands or hydric soils at or near the Project Site.

The Project Site occupies less than one acre and, as such, a DEEP general permit construction stormwater pollution prevention plan is not required. Groundwater in the Site vicinity will not be impacted by the installation and operation of the Project. Limited excavation of soils will be required for installation of the Project and no wastewaters will be discharged on-Site. To the extent necessary, the small number of personnel periodically operating and/or maintaining the Project will use existing sanitary facilities at PF.

The fuel cell to be installed as part of this Project (*i.e.,* DFC1500) will require approximately 6,500 gallons per day ("gpd") of raw water and will discharge approximately 3,200 gpd of wastewater. Most of the makeup water will be released as water vapor with the fuel cell exhaust gas. Water will be obtained from the existing PF water system and the wastewater will be discharged to the existing PF wastewater system. The Project will register under DEEP's Miscellaneous Sewer Compatible Discharges general permit. Thus, adequate water supply and infrastructure are available to supply the Project. Therefore, no substantial adverse environmental effect will occur from the Project's water use and wastewater disposal.

G. Fish and Wildlife

A request was made with the Connecticut DEEP for a review of the Natural Diversity Data Base Map. In response, DEEP indicated that there are known extant populations of State Special Concern box turtles in the vicinity of the Site. *See* Correspondence attached as Exhibit

E. DEEP recommended particular construction strategies, protocols and practices be employed to lessen any potential impact on the box turtles. FCE has shared these recommendations with PF and both FCE and PF are committed to employing each of these recommendations to protect any box turtles in the area.

H. Summary

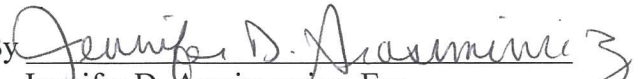
Overall, the proposed installation will have an incremental visual impact and will not cause any significant change or alteration in the physical or environmental characteristics of the Facility or the surrounding area. In fact, as discussed in Section IV.E above, the Project will actually provide an environmental benefit to the State of Connecticut by reducing CO_2 emissions by approximately 779 tpy.

V. CONCLUSION

For all the foregoing reasons, FCE and PF respectfully request that the Council issue a determination, in the form of a declaratory ruling, that the proposed installation as described above is not one that would have a substantial adverse environmental effect and, therefore, that a Certificate is not required.

Respectfully submitted,

FUELCELL ENERGY, INC.

By 

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Its Attorney

PEPPERIDGE FARMS
FUEL CELL SYSTEM

BLOOMFIELD, CT

PEPPERIDGE FARM®

FuelCell Energy
Ultra-Clean, Efficient, Reliable Power

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Mechanical Contractor

Notch Mechanical Constructors
85 Lemay St.
Chicopee, MA 01013-2236

Electrical Contractor

Elm Electrical, Inc.
68 Union St.
Westfield, MA 01085

Civil & Site Contractor

One Development & Construction; An Elm Company
68 Union St.
Westfield, MA 01085

PROJECT LOCATION

1414 Blue Hills Ave.
Bloomfield, CT 06002

ELM ELECTRICAL, INC.
68 UNION STREET
WESTFIELD, MA 01085
PHONE 413.568.0905
FAX 413.562.0407
E-MAIL: elm@elmelec.com
MA Lic #A-17024 CT Lic #E1-125482 VT Lic #EM-3803 NH Lic #M-10627 RI Lic #A004576

SCALE:	DWN BY:	CHK'D BY:	DATE DWN	CAD FILE:
NONE	AC	TJR	5.14.2015	
PROJECT NUM:		SERIES:	SHEET:	OF:	REV:
26001			T1	1	1

PROJECT: PEPPERIDGE FARMS 1.4 MW FUEL CELL INSTALLATION

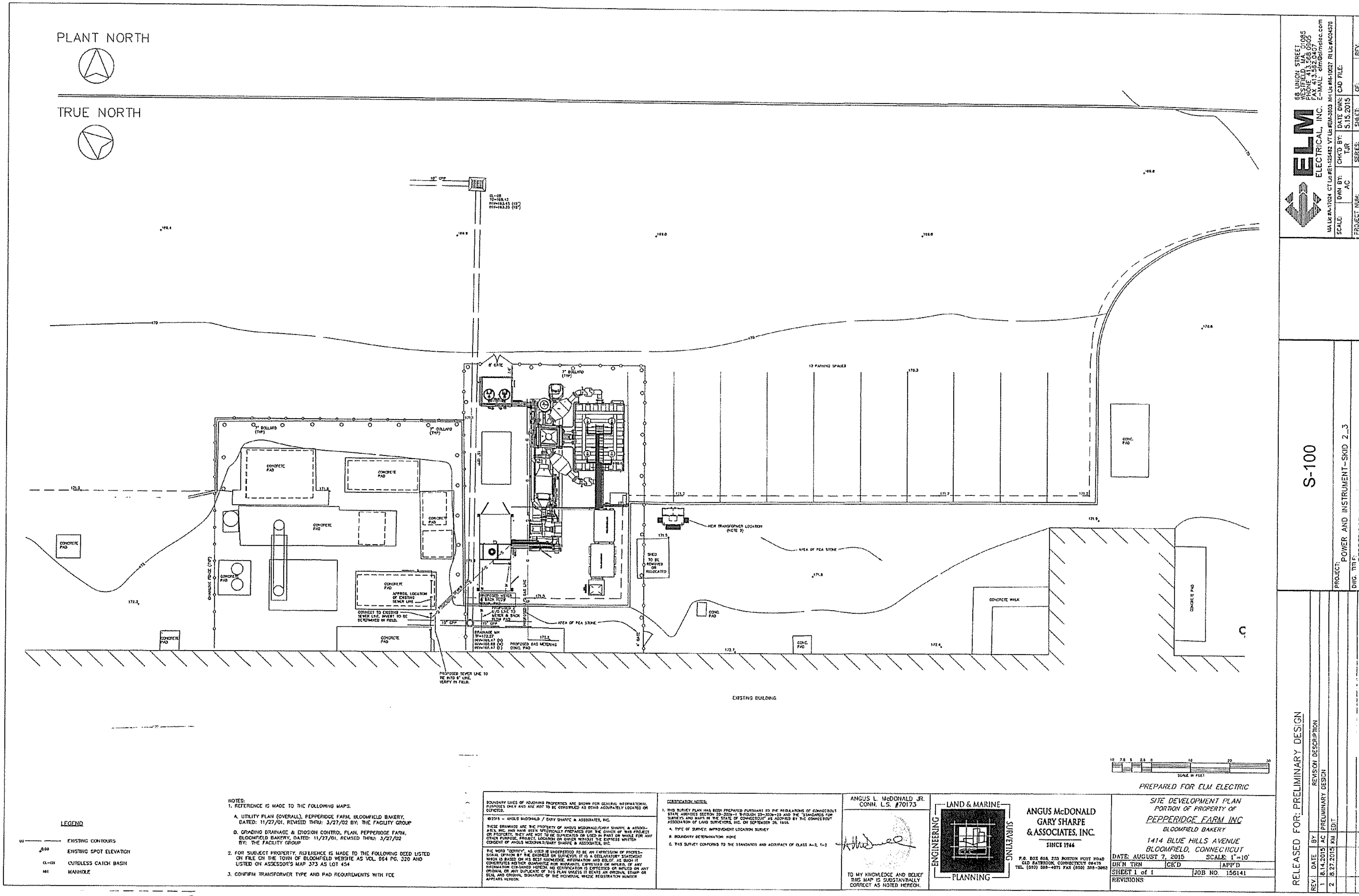
DWG TITLE: COVER PAGE

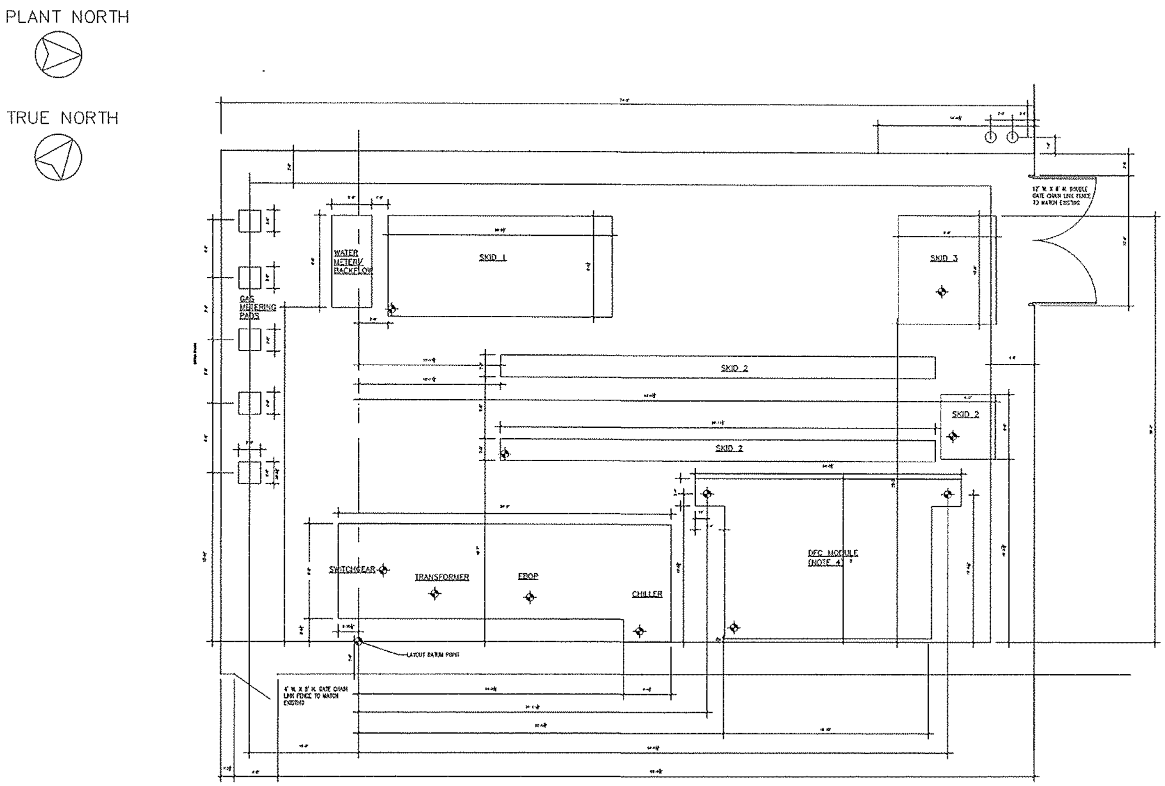
C-100

RELEASED FOR PRELIM DESIGN

REV	DATE	BY	REVISION DESCRIPTION
1	8.14.2015	AC	PRELIM DESIGN
2	8.27.2015	KM	EDIT

Petition of Pepperidge Farm Incorporated
December 4, 2015
Exhibit A





FLOOR & EQUIPMENT PAD LAYOUT PLAN
SCALE: 1/4" = 1'-0"

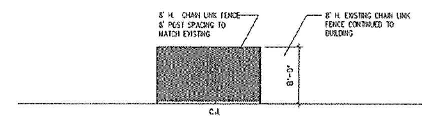
SKID TABLE					
SKID I.D.	NORTH	EAST	SHIPPING SIZE E-W x N-S x HEIGHT	***INSTALLED SIZE E-W x N-S x HEIGHT	WEIGHT (MAX - LBS)
SKID 1 - WATER TREATMENT	30'-6"	3'-0"	19'-10 1/2"x8'-0"x9'-6"	19'-10 1/2"x9'-2 3/8"x13'-1 1/2"	26,000
SKID 2 - MAIN PROCESS	17'-2"	13'-4 5/8"	*40'-10 1/4"x8'-6"x10'-11 7/8"±	39'-0"x11'-4"x29'-10 11/16"±	50,000
SKID 3 - DESULFURIZATION	32'-3"	53'-6"	**36"O.D.x12'-11 3/4"	8'-5 1/2"x8'-1 13/16"x18'-5"	11,000
DFC MODULE	1'-4"	34'-5"	19'-0 1/2"X13'-7"X12'-10 5/8"	18'-10"x13'-5 1/2"x14'-0 1/4"	96,000
EBOP(PCU)/BUS CAB.	4'-0 3/16"	15'-8 5/16"	9'-2"x6'-3 3/16"x8'-5 15/16"	8'-4"x5'-5"x8'-6"	8,300
EBOP TRANSFORMER (NOTE 5)	3'-1 5/16"	7'-8 7/8"	9'-4"x6'-8 7/8"x7'-7 13/16"	9'-0"x6'-9"x7'-9"	9,200
EBOP SWITCHGEAR	3'-3 13/16"	2'-2 13/16"	4'-8 1/4"x4'-1 3/8"x7'-8 11/16"	4'-4 1/2"x4'-0 3/16"x8'-11 1/8"	2,000
EBOP CHILLER	11 15/16"	25'-8 7/8"	3'-1 3/4"x4'-2"x5'-5 1/4"	2'-11 1/2"x4'-10"x5'-5 1/4"	1,600

* SHIPPING SIZE INCLUDES TEMPORARY/SHIPPING RESTRANTS.
** SIZE SHOWN IS FOR ONE DESULFURIZER VESSEL, WHICH IS SHIPPED INDEPENDANTLY OF THE OTHER.
*** INSTALLED SIZE IS NOT ALWAYS THE FOOTPRINT OF STEEL DIMINSIONS. USE FCE DWG 488C-12-0 FOR FURTHER GUIDANCE.

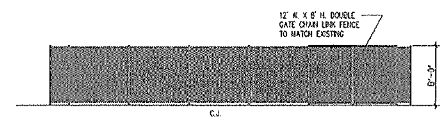
NOTES:

1. ALL EQUIPMENT SLAB ELEVATIONS TO BE 171.3' WITH THE EXCEPTION OF DFC MODULE TO BE 171.8'. REFERENCE ELEVATION TO BE VERIFIED PRIOR TO CONSTRUCTION
2. SLAB ELEVATIONS FOR DFC MODULE & SKID 2 ARE CRITICAL WITH NO VARIATIONS ALLOWED. POUR ONE PAD FIRST AND USE AS A BENCH MARK FOR THE 2ND PAD.
3. COORDINATE THE PAD PENETRATIONS WITH ELECTRICAL AND MECHANICAL PLANS
4. CONTRACTOR TO MINIMIZE PAD SIZE/HOTBOX SIZE WHERE EVER POSSIBLE

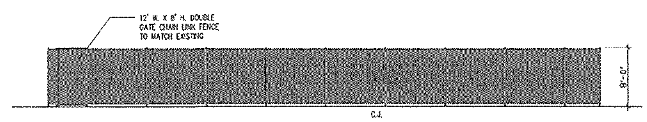
⊕ REFERS TO E-W / N-S LOCATIONS ON SKID TABLE



WEST ELEVATION
SCALE: 1/8" = 1'-0"



NORTH ELEVATION
SCALE: 1/8" = 1'-0"



EAST ELEVATION
SCALE: 1/8" = 1'-0"

ELM ELECTRICAL, INC.
58 UNION STREET
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FAX 413.562.0407
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MA Lic #A-17024 CT Lic #E1-125482 VT Lic #EM-3003 NH Lic #M-10027 RI Lic #A004578

SCALE:	DWN BY: AC	CHK'D BY: TJR	DATE DWN: 5.15.2015	CAD FILE:
PROJECT NUM: 39001		SERIES:	SHEET: 4	OF: 24	REV: 1

S-200

PROJECT: PEPPERIDGE FARMS 1.4MW FUEL CELL INSTALLATION
DWG. TITLE: EQUIPMENT PAD LOCATIONS

RELEASED FORPRELIMINARY DESIGN

REV.	DATE	BY	REVISION DESCRIPTION
1	8.14.2015	AC	PRELIMINARY DESIGN
2	8.26.2015	KM	EDIT

PLUMBING GENERAL NOTES:

PART 1 - GENERAL AND RELATED DOCUMENTS

DRAWING AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER DIVISION-1 SPECIFICATION SECTIONS APPLY TO THE WORK OF THIS SECTION

WORK INCLUDED: THE PLUMBING SYSTEM FOR THIS WORK INCLUDES ALL NATURAL GAS, COLD WATER DISTRIBUTION, DOMESTIC WATER HEATING AND DISTRIBUTION, VENTS, FLOOR DRAIN, EQUIPMENT, PLUMBING FIXTURES AND ALL OTHER PLUMBING ITEMS INDICATED ON THE DRAWINGS

CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AD REGULATIONS, COMPLY WITH THE FOLLOWING:
LOCAL GAS, MECHANICAL, AND THE PLUMBING CODE LATEST EDITIONS,
INCLUDING LOCAL AMENDMENTS
LOCAL UTILITY COMPANIES REGULATIONS

OPERATION AND MAINTENANCE MANUAL: UPON COMPLETION OF THE WORK, AND AS A CONDITION OF ITS ACCEPTANCE, COMPILE AND SUBMIT MANUALS AS REQUIRED

PRODUCT HANDLING / PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES

REPLACEMENT: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE OWNER AND AT NO ADDITIONAL COST TO THE OWNER

PART 2 - PRODUCTS

PIPE - SOIL, WASTE, AND VENT SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD CONNECTIONS, UNLESS OTHERWISE NOTED ON DRAWING

DOMESTIC WATER PIPING: COLD WATER PIPING, UNLESS OTHERWISE SHOWN ON THE DRAWINGS, SHALL BE HARD-DRAWN COPPER TUBE EQUALING OR EXCEEDING THE QUALITY OF "REYNOLDS", MADE UP WITH WROUGHT OR FORGED COPPER FITTINGS AND 95-5 TIN ANTIMONY SOLDER. BELOW-GRADE AND BELOW-SLAB COPPER PIPE SHALL BE TYPE "K", ALL OTHER COPPER PIPING SHOULD BE TYPE "L". NO JOINTS OR CONNECTION SHALL BE MADE IN OR BELOW THE SLAB. REFER TO LOCAL CODE FOR ANY OTHER REQUIREMENTS FOR TYPE OF MATERIALS APPROVED AND METHODS OF JOINING.

VALVES: ALL VALVE DESIGN IS BASED ON THE USE OF "WALWORTH" IN THE MODEL SHOWN BELOW. PROVIDE VALVES EQUALING AND EXCEEDING QUALITY OF THOSE UPON WHICH DESIGN IS BASED.

TYPE	SIZE RANGE	PART NUMBER
GATE	3" AND SMALLER	3
GLOBE	2" AND SMALLER	95
CHECK	2" AND SMALLER	412
GAS COCK	1" AND SMALLER	597
GAS COCK	1 1/4" AND LARGER	855 & 7904

WRENCH CHANGED FOR USE WITH EACH COCK

HANGER AND SUPPORTS, UNLESS OTHERWISE SHOWN ON DRAWINGS, SHALL EQUAL OR EXCEED THE QUALITY OF THE FOLLOWING:

ITEM	MANUFACTURER & MODEL NO
PIPE RING HANGER	GRINEL 107R
SIDE BEAM CLAMP	GRINEL 202
TRAPEZE HANGERS	SUPERSTRUT A1200
VERTICAL RISER	GRINEL 281

HANGER RODS SHALL CONFORM TO THE FOLLOWING:

PIPE SIZE	ROD DIAMETER
1/2" TO 2"	3/8"
2 1/2" TO 3 1/2"	1/2"
4" TO 5"	5/8"

TRAPEZE HANGERS MAY BE USED WHERE PARALLEL RUNS OF PIPE OCCURS. ALL RODS ON TRAPEZE HANGERS SHALL BE 1/2" MINIMUM.

SHOCK ABSORBERS: PROVIDE 12" HIGH AIR CHAMBER AT EACH FIXTURE ON BOTH HOT AND COLD WATER. SIZE TO BE THE SAME AS THE BRANCH LINE AT POINT OF TEE UPWARD.

CLEANOUT: PROVIDE CLEANOUTS EQUALING OR EXCEEDING THE QUALITY OF THE FOLLOWING
FLOOR CLEANOUT: J.R. SMITH # 4016
GARDE CLEANOUT: J.R. SMITH#4011 WITH ROUND FRAME & COVER

ALL EXPOSED PARTS OF FLOOR CLEANOUTS IN FINISHED AREAS SHALL BE SCORIATED NICKEL BRONZE. ALL OTHER INTERIOR CLEANOUTS SHALL BE POLISHED SCORIATED BRONZE. ALL GRADE CLEANOUTS SHALL HAVE ROUGH SCORIATED BRONZE COVERS.

ISOLATE ALL DISSIMILAR METALS WITH ISOLATORS EQUALING OR EXCEEDING THE QUALITY OF "EPCO" DIELECTRIC UNIONS.

COPPER: MAKE ALL JOINTS IN COPPER TUBING WITH 95-5 TIN-ANTIMONY SOLIDER, APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS

PVC: MAKE ALL JOINTS IN PVC PIPING WITH PROPER JOINT CEMENTS, APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.

SUPPORTING: USE A SEPARATE HANGER FOR EACH BRANCH. SUPPORT VERTICAL RISERS AT THE FLOOR WITH EXTENSION PIPE CLAMPS APPROVED BUT THE ARCHITECT, WHEREVER INSULATION PIPE IS SUPPORTED BY RING HANGERS, THE RINGS SHALL PASS FREELY AROUND THE ISOLATION AT POINT OF CONTACT WITH THE SADDLES APPROVED BY THE ARCHITECT.

SLEEVING, SEALING, ESCUTCHEONS, AND FIRE-SAFING: ALL PIPING THROUGH ALL INTERIOR AND EXTERIOR WALLS SHALL BE SLEEVED. ANNULAR SPACE BETWEEN PIPING AND SLEEVE SHALL BE SEALED WATERTIGHT WITH NON-HARDENING COMPOUND (WHERE WALLS ARE NOT FIRE RATED) OR FIRE-SAFING (WHERE WALLS ARE FIRE RATED). SLEEVE AND FIRE-SAFING SHALL MAINTAIN FIRE RATING OF WALL ASSEMBLY. EACH END OF SLEEVE SHALL BE FITTED WITH TWO PIECE CHROME PLATED ESCUTCHEON PLATE.

DRAIN VALVE TO BE LOCATED AT ALL LOW POINTS

TESTING:

GENERAL: FURNISH ALL TEST PUMPS, GAGES, EQUIPMENT, AND PERSONNEL REQUIRED, AND TEST AS NECESSARY TO DEMONSTRATE THE INTEGRITY OF THE FINISHED INSTALLATION TO THE APPROVAL OF ALL PERTINENT AUTHORITIES AND OWNER

SOIL & WASTE: UNLESS OTHERWISE DIRECTED, PLUG ALL OPENINGS AND FILL WITH WATER TO A HEIGHT EQUAL TO THE LOWEST VENT. ALLOW TO STAND ONE HOUR OR LONGER AS REQUIRED. RECAULK LEAKING JOINTS AS DIRECTED THEN RETEST

WATER LINES: TEST AND AKE TIGHT AT 150PSI WATER GAGE. RETAIN FOR FOUR HOURS; REPAIR ALL LEAKING JOINTS AS DIRECTED AND THEN RE-TEST

GAS: AIR TEST TO PRESSURE EQUAL TO 1.50 TIMES NORMAL OPERATING PRESSURE; RETAIN FOR FOUR HOURS, SOAP TEST IF THE PRESSURE DROPS; REPAIR ALL LEAKS; AND THEN RE-TEST

VALVES: TEST ALL VALVE BONNETS FOR TIGHTNESS, TEST OPERATE ALL VALVES AT LEAST ONCE FROM CLOSED-TO-OPEN-TO-CLOSED POSITION WHILE VALVE IS UNDER PRESSURE. TEST ALL AUTOMATIC VALVES FOR PROPER OPERATION AT THE SETTING INDICATED. TEST PRESSURE RELIEF VALVE AT LEAST THREE TIMES.

OTHER: TEST ALL PIPING SPECIALTIES FOR PROPER OPERATION. TEST ALL VENT POINTS TO ENSURE THAT AIR HAS BEEN VENTED

ADDITIONAL NOTES:

ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE OR READY FOR OPERATION, SHALL BE PROVIDED BY OTHERS.

DRAWINGS AND SPECIFICATIONS INDICATE GENERAL ARRANGEMENT OF SYSTEM AND WORK. NEITHER THE SPECIFICATIONS NOR THE DRAWINGS UNDERTAKE TO ILLUSTRATE OR DESCRIBE ALL ITEMS NECESSARY FOR THE WORK. THE VENDOR/CONTRACTOR IS TO BE COMPLETELY FAMILIAR WITH THE FUNCTION OF ALL THE ITEMS INCLUDED AND THAT HIS ESTIMATE SHALL REFLECT THE INCLUSION OF ALL THE HANGERS, FLANGES, ETC., NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. ALL MATERIAL, WORK, INCIDENTAL ACCESSORIES OR OTHER DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT, AND IN ALL RESPECTS READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED BY THE CONTRACTOR/VENDOR AT NO ADDITIONAL COST.

SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL MECHANICAL EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE AND FEDERAL BUILDING CODE REQUIREMENTS. CONTRACTOR TO SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER, IF REQUIRED.

FIELD VERIFY ALL UNDERGROUND UTILITIES, PIPE LINE, ETC. BEFORE COMMENCING WORK.

PROVIDE VENTS AT HIGH PIPING POINTS.

NATURAL GAS PIPING	ABOVE & BELOW GRADE: SHALL BE SCHEDULE 40CARBON STEEL (COATED BELOW GRADE), BUTT WELDED. DIRECT BURIAL PER NFPA 54
MECHANICAL PIPE INSULATION	EXPOSED PIPES: SHALL BE 2" FIBERGLASS, ALUMINUM JACKET. INTERIOR PIPES: SHALL BE 1 1/2" FIBERGLASS, FSK JACKET.
TAB SERVICE	INDEPENDENT TEST AND BALANCE SERVICE PROVIDED FOR HYDRONIC HEAT REJECTION SYSTEM

ELM ELECTRICAL, INC.
68 UNION STREET
WESTFIELD, MA. 01085
PHONE 413.568.0905
FAX 413.562.0407
MA Lic #A-17024 CT Lic #E1-123482 VT Lic #EM-3803 NH Lic #M-10827 RI Lic #A004578

SCALE:	DWN BY	CHK'D BY	DATE DWN	CAD FILE
	AC	TJR	5.15.2015	
PROJECT NUM		SERIES	SHEET	OF	REV.
39001			13	24	1

M-100

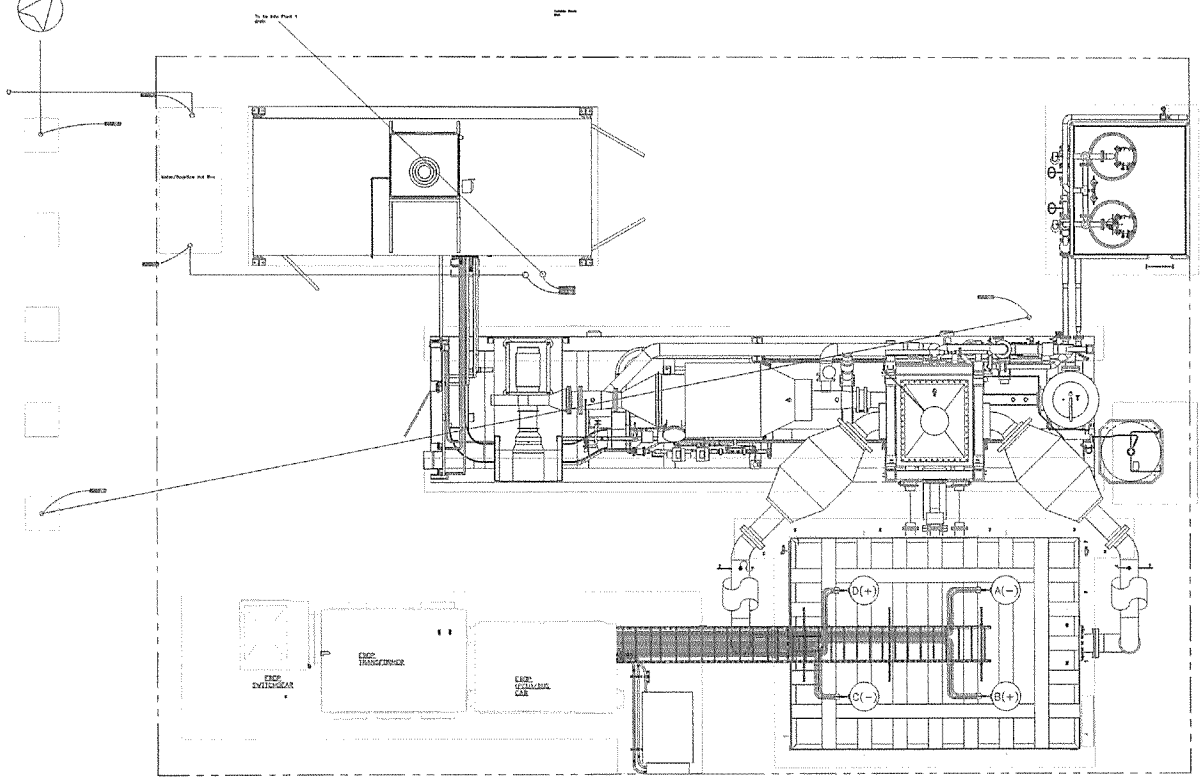
PROJECT: PEPPERIDGE FARMS 1.4MW FUEL CELL INSTALLATION
DWG. TITLE: MECHANICAL GENERAL NOTES

RELEASED FOR: PRELIMINARY DESIGN

REV.	DATE	BY	REVISION DESCRIPTION
1	8.14.2015	AC	PRELIMINARY DESIGN
2	8.28.2015	KM	EDIT

PLANT NORTH

TRUE NORTH



Pipe Stub-up Locations		
Stub-up No.	Pipe Size (in)	Description
Notch-1	1 1/2	Load Side Backflow Preventer
Notch-2	2	Skid No.1 Drain
Notch-3	1 1/4	Skid No.1 Water Supply
Notch-4	3	Skid No.2 Gas Supply
Notch-5	2	Line side of water to backflow
Notch-6	3	Line side of gas metering
Notch-7	3	Load side of gas metering
Notch-11	3	Load Side of Gas Meter
Notch-12	3	Line Side of Gas Meter

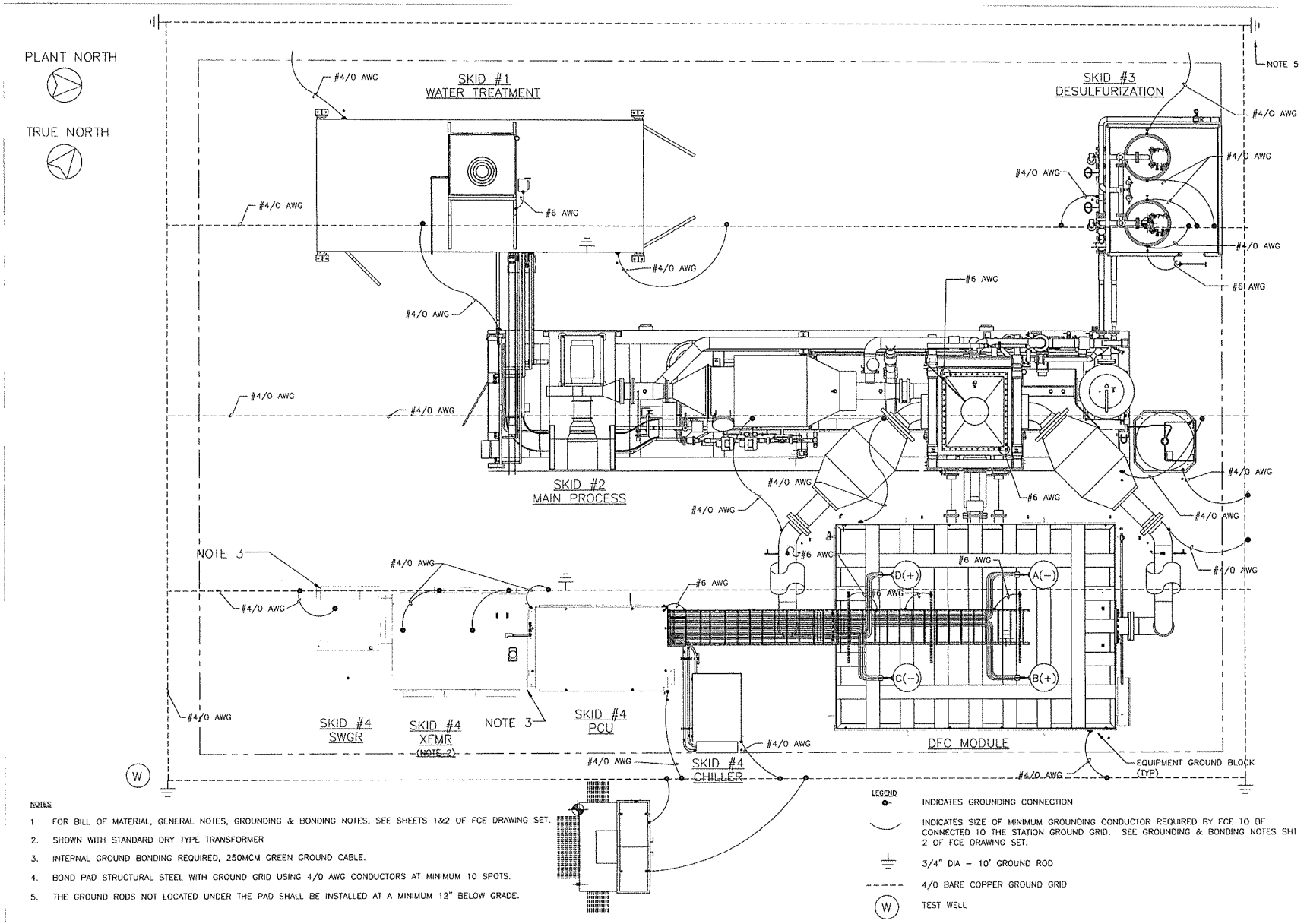
ELM

M200

GENERAL ELECTRICAL NOTES

1. DRAWINGS ARE NECESSARILY DIAGRAMMATIC BY NATURE AND ARE NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL OR EVERY PIPE OR CONDUIT IN ITS EXACT LOCATION. CAREFULLY INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AND COORDINATE THE WORK. INSTALL ALL WORK PARALLEL OR PERPENDICULAR TO BUILDING LINES UNLESS OTHERWISE NOTED.
2. THE INTENT OF THE DRAWINGS IS TO ESTABLISH THE TYPES OF SYSTEMS AND FUNCTIONS; NOT TO SET FORTH EACH ITEM ESSENTIAL TO THE FUNCTIONING OF THE SYSTEM. INSTALL THE WORK COMPLETE, INCLUDING MINOR DETAILS NECESSARY TO PERFORM THE FUNCTION INDICATED. REVIEW PERTINENT DRAWINGS, MANUFACTURERS' INSTALLATION MANUALS, ETC., AND ADJUST THE WORK TO CONDITIONS SHOWN. WHERE DISCREPANCIES OCCUR BETWEEN DRAWINGS, SPECIFICATIONS, MANUFACTURER INSTALLATION AND OPERATION MANUALS AND ACTUAL FIELD CONDITIONS, NOTIFY THE CONTRACTOR'S PROJECT MANAGER PRIOR TO BEGINNING ANY WORK.
3. COORDINATE THE ACTUAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH BUILDING FEATURES AND OTHER EQUIPMENT IN THE FIELD. REVIEW ANY PROPOSED CHANGES IN ELECTRICAL EQUIPMENT LOCATION WITH THE CONTRACTOR PROJECT MANAGER.
4. ALL DIMENSIONAL INFORMATION RELATED TO NEW STRUCTURES SHALL BE TAKEN FROM THE APPROPRIATE DRAWINGS. ALL DIMENSIONAL INFORMATION RELATED TO EXISTING FACILITIES SHALL BE TAKEN FROM ACTUAL MEASUREMENTS MADE BY THE SUBCONTRACTOR ON THE SITE.
5. EXISTING STRUCTURES: THE BUILDING FLOOR SLABS, STRUCTURE AND OUTER WALLS ARE GENERALLY TO REMAIN. THE ONLY EXISTING PENETRATIONS ARE OPENINGS WHERE INDICATED ON THE DRAWINGS. THIS CONTRACT REQUIRES THE SUBCONTRACTOR TO CORE DRILL ALL OTHER FLOOR OR WALL PENETRATIONS AS REQUIRED.
6. WORK, MATERIALS, AND EQUIPMENT SHALL COMPLY WITH THE RULES AND REGULATIONS SPECIFIED IN THE EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) ADOPTED BY THE JURISDICTION OF THE PROJECT.
7. ALL EQUIPMENT AND MATERIALS SHALL BE DELIVERED TO THE PROJECT SITE CLEAN AND SEALED FOR PROTECTION. TAKE SUCH PRECAUTIONS AS ARE NECESSARY TO PROTECT APPARATUS AND MATERIALS FROM DAMAGE. PROTECT FACTORY FINISH FROM DAMAGE DURING CONSTRUCTION UNTIL ACCEPTANCE OF THE PROJECT. RESTORE ANY FINISHES THAT BECOME STAINED OR DAMAGED TO CONTRACTOR'S SATISFACTION.
8. PROVIDE NEW PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN PRODUCTION OF SUCH EQUIPMENT.PROVIDE THE MANUFACTURERS LATEST STANDARD DESIGN FOR THE TYPE OF PRODUCT SPECIFIED.
9. PRODUCTS SHALL CONFORM TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. WHERE UNDERWRITERS' LABORATORIES HAVE SET STANDARDS, LISTED PRODUCTS AND ISSUED LABELS, PRODUCTS USED SHALL BE LISTED AND LABELED TO THOSE STANDARDS BY UL OR ANOTHER AGENCY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
10. DESIGNATIONS: EXTERNALLY MARK ALL EQUIPMENT, DEVICES, FEEDERS, BRANCH CIRCUITS AND SIMILAR ITEMS WITH NAMEPLATES AS INDICATED ELSEWHERE IN THESE DRAWINGS AND SPECIFICATIONS.
11. MATERIALS AND EQUIPMENT TO BE REMOVED, EXCEPT ITEMS SPECIFICALLY NOTED TO BE RELOCATED OR RETURNED TO THE OWNER, BECOME PROPERTY OF THE SUBCONTRACTOR AND SHALL BE IMMEDIATELY REMOVED FROM THE PROJECT SITE. IF THE OWNER IDENTIFIES OTHER ITEMS DURING CONSTRUCTION, THOSE ITEMS BECOME OWNER PROPERTY AND SHALL BE TURNED OVER TO THE OWNER.
12. COORDINATE THE SCHEDULING OF ALL WORK REQUIRING ELECTRICAL SHUTDOWNS WITH THE OWNER. THIS MAY REQUIRE PERFORMING THE WORK OUTSIDE OF NORMAL WORKING HOURS, AND/OR PROVIDING TEMPORARY POWER WITH A PORTABLE GENERATOR OR BY OTHER APPROVED MEANS.COORDINATE TEMPORARY POWER REQUIREMENTS AND POSSIBLE ALTERNATE POWER SOURCES WITH THE OWNER.
13. EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
14. OBSERVE ALL CLEARANCES REQUIRED BY NEC 110.26.
15. EQUIPMENT SHALL BE SET LEVEL AND PLUMB.
16. SEAL OPENINGS INTO EQUIPMENT TO PREVENT THE ENTRANCE OF ANIMALS, BIRDS, AND INSECTS.
17. ALL UNUSED OPENINGS SUCH AS, BUT NOT LIMITED TO, KNOCKOUTS ON PANELS AND BOXES, SURFACE WIREWAY OPENINGS, BUSWAY OPENINGS, AND CIRCUIT BREAKER EMPTY SLOTS SHALL BE COVERED WITH APPROVED COVER PLATES.
18. COOPERATE WITH TRADES OF ADJACENT, RELATED, OR AFFECTED MATERIALS OR OPERATIONS, AND WITH TRADES PERFORMING CONTINUATIONS OF THIS WORK IN ORDER TO EFFECT TIMELY AND ACCURATE PLACING OF WORK AND TO COORDINATE, IN PROPER AND CORRECT SEQUENCE, THE WORK OF SUCH TRADES.
19. WORK SHALL BE PERFORMED BY COMPETENT WORKERS SKILLED IN THEIR TRADE.
20. THIS INSTALLATION SHALL BE COMPLETE AND FUNCTIONAL.
21. COORDINATE SYSTEM TURNOVER WITH CONTRACTOR'S PROJECT MANAGER.
22. SUBCONTRACTOR SHALL FOLLOW CONTRACTOR'S SEQUENCE AND PROCEDURES FOR QUALITY ASSURANCE TESTING AND SYSTEM COMMISSIONING DURING INSTALLATION; INCLUDING MEGGER TESTING OF ALL CONDUCTORS AFTER BEING PULLED THROUGH CONDUIT PRIOR TO TERMINATION.
23. THE CONTRACTOR RESERVES THE RIGHT TO APPROVE OR DISAPPROVE ANY PRODUCTS OR WORK NOT IN CONFORMANCE WITH THESE SPECIFICATIONS.
24. ALL EXISTING PANEL--BOARDS MODIFIED BY THIS PROJECT SHALL BE UPDATED WITH NEW TYPE WRITTEN DIRECTORIES.

V.1



NOTES

1. FOR BILL OF MATERIAL, GENERAL NOTES, GROUNDING & BONDING NOTES, SEE SHEETS 1&2 OF FCE DRAWING SET.
2. SHOWN WITH STANDARD DRY TYPE TRANSFORMER
3. INTERNAL GROUND BONDING REQUIRED, 250MCM GREEN GROUND CABLE.
4. BOND PAD STRUCTURAL STEEL WITH GROUND GRID USING 4/0 AWG CONDUCTORS AT MINIMUM 10 SPOTS.
5. THE GROUND RODS NOT LOCATED UNDER THE PAD SHALL BE INSTALLED AT A MINIMUM 12" BELOW GRADE.

LEGEND

- INDICATES GROUNDING CONNECTION
- INDICATES SIZE OF MINIMUM GROUNDING CONDUCTOR REQUIRED BY FCE TO BE CONNECTED TO THE STATION GROUND GRID. SEE GROUNDING & BONDING NOTES SHT 2 OF FCE DRAWING SET.
- 3/4" DIA – 10' GROUND ROD
- 4/0 BARE COPPER GROUND GRID
- W — TEST WELL

YARD PLAN

ELM

E-300

Petition of Pepperidge Farm Incorporated
December 4, 2015
Exhibit B

CERTIFICATION

I hereby certify that a copy of the foregoing was e-mailed or mailed via first class mail, postage pre-paid, to the following on this 4th day of December, 2015.

PARCEL #	PROPERTY OWNER	ADDRESS
100960	River Bend Development CT LLC	204 W Newberry Road Bloomfield, CT 06002
15	Meyer Windsor LLC	255 Long Beach Blvd. Stratford, CT 06615
2256	FJS Family LLC	24 Hunting Ridge Dr. Simsbury, CT 06070
2260	FJS Family LLC	24 Hunting Ridge Dr. Simsbury, CT 06070
2540	River Bend Holdings LLC	204 West Newberry Rd. Bloomfield, CT 06002
3158	HG Conn Realty Corp.	P. O. Box 5369 Wayland, MA 01778
4950	Babcock & Brown Parallel Blue Hills Ave.	P. O. Box 523 Salisbury, CT 06068
523	Berco Properties LLC	100 Old Iron Ore Rd. Bloomfield, CT 06002
5314	Pepperidge Farm Inc.	c/o Campbell Soup Co. Corporate Tax Dept. Camden, NJ 08101
7595	Wintonbury Land Trust Inc.	P. O. Box 734 Bloomfield, CT 06002
7645	Liberty Business Park LLC	163 Misty Wood Lane Fairfield, CT 06824
7748	Town of Bloomfield	800 Bloomfield Ave. Bloomfield, CT 06002
8051	Sir Properties Trust	Two Newton Place Newton, MA 02458
8124	HG Conn Realty Corp.	770 Cochituate Road Framingham, MA 01701

MUNICIPAL OFFICIAL/AGENCY	NAME/ADDRESS
Bloomfield Chief Elected Official	Mayor Sydney Schulman Town of Bloomfield 8 High Ledge Road Bloomfield, CT 06002 SSchulman@bloomfieldct.org

Bloomfield Planning and Zoning Department	Jose Giner, Director Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002 jginer@bloomfieldct.org
Bloomfield Inland Wetlands and Watercourses	Peter Castaldi, Wetlands Agent Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002 pcastaldi@bloomfieldct.org
Bloomfield Conservation, Energy & Environment Committee	Marie MacDonald Town of Bloomfield Conservation, Energy & Environment Committee 800 Bloomfield Avenue Bloomfield, CT 06002 mariemacdonald@comcast.net
Bloomfield Town Attorney	Marc N. Needelman, Esq. Law Offices of Marc N. Needelman 800 Cottage Grove Road – Suite 313 Bloomfield, CT 06002-2343
Regional Council of Governments	Majority Leader Chip Beckett, Chairperson Capitol Region Council of Governments 241 Main Street Hartford, CT 06101 lwray@crcog.org
Windsor Chief Elected Official	Mayor Donald Trinks Town of Windsor 275 Broad Street Windsor, CT 06095
Windsor Planning & Zoning Commission	Eric Barz, AICP, Town Planner Town of Windsor Planning and Zoning Commission c/o Planning Department 275 Broad Street Windsor, CT 06095 barz@townofwindsorct.com
Windsor Planning & Zoning Commission	Tom Hazel, Environmental Planner & Wetlands Agent Town of Windsor Planning & Zoning Commission c/o Planning Department 275 Broad Street Windsor, CT 06095 hazel@townofwindsorct.com

Windsor Conservation Commission	Windsor Conservation Commission 275 Broad Street Windsor, CT 06095 windsorconscomm@comcast.net
Windsor Town Attorney	O'Malley, Deneen, Leary, Messina & Oswecki 20 Maple Avenue Windsor, CT 06095
State Senator – District S02	Senator Eric D. Coleman Legislative Office Building, Room 2500 Hartford, CT 06106-1591
State Representative – District 015	Representative David A. Baram Legislative Office Building, Room 5006 Hartford, CT 06106-1591 David.Baram@cga.ct.gov
U. S. Senator	Senator Richard Blumenthal 90 State House Square - 10th Floor Hartford, CT 06103
U. S. Senator	Senator Christopher Murphy One Constitution Plaza, 7th Fl. Hartford, CT 06103
U. S. Congressman, 1st District	Congressman John B. Larson 221 Main Street, 2nd Floor Hartford, CT 06106

STATE OFFICIAL AGENCY	NAME/ADDRESS
Connecticut Attorney General	Attorney George Jepsen Office of the Attorney General State of Connecticut 55 Elm Street Hartford, CT 06106
State Department of Energy of Environmental Protection	Robert Klee, Commissioner Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106-5127 Robert.klee@ct.gov
State Public Utilities Regulatory Authority	Arthur House, Chairman Public Utilities Regulatory Authority 10 Franklin Square New Britain, CT 06051 Arthur.house@ct.gov
State Department of Public Health	Dr. Jewel Mullen, Commissioner Department of Public Health 410 Capitol Avenue P. O. Box 340308 Hartford, CT 06134 dph.commissioner@ct.gov

State Council on Environmental Quality	Susan D. Merrow, Chair Council on Environmental Quality 79 Elm Street Hartford, CT 06106 Karl.wagener@ct.gov
State Department of Agriculture	Steven K. Reviczky, Commissioner Department of Agriculture 165 Capitol Avenue Hartford, CT 06106 steven.reviczky@ct.gov
Office of Policy and Management	Benjamin Barnes, Secretary Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106 Ben.Barnes@Ct.gov
State Department of Economic and Community Development	Catherine Smith, Commissioner Department of Economic and Community Development 505 Hudson Street Hartford, CT 06106 Catherine.Smith@ct.gov
State Department of Transportation	James P. Redeker, Commissioner Department of Transportation 2800 Berlin Turnpike P. O. Box 317546 Newington, CT 06131-7546 james.redeker@ct.gov
State Department of Emergency Services and Public Protection	Dora B. Schriro, Commissioner Department of Emergency Services and Public Protection 1111 Country Club Road Middletown, CT 06457 dora.schriro@ct.gov
State Department of Consumer Protection	Jonathan A. Harris, Commissioner Department of Consumer Protection 165 Capitol Avenue Hartford, CT 06106 jonathan.harris@ct.gov
State Department of Labor	Sharon M. Palmer, Commissioner Department of Labor 200 Folly Brook Boulevard Wethersfield, CT 06109

State Department of Emergency Management & Homeland Security	William P. Shea, Deputy Commissioner Department of Emergency Management & Homeland Security 25 Sigourney Street, 6th Floor Hartford, CT 06106 william.shea@ct.gov
State Department of Administrative Services	Melody A. Currey, Commissioner Department of Administrative Services 165 Capitol Avenue Hartford, CT 06106

Jennifer D. Arasimowicz

FuelCell Energy

EMERGENCY RESPONSE/SAFETY PLAN

Prepared for:

Pepperidge Farm Fuel Cell Project

Located at:
1414 Blue Hills Avenue
Bloomfield, CT 06002

Owned by:
Pepperidge Farm, Inc.

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 2015

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

Document Number: SHE_Eng-105
Revision: 2

Plan Contents

Appendices

1 INTRODUCTION

The Pepperidge Farm Fuel Cell Project is a fuel cell power plant whose equipment is wholly owned by Pepperidge Farm, Inc. The fuel cell plant will be operated under a long term service agreement by FuelCell Energy, Inc. The property is owned by Pepperidge Farm and the generated power from the facility will be used by the plant owner to offset power purchases from the utility supplier to operate the Pepperidge Farm bakery at the same location. There is an existing operating fuel cell power plant on the site. The net generating capacity of the two fuel cell power plants on the site is 2.6 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 (OHSA) 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, in addition to other information, are incorporated into this Plan in fulfillment of the NT-2010 requirements.

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 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 Monitoring and Control Center ("GMCC"), 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 GMCC 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 Descriptions

Plant Model: DFC1500B5 (new, 2015)
DFC1500B (existing, since ~2010)

Each DFC1500B and DFC1500B5 plant consists of one (1) DFC module, a Mechanical Balance-of-Plant (MBOP – skids 1-3), and an Electrical Balance of Plant (EBOP – power conditioning unit (PCU)/inverter, transformer & utility interconnection switchgear).

Number of Fuel Cell Plants: 2 ((1) DFC1500B, existing & (1) DFC1500B5, to be installed in Dec. 2015)

Fuel Cell Power Output: **2.6 MW, nominal** (1.2 MW from DFC1500B, and 1.4 MW from DFC1500B5)

Installation Location: **Outdoors,** both plants

Fuel type: **Pipeline Natural Gas**, both plants
Utility supply pressure: 20 psig to fuel cell plant
Plant reduced operating pressure: <15psig

Plant Output Voltage: **480 VAC/3 Phase/60 Hz,** both plants (at project interconnection points)

EBOP Manufacturer: **DFC1500B: Satcon**
DC1500B5: Rockwell

EBOP Transformer Type / Dielectric Fluid:
DFC1500B: Dry Type
DFC1500B5: Dry Type

Nitrogen Supply: **Liquid microbulk tank (~250 gal. liquid capacity, each plant)**

<u>Additional Appurtenant Equipment</u>

Fuel Cleanup Equipment: None

Ancillary Equipment:

DFC1500B: Heat Recovery Unit (hot water, w/ pumps & trim radiator)
DFC1500B5: Capability for future heat recovery

Project Equipment not in FCE scope:
Multiple medium voltage transformers (13.8 kV & 22.86 kV)
(owned/operated/maintained by Eversource)

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 is the national standard for the installation of Stationary Fuel Cell Power Systems and 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 the Emergency Action Plan, Fire Prevention & Emergency Plan and Plant/Project Safety Plan for the Pepperidge Farm Fuel Cell Project follow.

Emergency Action Plan

Following is the Emergency Action Plan (EAP) for the subject plant. As the new plant is at the point of the start of construction, the installation of which will add 1.4 MW of on-site power generation capacity to the existing 1.2 MW generation site, this EAP will serve as both a construction phase and an operation phase document. If required, it will be updated again as necessary to appropriately reflect specific site conditions and limitations, at final project completion.

Emergency Action Plan

Site Name: **Pepperidge Farm Fuel Cell Project**

Site Address: **1414 Blue Hills Avenue**
Bloomfield, CT 06602

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

Plant Owner: Pepperidge Farm, Inc.
1414 Blue Hills Avenue
Bloomfield, CT 06002

A. *Emergency Plan Coordinator & Other Contacts*

Emergency Plan Coordinator –

Name: **Global Monitoring and Control Center (GMCC)**
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: Vallerie Hoffman
Co./Dept./Title: FCE / Field Service / Eastern Region Manager
Telephone No: (203) 825-6071 (FCE)
(XXX) XXX-XXXX (work cell)
(XXX) XXX-XXXX (personal cell)

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

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

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

Additional Site Contacts:

Name:	Robert Rotaru
Co./Dept.:	Pepperidge Farm, Inc. / Engineering & Maintenance Manager.
Telephone No:	(860) 286-6433

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:	**Eversource (electricity)**
Name/Dept /Title:	Eversource Customer Care Phone Support Number - Emergency
Telephone No:	(800) 286-2000 (24 hour)

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

Company:	**Airgas (Nitrogen)**
Name/Dept /Title:	Mike Gieralt / Bulk Gas Manager/Southern New England
Telephone No:	(203) 258-2616 (cell)
	(800) 242-0105 (24/7 Technical Service and Bulk Deliveries)

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 Bloomfield –
Town Manager – Philip K. Schenck, Jr. (860) 769-3504
Police Department (non-emergencies) – (860) 242-5501
Blue Hills Fire Dept. (primary), 779 Blue Hills Ave. (non-emergencies) – (860) 243-8949
Bloomfield Fire Department, 371 Tunxis Ave. (non-emergencies) – (860) 242-5888

State Legislators –
State House Representative – David A. Baram (District 15); (860) 240-8500; (800) 842-1902
State Senator – Eric D. Coleman (Senate District 2); (860) 240-0528; (800) 842-1420

Private Residences/Establishments requesting notification of emergency response incidents (per formal request):

Neighboring Resident or Establishment Name	Neighbor Street Address	Contact Information – Phone and/or email
none		

B. *Preferred Means of Reporting Emergencies*

GMCC 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) 242-1749** (verified 11/04/15 - mab) **(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 GMCC (800) 326-3052

GMCC is to then contact a FCE Field Service Management representative and then make any additional utility / owner / community resident contacts as directed to by FCE F.S. Management representative.

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 FCE 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 GMCC with a request/instruction for the second GMCC operator to immediately call local Emergency Responders*** *(See Emergency Action Plan, Section B)* 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 Pepperidge Farm Fuel Cell 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 GMCC operator. Upon the implementation of an evacuation, cell phone contact is to be established immediately with GMCC 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 Pepperidge Farm Fuel Cell 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***

ESD Pushbuttons located throughout the site can be used to shut down the operation of site equipment.

1. **Site Electrical Disconnect pushbutton:** The following ESD pushbutton will ***both disconnect the DFC plant and open the plant utility grid Tie-Breaker*** *(present on each plant (DFC1500B & DFC1500B5))**:***

    - 1 on the EBOP Tie Breaker Switchgear *(HS-300E)*

Note that some Mechanical Balance of Plant electrical devices are also UPS (uninterruptable power supply) fed, so some low voltage equipment may temporarily remain energized even after engaging an ESD pushbutton. Note also that a hot DFC module may contain hazardous voltage, even when not operating.

2. **DFC ESD pushbuttons:** The following ESD pushbuttons will stop the operation of the DFC equipment *(all present on each plant (DFC1500B & DFC1500B5))*:

    - 1 pushbutton on the main control panel inside of Skid 1 (*HS-300A)*
    - 1 pushbutton on the south outside of Skid 1 (*HS-300B)*
    - 1 pushbutton on the control panel on the west end of Skid 2 *(HS-300C)*
    - 1 pushbutton on the southeast corner of Skid 2 *(HS-300D)*
    - 1 pushbutton on the side of the EBOP PCU *(HS-300F)*

NOTE: Fuel Cell Plant Electrical Balance of Plant switchgear, PCU and transformer equipment will remain energized even after depressing one of these ESD pushbuttons. Note also that some Mechanical Balance of Plant electrical devices are also UPS (uninterruptable power supply) fed, so some low voltage equipment may temporarily remain energized even after engaging an ESD pushbutton. Note also that a hot DFC module may contain hazardous voltage, even when not operating.

The locations of the plant ESD pushbuttons are depicted in the drawings 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

In order to be accounted for, 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.. 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 the Fire Prevention & Emergency Plan for the subject plant. As only the first phase of the plant has been constructed to date, this Fire Prevention & Emergency Plan will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and construction is completed.

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 853-2015.

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 connection point via an underground pipe from a connection in the street. The aboveground gas meters and manual shutoff valves (separate trains for each plant) that supply the fuel cells are located inside the locked fence enclosure surrounding the fuel call plants in the back next to the building. The piping runs underground from the shutoff valve/metering stations to the interior of the plant 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 then into the fuel cell modules. 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.

Ancillary pieces of electrical equipment are provided with or are appurtenant to the fuel cell power plant. Some electrical equipment may 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 first restricted by their location in the back of a private, round-the-clock secured facility. Additional security is maintained by a locked, eight foot high twist selvage chain link fence enclosure surrounding each plant. The enclosure is equipped with personnel and equipment doors or gates for necessary access. All doors/gates are kept locked when facility or operating personnel are not present. Emergency Fire Department access to the site in the absence of attending personnel would be obtained by removing the lock with a bolt cutter.

- **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 A and Appendix B, and as can be identified by their red mushroom caps and labeling, as depicted in photos later in this plan.
  - 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 GMCC and instruct GMCC to in turn contact local Emergency Responders. As an emergency situation, advise GMCC 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 of non-responding personnel, or controlling traffic.

  Remote GMCC (Global Monitoring and Control 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 fires 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, 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.

  Transformer dielectric oil – There are five (5) transformers on site that contain dielectric oil. The medium voltage transformers are owned, operated and maintained by the electric utility supplier, Eversource.

  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 GMCC 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*

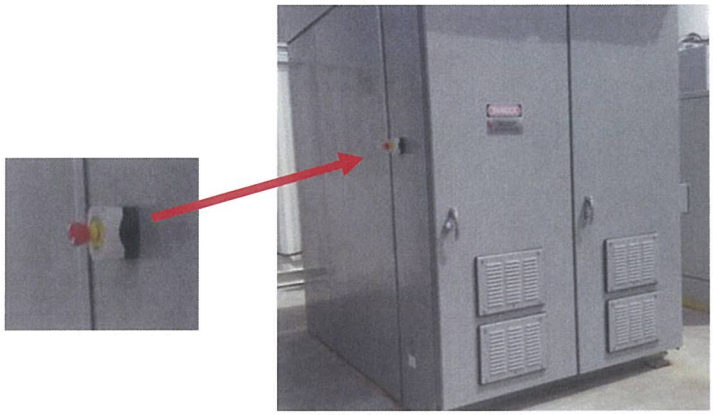
The fuel cell power plant is provided with Emergency ShutDown (ESD) pushbuttons. ESD pushbuttons have red mushroom caps and are clearly labeled. ESD pushbutton locations are indicated on the drawings in Appendix A and Appendix B. Photos of typical ESD pushbuttons are shown in Figure 1. Depressing an 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.** (exception – the EBOP switchgear ESD button *does* open the electric grid tie-breaker; however, hazardous voltage may still remain.)

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

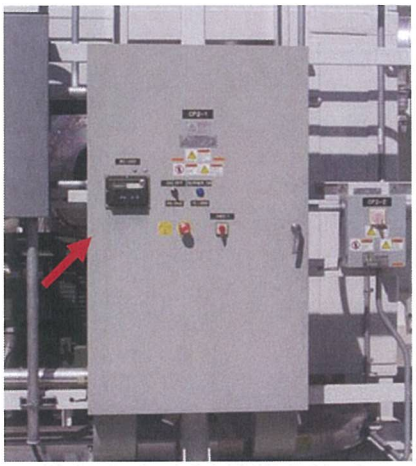
In addition process flows, temperatures, pressures and voltages are continuously monitored for deviations from expected values. Process sensors are used to verify proper operation of the process and will quickly sense and shutdown the process upon severe deviations, such as would occur in the case of 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, as well as Classified hazardous areas, are depicted in the drawings provided 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
(Site Electrical Disconnect)

Electrical Balance of Plant



Skid 2, Main Process Skid Control Panel

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 JURISTICTION. 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 – closed/sealed steel drums
  - Desulfurizer media, virgin – manufacturer's original packaging
  - Desulfurizer media, spent – closed/sealed 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)
  - Electrical equipment
  - Plastics
  - Insulation jacketing
  - Desulfurizer media (activated carbon)
  - 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 storage only, 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 B.)
- 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/operator. 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), depicted in the drawing in Appendix A, are installed at the 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. FCE 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/B5 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	6 mos.	Clean, test & calibrate, if req'd.
UV/IR Flame Detector	18 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/manufacturer (FCE) 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 the Safety Plan for the subject plant. This 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 1910.101 "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: A formal "Hot Work Permit" program is used as part of FCE's overall Fire Prevention 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 FCE EHS Dept.
- 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. All site practices will be to prevent or minimize pollution of stormwater. Operation of the fuel cell plant in and of itself does not invoke stormwater permitting requirements, however, the fuel cells are installed at and owned by a larger manufacturing facility - bakery. Stormwater permitting and compliance for this site is the responsibility of the site owner, Pepperidge Farm, Inc.
- 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. Employees performing work alone shall always contact GTAC by cell phone upon entering the facility site and upon leaving.
- 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. Employees are encouraged to discuss any known or perceived health or safety issues or concerns with FCE management or EHS associates.

3 SITE SECURITY & ACCESS

Public access to the fuel cell equipment is first restricted by their location in the back of a private, round-the-clock secured facility. Additional security is maintained by a locked, eight foot high twist selvage chain link fence enclosure surrounding each plant. 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. Emergency Fire Department access to the site would be obtained by removing the lock with a bolt cutter.

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.

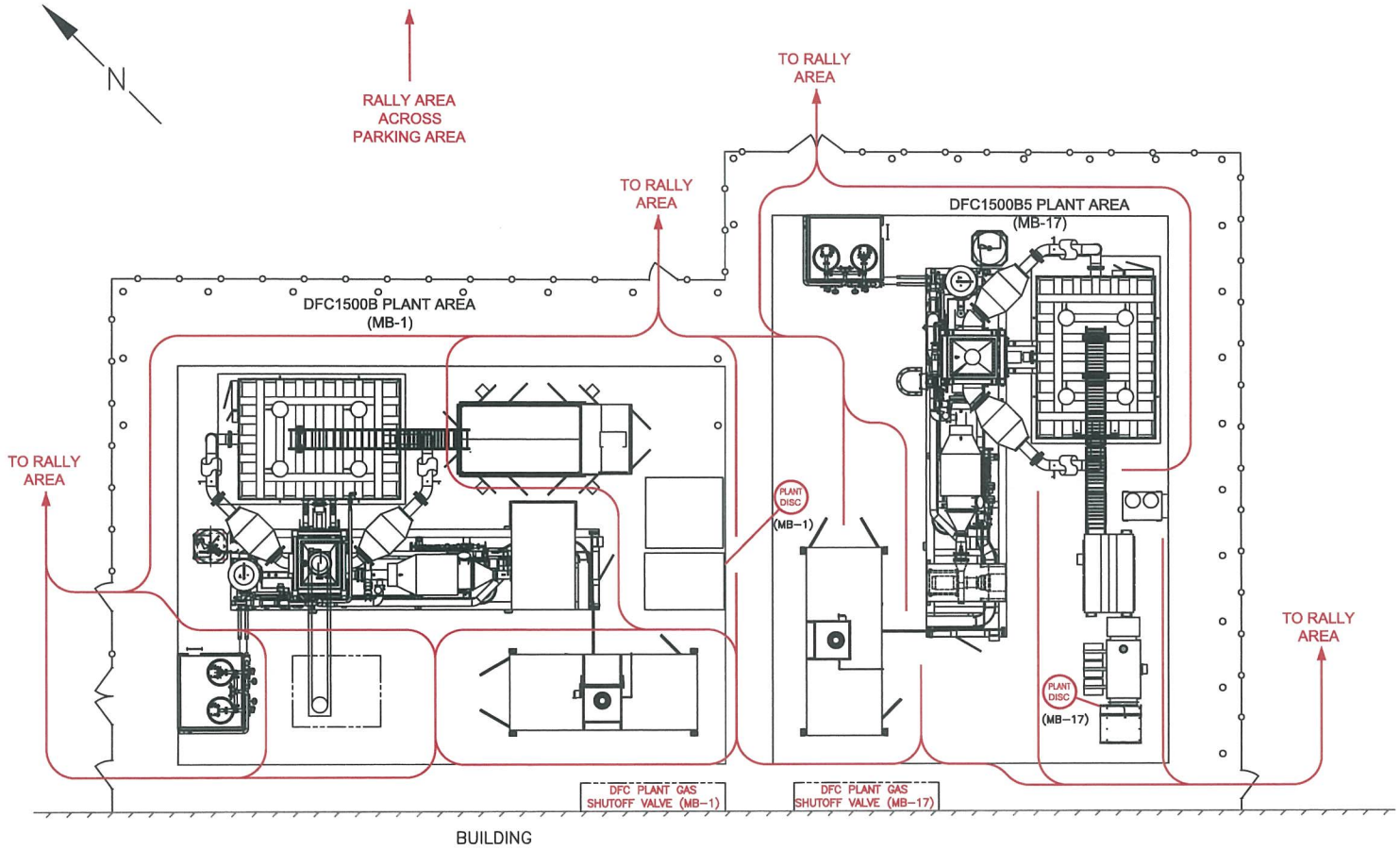
4 EMERGENCY RESPONDER / LOCAL COMMUNITY COORDINATION & NOTIFICATION SYSTEM

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 record the names and contact information of those local residents that request 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 GMCC during the operation phase of the project.

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
1	PRELIMINARY	MB	M.BENEDICT	11/10/15



PLOT PLAN

5' 0 5' 10' 25'

GRAPHIC SCALE

LEGEND

- EXIT PATHWAY

PLANT DISC – SITE EQUIPMENT EMERGENCY SHUTDOWN & ELEC. UTILITY DISCONNECT PUSHBUTTON LOCATION (2)

Appendix A

FUELCELL ENERGY, INC. PROPRIETARY

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CAGE CODE 63131

SIGNATURES

DRAWN: M.BRUESKI 11/09/15

ENGINEER: M.BENEDICT 11/09/15

APPROVED:

RELEASED:

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16"

REVISION INDICATOR

FLAG NOTE

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

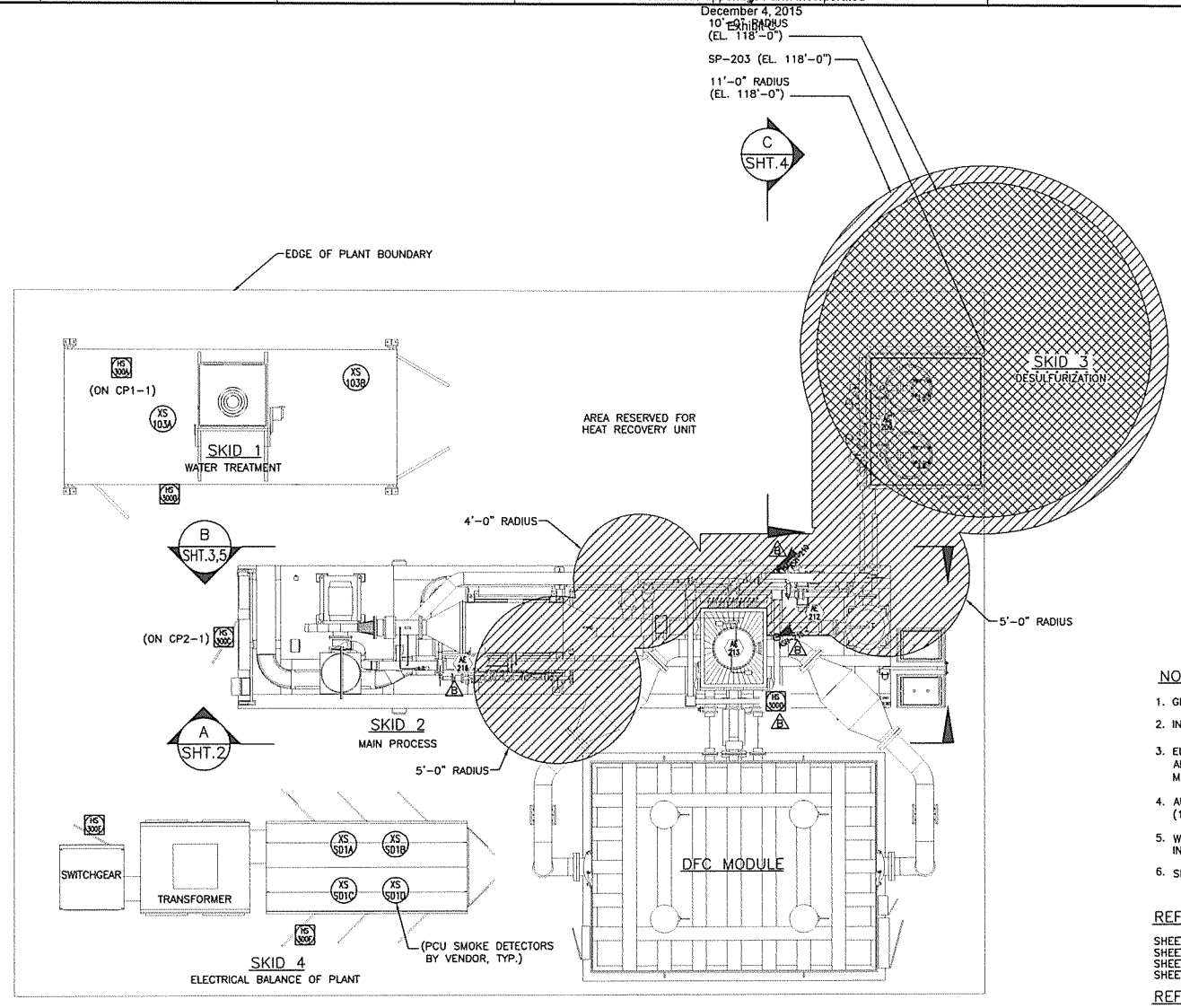
TITLE: PEPPERIDGE FARM FUEL CELLS EXIT PATHWAYS & UTILITY SHUTOFFS

SIZE D | Location | DWG NO 14-0050-45-SK | REV 1

SCALE AS SHOWN | SHEET 1 OF 1

Petition of Pepperidge Farm Incorporated
December 4, 2015
Exhibit D

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
A	REVISED FOR PRODUCTION PER ENC#3410	HEB II	B. KENT	03/12/08
B	REVISION PER ECN #3740	JA	B. KENT	7/9/08



SITE OVERALL AREA CLASSIFICATION PLAN

SCALE: 1/4"=1'-0"

LEGEND:

- CLASS 1, DIVISION 1
- CLASS 1, DIVISION 2
- NON-CLASSIFIED
- ASH-YYY — UV/IR FLAME DETECTOR (2)
- AE YYY — COMBUSTIBLE GAS DETECTOR (LEL) (4)
- HS YYY — E-STOP (6)
- XS YYY — PHOTO ELECTRIC SMOKE DETECTOR (6)

NOTES:

1. GRADE ELEVATION = 100'-0"
2. INTERIOR OF 200-RR-201A/B AND 200-RR-203 ARE CLASS 1, DIVISION 1.
3. ELECTRICAL AREA CLASSIFICATIONS FOR NATURAL GAS (GROUP D) AND ANAEROBIC DIGESTER GAS (ADG) COMPOSED PRIMARILY OF METHANE (55% MIN.) AND CARBON DIOXIDE (GROUP D).
4. AUTO-IGNITION TEMPERATURE FOR METHANE (NATURAL GAS) IS 630°C (1166°F).
5. WALLS AND/OR ROOF OF FRESH AIR BLOWER SOUND ENCLOSURE OMITTED IN SOME VIEWS FOR CLARITY.
6. SKID 2 ELEVATION VIEWS SHOWN WITH OPTIONAL EXHAST CHIMNEY STACK.

REFERENCE SHEETS – THIS DRAWING

SHEET 2 – YARD – AREA CLASSIFICATION SECTIONS & DETAILS
SHEET 3 – YARD – AREA CLASSIFICATION SECTIONS & DETAILS
SHEET 4 – YARD – AREA CLASSIFICATION SECTIONS & DETAILS
SHEET 5 – YARD – AREA CLASSIFICATION DUAL FUEL BLENDING OPTION

REFERENCE DRAWINGS

483S-01-01 – LIST OF DRAWINGS

Appendix B

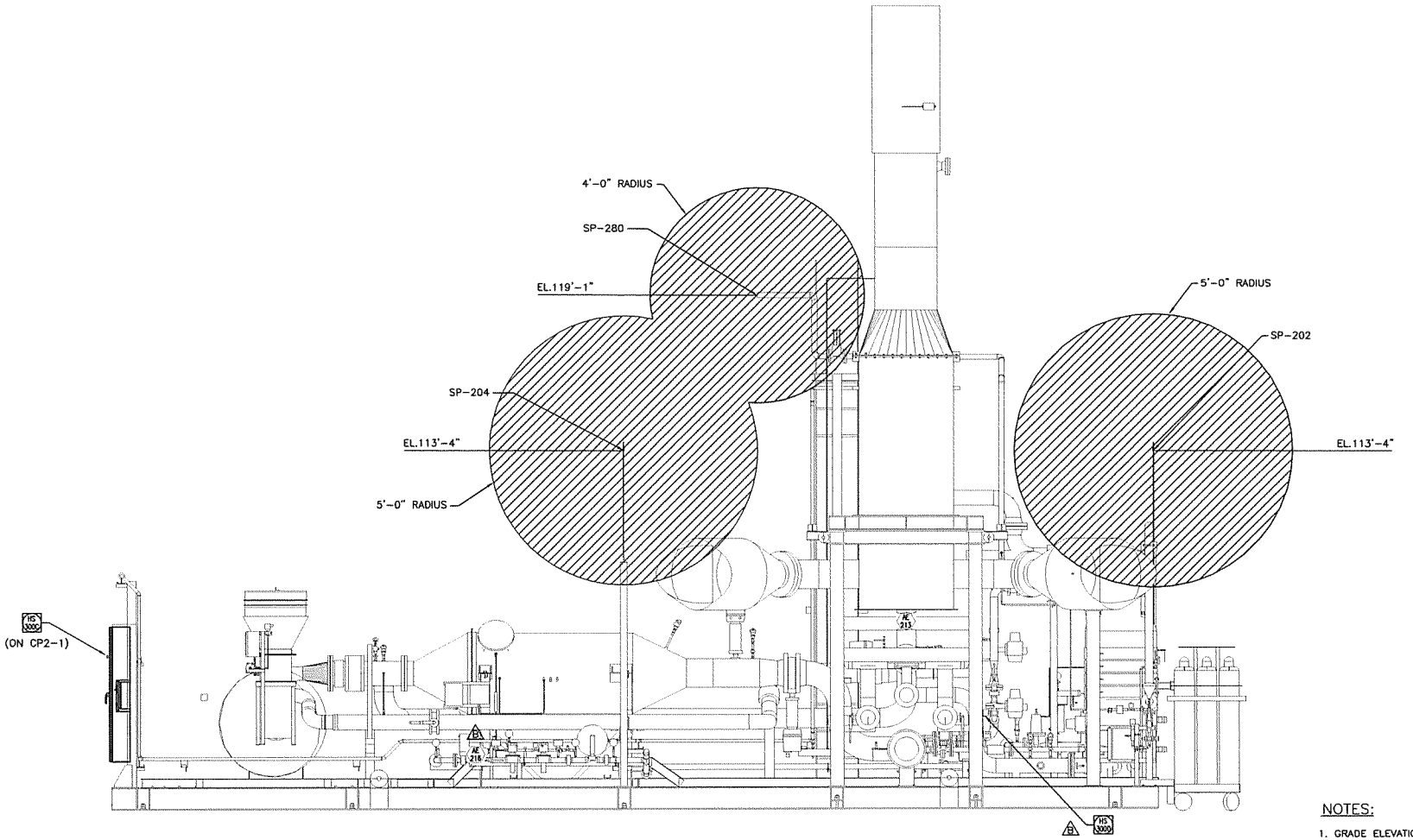
CAGE CODE 63131

SIGNATURES
DRAWN H.E.BOYKIN II 9/19/07
CHECKED C. THOMAS 12/07/07
APPROVED B. KENT 12/07/07
RELEASED G. MARINO 12/10/07
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16"
REVISION INDICATOR
FLAG NOTE

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
DFC1500B POWER PLANT
YARD - AREA CLASSIFICATION
OVERALL PLAN

SIZE	Location	DWG NO	REV
D	SITE	483S-51-00	B
SCALE	1/16" = 1'-0"	SHEET	1 OF 5



NOTES:

1. GRADE ELEVATION = 100'-0"

SECTION-A SKID 2 SOUTH SIDE

SCALE: 1/2"=1'-0"

A SHT. 1

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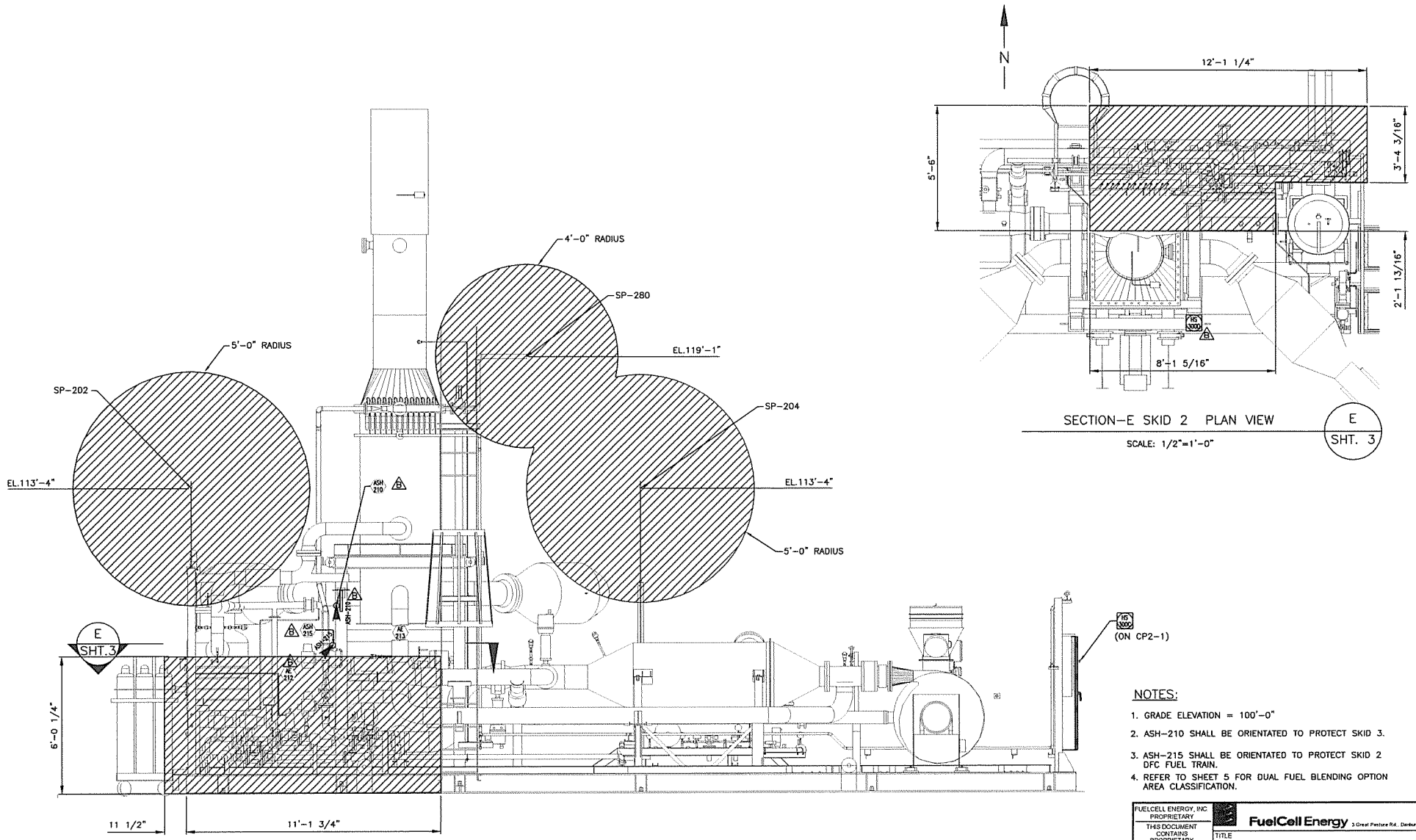
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE

DFC1500B POWER PLANT
YARD - AREA CLASSIFICATION
SECTIONS & DETAILS

SIZE	Location	DWG NO	REV
D	SKID 2	483S-51-00	B
SCALE	AS NOTED	SHEET	2 OF 5



SECTION–E SKID 2 PLAN VIEW

SCALE: 1/2"=1'-0"

E SHT. 3

SECTION–B SKID 2 NORTH SIDE

SCALE: 1/2"=1'-0"

B SHT. 1

NOTES:

1. GRADE ELEVATION = 100'-0"
2. ASH–210 SHALL BE ORIENTATED TO PROTECT SKID 3.
3. ASH–215 SHALL BE ORIENTATED TO PROTECT SKID 2 DFC FUEL TRAIN.
4. REFER TO SHEET 5 FOR DUAL FUEL BLENDING OPTION AREA CLASSIFICATION.

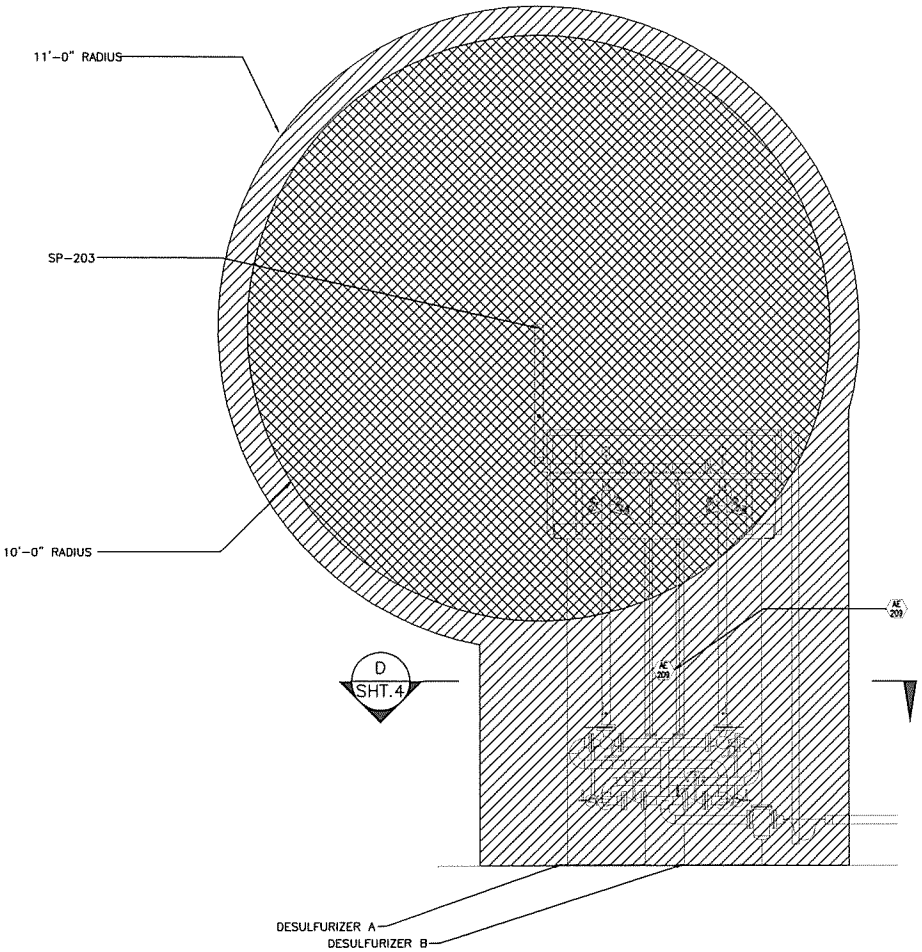
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE

DFC1500B POWER PLANT
YARD - AREA CLASSIFICATION
SECTIONS & DETAILS

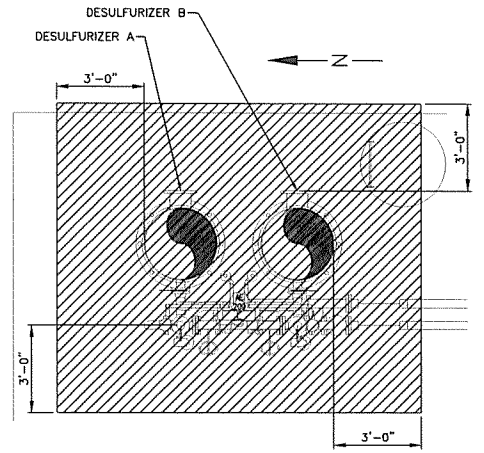
SIZE	Location	DWG NO	REV
D	SKID 2	483S-51-00	B
SCALE	AS NOTED	SHEET	3 OF 5



SECTION–C SKID 3 WEST SIDE

SCALE: 1/16"=1'-0"

C SHT. 1



SECTION–D SKID 3 PLAN

SCALE: 1/16"=1'-0"

D SHT. 4

NOTES:

1. GRADE ELEVATION = 100'-0"

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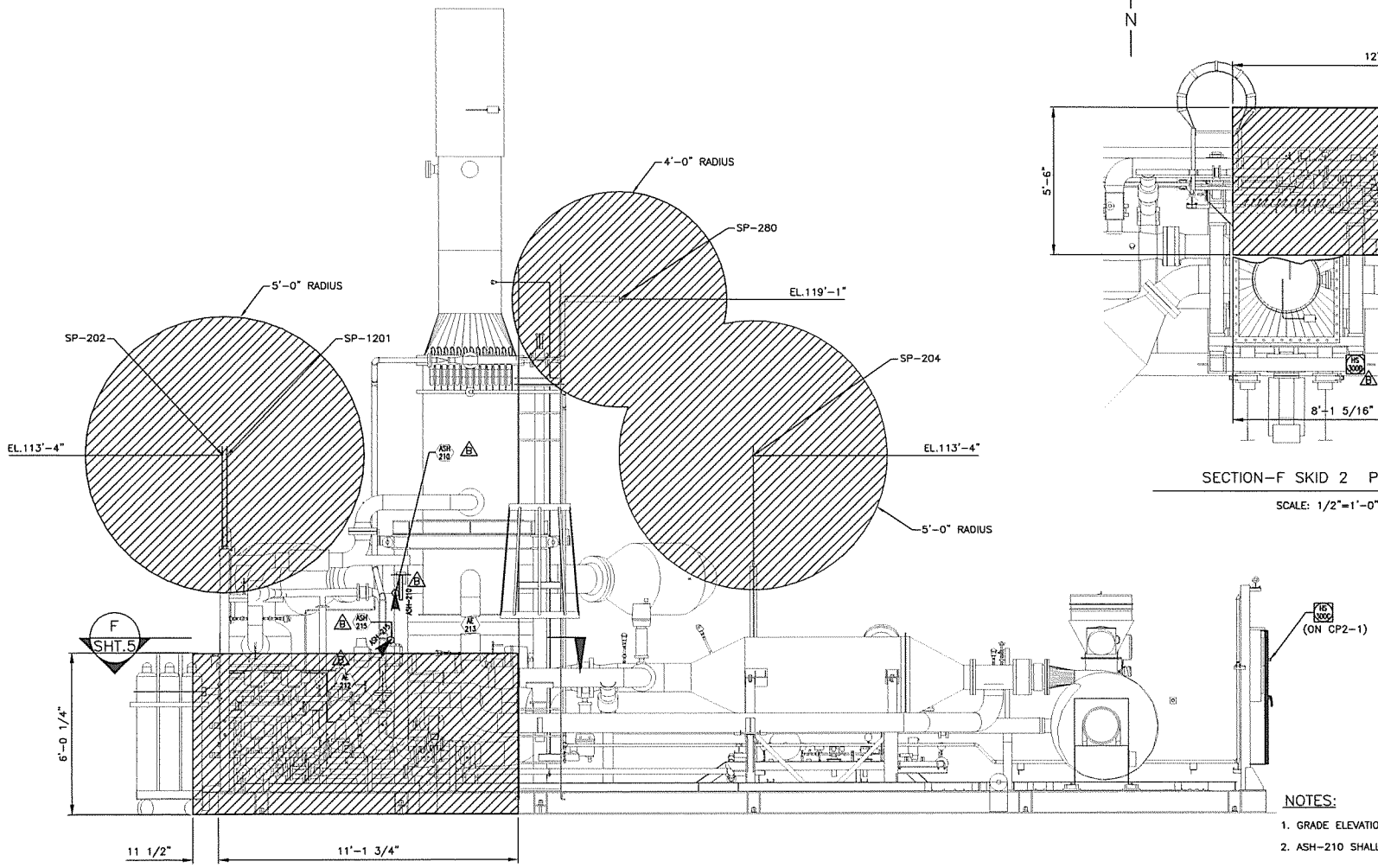
FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE

DFC1500B POWER PLANT
YARD - AREA CLASSIFICATION
SECTIONS & DETAILS

SIZE	Location	DWG NO	REV
D	SKID 3	483S-51-00	B
SCALE	AS NOTED	SHEET	4 OF 5



SECTION–B SKID 2 NORTH SIDE

SCALE: 1/2"=1'-0"

B SHT. 1

SECTION–F SKID 2 PLAN VIEW

SCALE: 1/2"=1'-0"

F SHT. 5

NOTES:

1. GRADE ELEVATION = 100'-0"
2. ASH–210 SHALL BE ORIENTATED TO PROTECT SKID 3.
3. ASH–215 SHALL BE ORIENTATED TO PROTECT SKID 2 DFC FUEL TRAIN.
4. REFER TO SHEET 3 FOR NON–DUAL FUEL BLENDING OPTION AREA CLASSIFICATION.

CAGE CODE 63131

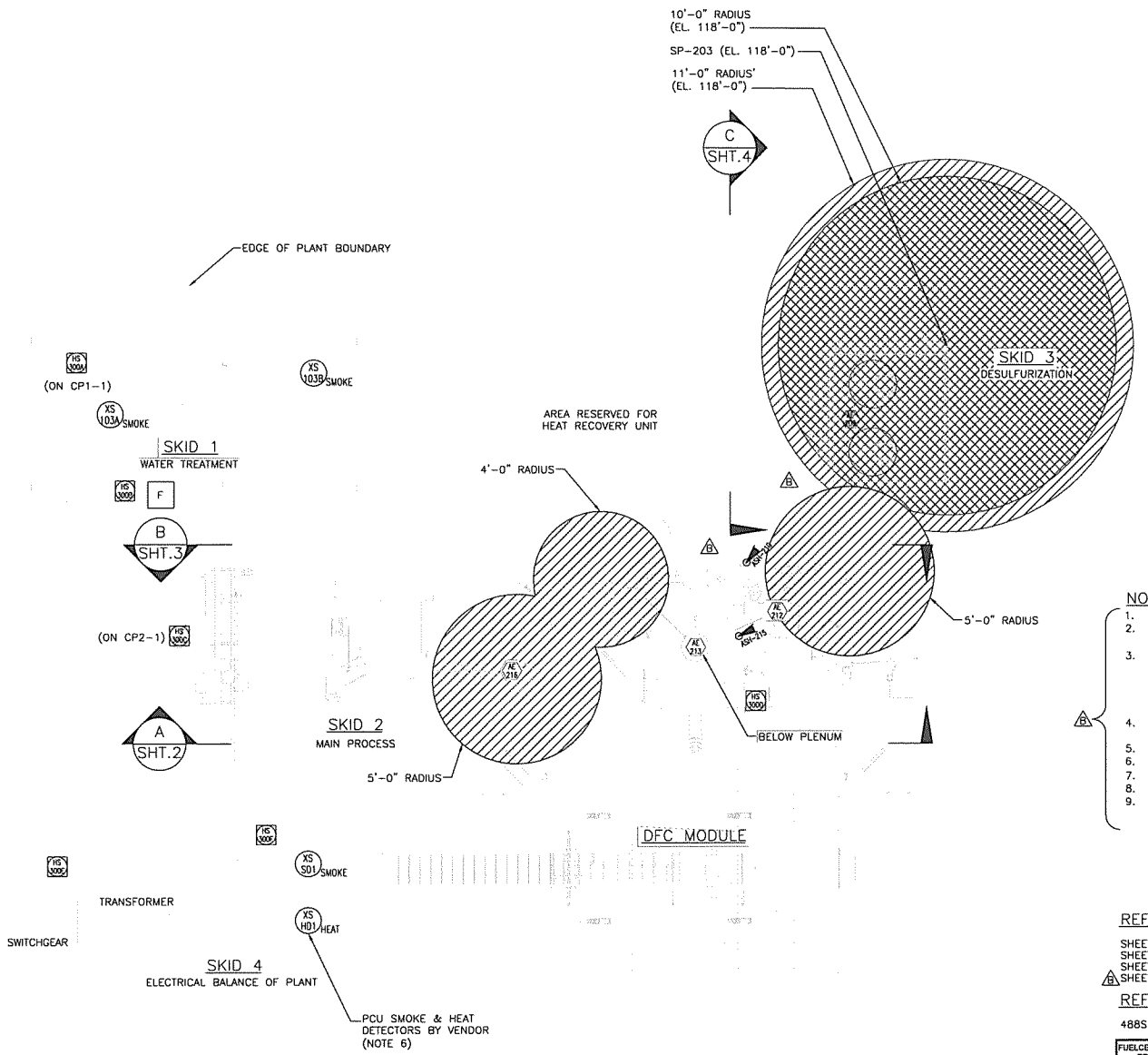
FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
DFC1500B POWER PLANT
YARD - AREA CLASSIFICATION
DUAL FUEL BLENDING OPTION

SIZE	Location	DWG NO	REV
D	SKID 2	483S-51-00	B
SCALE	AS NOTED	SHEET	5 OF 5

Petition of Peppertree Farm Incorporated
December 1, 2015
Exhibit C

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
A	INITIAL RELEASE PER ECN #4199	HEB II	M.A.B.	6/24/09
B	REVISION PER ECN #6307	KGG	S.MAURER	04/23/14



SITE OVERALL AREA CLASSIFICATION PLAN

SCALE: 0 4' 8' 12'

LEGEND:

- CLASS 1, DIVISION 1
- CLASS 1, DIVISION 2
- ASH-YYY — UV/IR FLAME DETECTOR (2)
- AE YYY — COMBUSTIBLE GAS DETECTOR (LEL) (4)
- HS YYY — E-STOP (6)
- XS YYY — HEAT OR SMOKE DETECTOR (4)
- B F — FIRE EXTINGUISHER RECOMMENDED LOCATION TYPE A,B,C 20LB MIN (SEE DETAIL, SHT 4. SEE NOTE 7) (1)

NOTES:

1. GRADE ELEVATION = 100'-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 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.
4. CLASSIFICATION DRAWING DOES NOT ASSESS LEAK SOURCES FROM CUSTOMER SUPPLIED NG OR ADG FUEL UTILITY TIE-INS IN THE VICINITY OF PLANT.
5. NOTE DELTED
6. PCU HEAT & SMOKE DETECTORS ARE ALARMS ONLY.
7. FIRE EXTINGUISHER(S) SUPPLIED BY CUSTOMER.
8. THIS DRAWING APPLIES TO OUTDOOR INSTALLATION.
9. 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 SECTION
SHEET 3 - YARD - AREA CLASSIFICATION SECTION
SHEET 4 - YARD - AREA CLASSIFICATION SECTIONS & DETAIL
B SHEET 5 - YARD - BLACKSTART OPTION, PLAN & SECTION

REFERENCE DRAWINGS

488S-01-01 - LIST OF DRAWINGS

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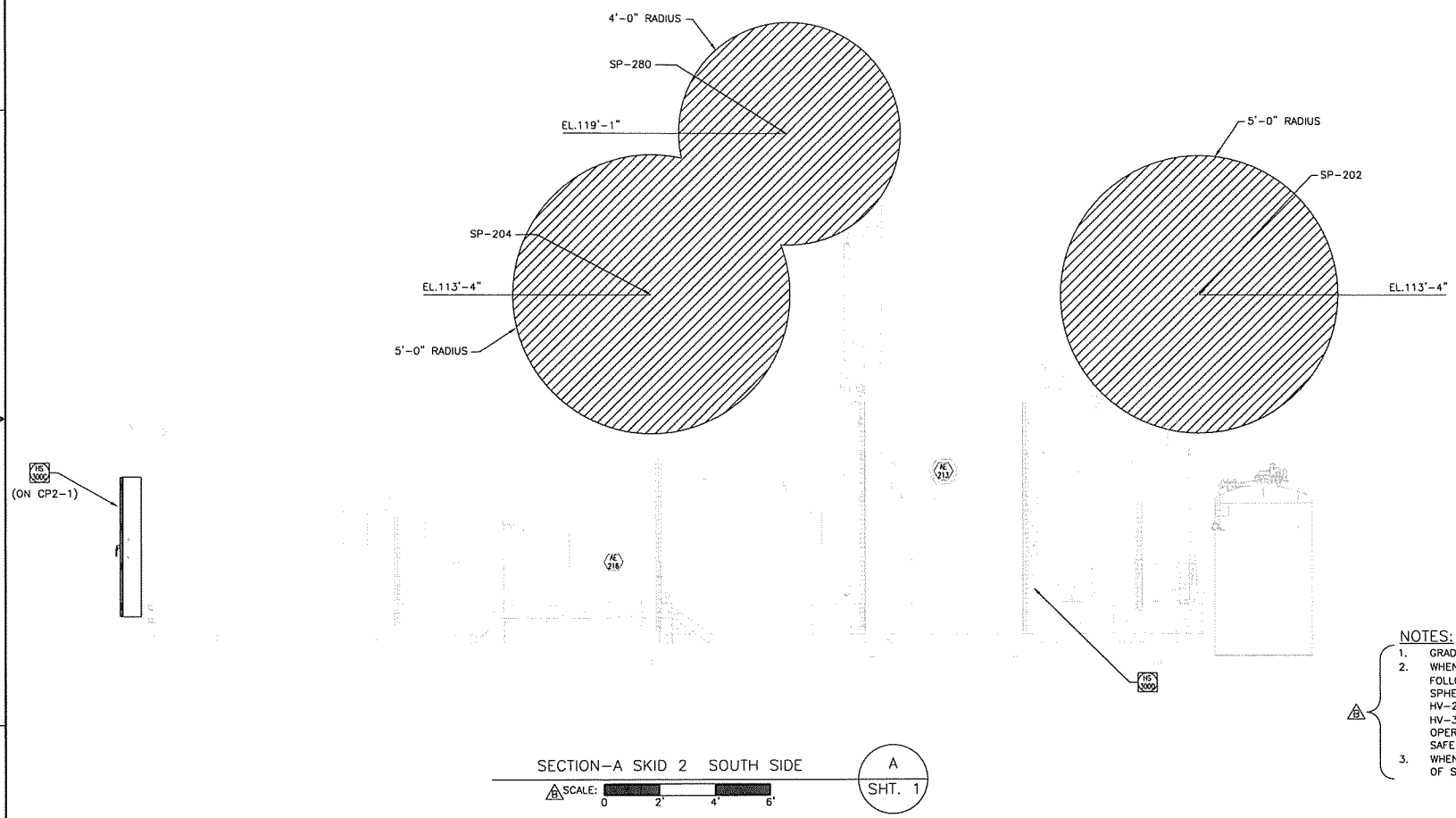
CAGE CODE 63131

SIGNATURES
DRAWN H.E.BOYKIN II 3/20/09
ENGINEER C.THOMAS 05/29/09
APPROVED S. MAURER 05/29/09
RELEASED A.HADJIST 05/29/09
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16"
A REVISION INDICATOR
FLAG NOTE

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
DFC 1500BL5 POWER PLANT
YARD - AREA CLASSIFICATION
OVERALL PLAN

SIZE D | Location SITE | DWG NO 488S-51-00 | REV B
SCALE AS SHOWN | SHEET 1 OF 5



SECTION-A SKID 2 SOUTH SIDE

SCALE: 0 2' 4' 6'

A SHT. 1

NOTES:

1. GRADE ELEVATION = 100'-0"
2. WHEN OPENED AND DISCHARGING (EXHAUST PURGING), THE FOLLOWING SAMPLE VALVES HAVE 18" RADIUS DIVISION 2 SPHERES ABOUT THEIR FINAL DISCHARGE LOCATIONS: HV-228, HV-237, HV-243, HV-249A, HV-250, HV-274, HV-321, (AND HV-1237 AND HV-1243, IF PRESENT). OPERATORS TO ROUTE VENT TUBING FROM VALVES TO A SAFE LOCATION DURING VENTING PROCEDURES.
3. WHEN EXISTING, SP-1201 SHALL BE LOCATED WITHIN 2" OF SP-204.

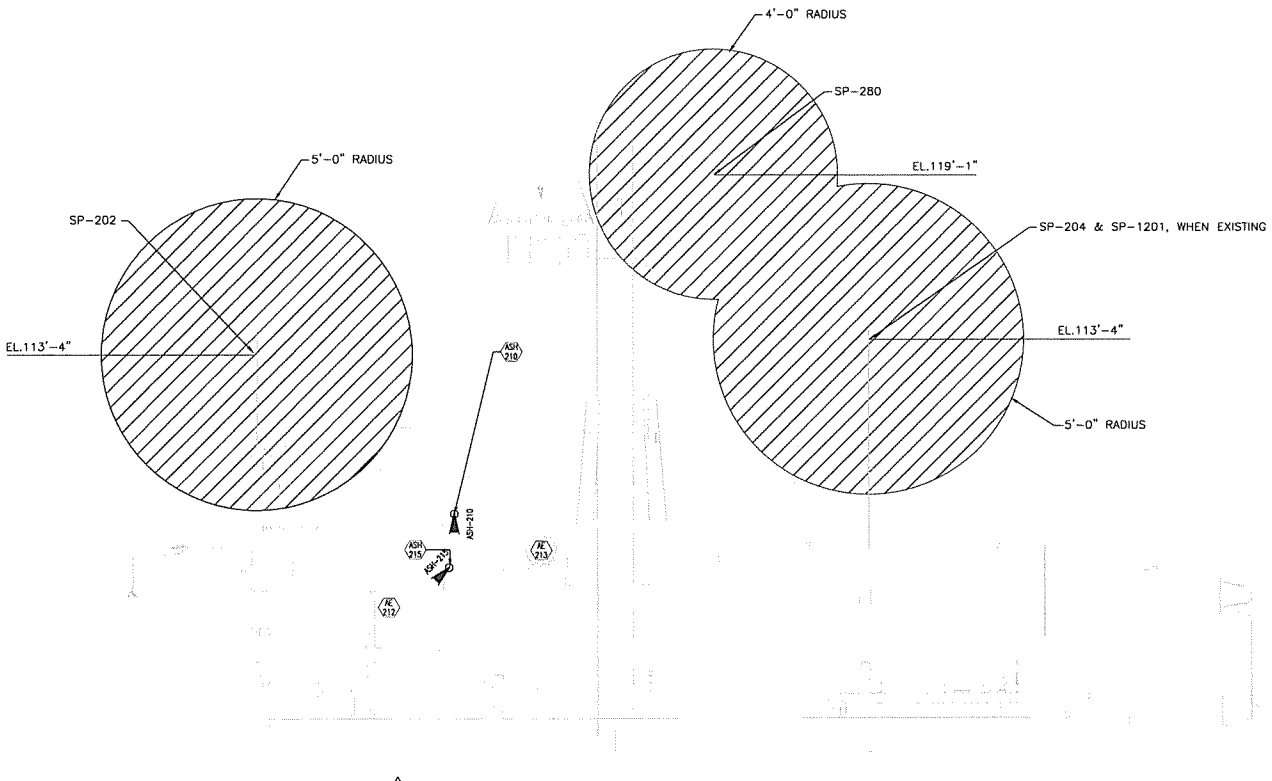
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE: DFC 1500BL5 POWER PLANT YARD - AREA CLASSIFICATION SECTION

SIZE	Location	DWG NO	REV
D	SKID 2	488S-51-00	B

SCALE AS NOTED SHEET 2 OF 5



NOTES:

1. GRADE ELEVATION = 100'-0"
2. ASH-210 SHALL BE ORIENTATED TO PROTECT SKID 3.
3. ASH-215 SHALL BE ORIENTATED TO PROTECT SKID 2 DFC FUEL TRAIN.
4. WHEN OPENED AND DISCHARGING (EXHAUST PURGING), THE FOLLOWING SAMPLE VALVES HAVE 18" RADIUS DIVISION 2 SPHERES ABOUT THEIR FINAL DISCHARGE LOCATIONS: HV-228, HV-237, HV-243, HV-249A, HV-250, HV-274, HV-321, (AND HV-1237 & HV-1243, IF PRESENT). OPERATORS TO ROUTE VENT TUBING FROM VALVE(S) TO A SAFE LOCATION DURING VENTING PROCEDURES.
5. FOR SKID 3 LOCATED DIFFERENTLY THAN DEPICTED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN A LOCATION APPROVED BY FCE.
6. WHEN EXISTING, SP-1201 SHALL BE LOCATED WITHIN 2" OF SP-204.

SECTION-B SKID 2 NORTH SIDE

B SCALE: 0 2' 4' 6'

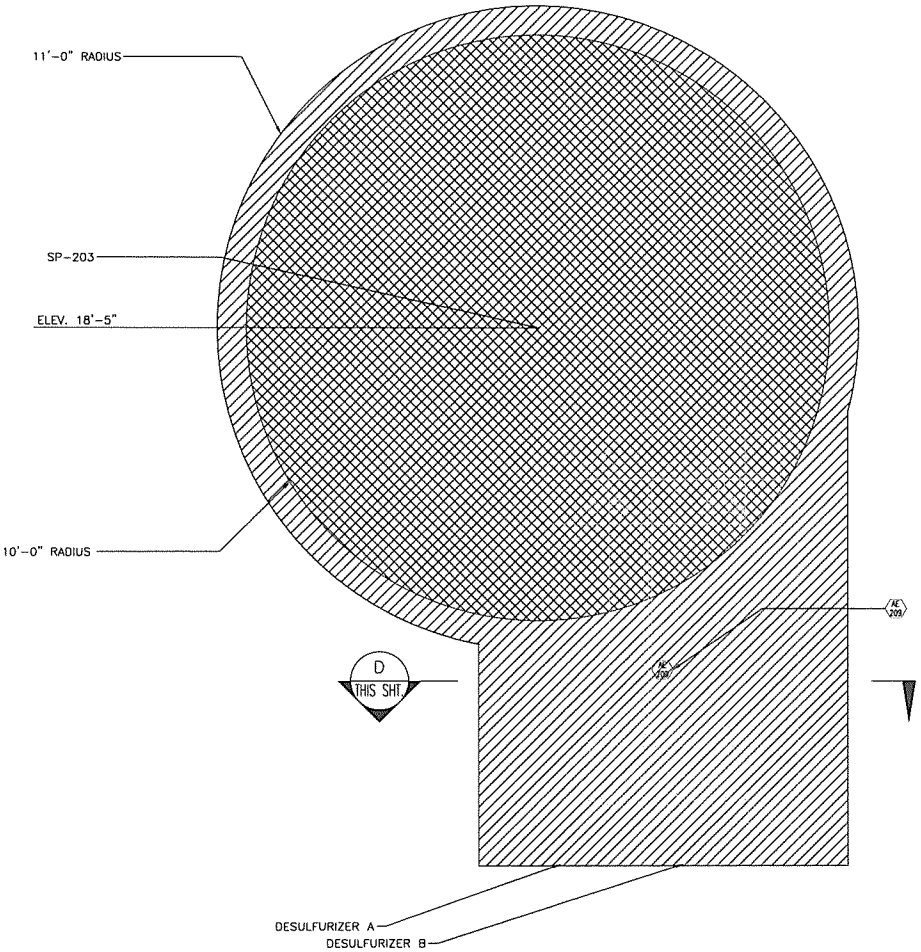
B SHT. 1

CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
DFC 1500BL5 POWER PLANT
YARD - AREA CLASSIFICATION
SECTION

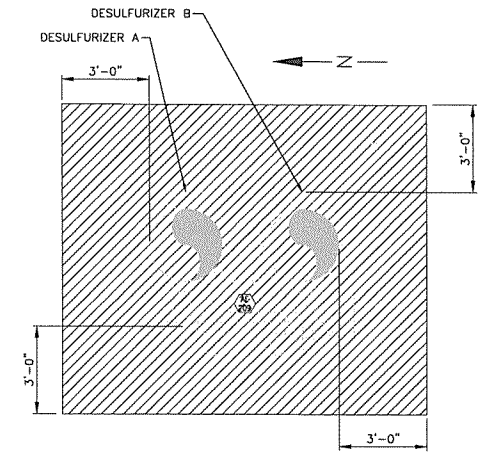
SIZE	Location	DWG NO	REV
D	SKID 2	488S-51-00	B
SCALE	AS NOTED	SHEET	3 OF 5



SECTION–C SKID 3 WEST SIDE

SCALE: 0 2' 4' 6'

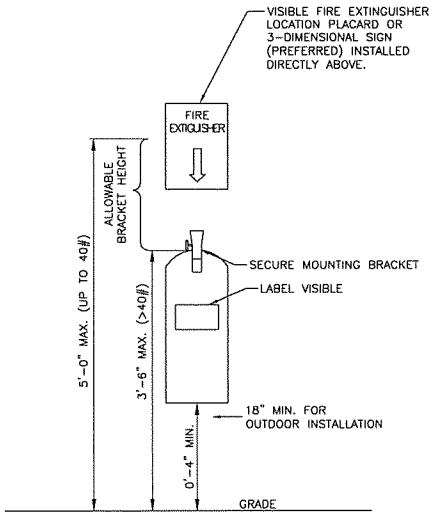
C SHT. 1



SECTION–D SKID 3 PLAN

SCALE: 0 2' 4' 6'

D THIS SHT



FIRE EXTINGUISHER MOUNTING DETAIL

SCALE: N.T.S.

NOTES:

- OUTDOOR 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 = 100'-0"
2. FOR SKID 3 LOCATED DIFFERENTLY THAN DEPICTED ON SHEET 1, OWNER SHALL INSTALL AE/ASH-210 IN A LOCATION APPROVED BY FCE.
3. SP-203 SHALL NOT BE DIRECTED TOWARDS, OR LOCATED WITHIN 15'-0" OF ANY HEATING, VENTILATION OR AIR-CONDITIONING AIR INTAKE, WINDOWS, DOORS OR OTHER OPENINGS INTO BUILDINGS.

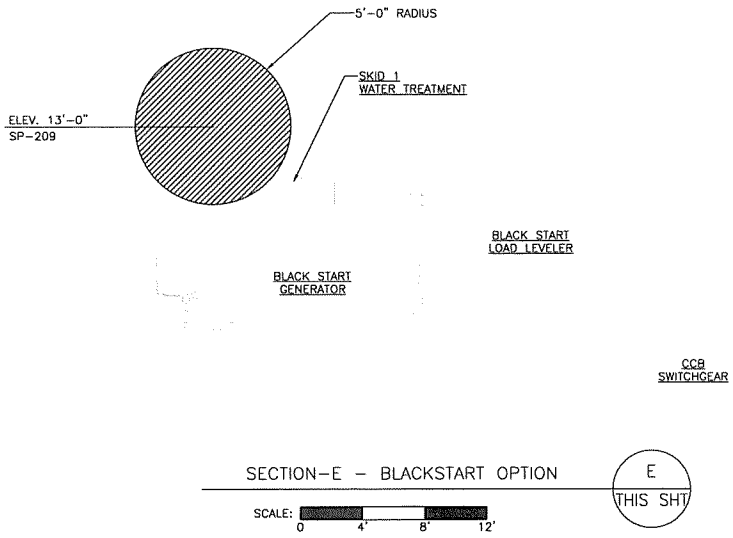
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE

DFC 1500BL5 POWER PLANT YARD - AREA CLASSIFICATION SECTIONS & DETAILS

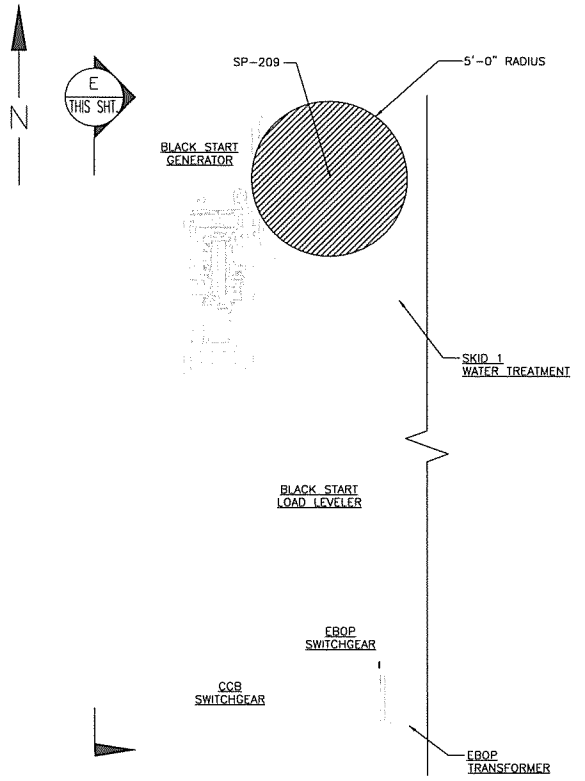
SIZE	Location	DWG NO	REV
D	SKID 3	488S-51-00	B
SCALE	AS NOTED	SHEET	4 OF 5



SECTION-E - BLACKSTART OPTION

SCALE: 0 4' 8' 12'

E
THIS SHT



PARTIAL PLAN

SCALE: 0 4' 8' 12'

B

FUELCELL ENERGY, INC.
PROPRIETARY

CAGE CODE
63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
DFC 1500BL5 POWER PLANT
YARD - AREA CLASSIFICATION
BLACKSTART OPTION - PLAN & SECTION

SIZE	Location	DWG NO	REV
D	SITE	488S-51-00	B
SCALE	AS SHOWN	SHEET	5 OF 5

Department of Economic and Community Development
Connecticut
still revolutionary

State Historic Preservation Office
One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

PROJECT REVIEW COVER FORM

1. This information relates to a previously submitted project. ☐ You do not need to complete the rest of the form if you have been previously issued a SHPO Project Number. Please attach information to this form and submit

SHPO Project Number _____
(Not all previously submitted projects will have project numbers)

Project Address _____
(Street Address and City or Town)

2. This is a new Project. [X] If you have checked this box, it is necessary to complete ALL entries on this form .

Project Name Pepperidge Farm Fuel Cell

Project Location 1414 Blue Hills Avenue
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town Bloomfield
In addition to the village or hamlet name (if appropriate), the municipality must be included here.

County Hartford
If the undertaking includes multiple addresses, please attach a list to this form.

Date of Construction (for existing structures) N/A

PROJECT DESCRIPTION SUMMARY (include full description in attachment):
Installation of a 1.4 MW fuel cell combined heat and power generating facility, including all associated equipment and site improvements at the Pepperidge Farm bakery

TYPE OF REVIEW REQUESTED

a. Does this undertaking involve funding or permit approval from a State or Federal Agency?

[X] Yes [ ] No

Agency Name/Contact	Type of Permit/Approval	State	Federal
Connecticut Siting Council	Petition of Pepperidge Farm, Inc. for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need ~~is not Required for the Installation~~ of a Fuel Cell at Its Bloomfield Facility	[X]	[ ]

	Yes	No
b. Have you consulted the SHPO and UCONN Dodd Center files to determine the presence or absence of previously identified cultural resources within or adjacent to the project area?	[ ]	[X]
If yes: Was the project site wholly or partially located within an identified archeologically sensitive area?	[ ]	[ ]
Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the CT State or National Registers of Historic Places?	[ ]	[X]
Does the project involve the rehabilitation, renovation, relocation, demolition or addition to any building or structure that is 50 years old or older?	[ ]	[X]

Department of Economic and Community Development
Connecticut still revolutionary

State Historic Preservation Office
One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

PROJECT REVIEW COVER FORM

The Historic Preservation Review Process in Connecticut Cultural Resource Review under the National Historic Preservation Act – Section 106 http://www.achp.gov/106summary.html involves providing technical guidance and professional advice on the potential impact of publicly funded, assisted, licensed or permitted projects on the state's historic, architectural and archaeological resources. This responsibility of the State Historic Preservation Office (SHPO) is discharged in two steps: (1) identification of significant historic, architectural and archaeological resources; and (2) advisory assistance to promote compatibility between new development and preservation of the state's cultural heritage.

Project review is conducted in two stages. First, the SHPO assesses affected properties to determine whether or not they are listed or eligible for listing in the Connecticut State or National Registers of Historic Places. If so, it is deemed "historic" and worthy of protection and the second stage of review is undertaken. The project is reviewed to evaluate its impact on the properties significant materials and character. Where adverse effects are identified, alternatives are explored to avoid, or reduce project impacts; where this is unsuccessful, mitigation measures are developed and formal agreement documents are prepared stipulating these measures. For more information and guidance, please see our website at: http://www.cultureandtourism.org/cct/cwp/view.asp?a=3933&q=293820

ALL PROJECTS SUBMITTED FOR REVIEW MUST INCLUDE THE FOLLOWING MATERIALS*:

[X] **PROJECT DESCRIPTION** Please attach a full description of the work that will be undertaken as a result of this project. Portions of environmental statements or project applications may be included. The project boundary of the project should be clearly defined**

[X] **PROJECT MAP** This should include the precise location of the project – preferably a clear color image showing the nearest streets or roadways as well as all portions of the project. Tax maps, Sanborn maps and USGS quadrangle maps are all acceptable, but Bing and Google Earth are also accepted if the information provided is clear and well labeled. The project boundary should be clearly defined on the map and affected legal parcels should be identified.

[X] **PHOTOGRAPHS** Clear, current images of the property should be submitted. Black and white photocopies will not be accepted. Include images of the areas where the proposed work will take place. May require: exterior elevations, detailed photos of elements to be repaired/replaced (windows, doors, porches, etc.) All photos should be clearly labeled.

For Existing Structures	Yes	N/A	Comments
Property Card	☐	☒	
For New Construction	**Yes**	**N/A**	**Comments**
Project plans or limits of construction (if available)	☒	☐	
If project is located in a Historic District include renderings or elevation drawings of the proposed structure	☐	☒	
Soils Maps http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm	☐	☒	
Historic Maps http://magic.lib.uconn.edu/	☐	☒	
For non-building-related projects (dams, culverts, bridge repair, etc)	**Yes**	**N/S**	**Comments**
Property Card	☐	☒	
Soils Map (see above)	☐	☒	
Historic Maps (see above)	☐	☒	

PROJECT CONTACT

Name Jennifer D. Arasimowicz, Esq. Title Vice President, Managing Counsel
Firm/Agency FuelCell Energy, Inc.
Address 3 Great Pasture Road
City Danbury State CT Zip 06810
Phone (203) 825-6070 Cell (860) 213-0592 Fax (203) 825-6069
Email jarasimowicz@fce.com

*Note that he SHPO's ability to complete a timely project review depends largely on the quality of the materials submitted.
** Please be sure to include the project name and location on *each page* of your submission.

PEPPERIDGE FARM FUEL CELL

PROJECT DESCRIPTION

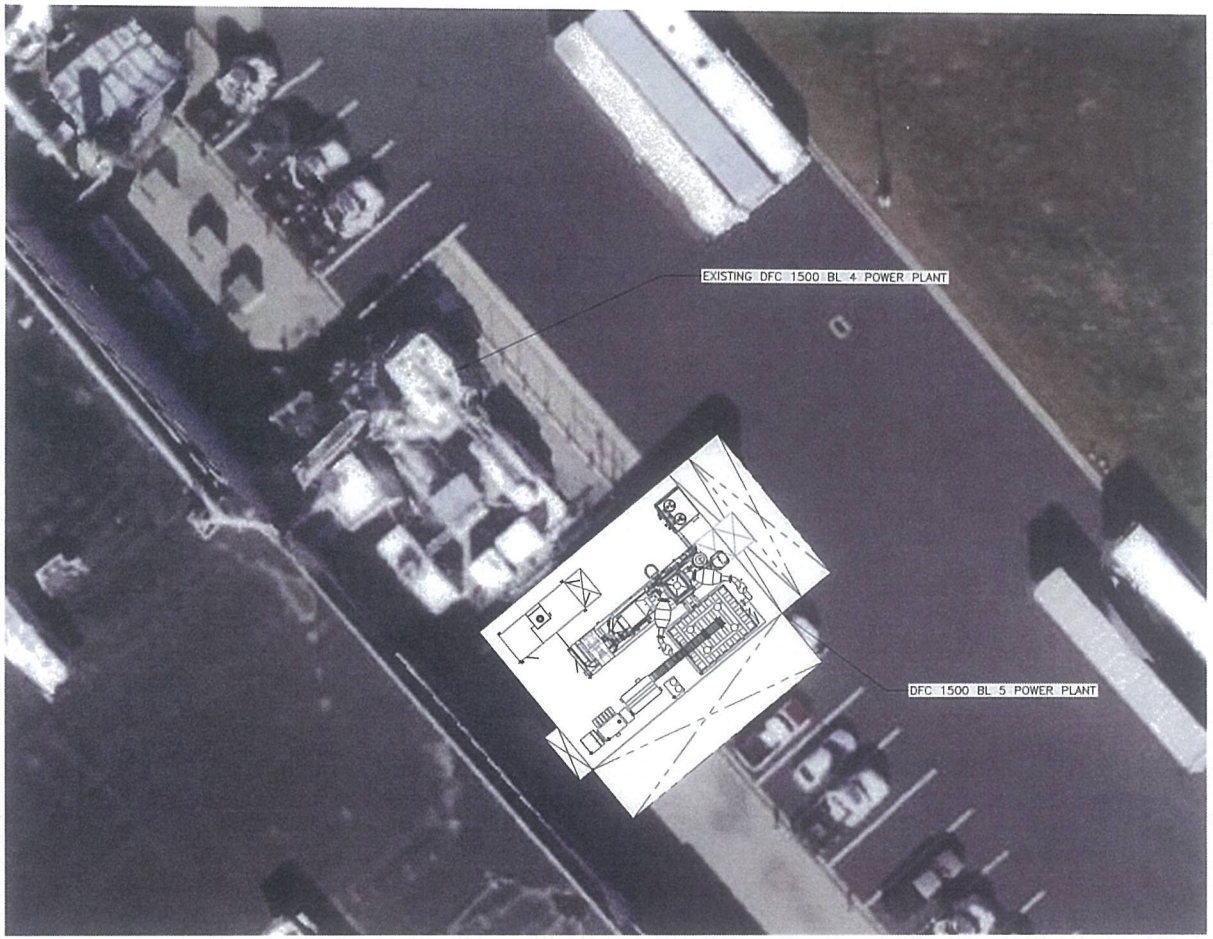
Pepperidge Farm, Incorporated owns and operates a bakery at 1414 Blue Hills Avenue in Bloomfield, Connecticut (the "Facility"). The Facility currently hosts one FuelCell Energy, Inc. ("FCE") DFC1500 fuel cell that supplies electricity and heat to the Facility. The current fuel cell is located in the parking lot adjacent to the bakery. Pepperidge Farm and FCE have contracted to add an additional DFC1500 fuel cell to the Facility to be also located in the parking lot next to the existing fuel cell.

The proposed project will employ one DFC1500 molten carbonate fuel cell system to generate nominally 1,400kW and distribute it to the Pepperidge Farm electrical infrastructure. Waste heat from the fuel cell exhaust will be utilized at a later time pursuant to a design to be provided by Pepperidge Farm. The project will be engineered, designed, procured, constructed and installed for Pepperidge Farm by FCE, the fuel cell manufacturer.

Jurisdiction over the siting of the facility, including review of any potential environmental impacts, rests with the Connecticut Siting Council. Pepperidge Farm and FCE are requesting project review from the State Historic Preservation Office for purposes of its initial submission to the Siting Council.

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
1	INTERNAL REVIEW	KGG	I.COREA	12/12/14

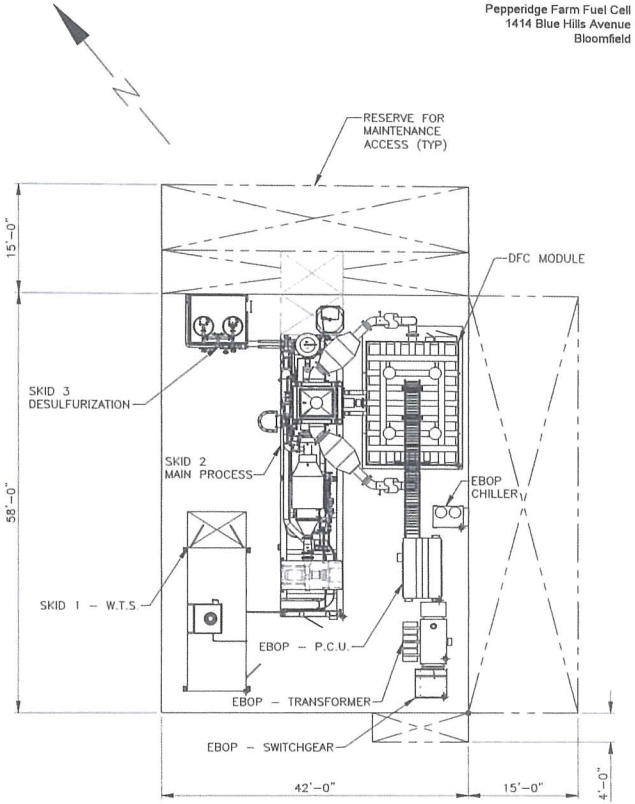
Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield



DFC1500 BL5 POWER PLANT
PLOT PLAN

5' 0 5' 15' 30'

GRAPHIC SCALE



DFC1500 BL5 POWER PLANT
PLANT LAYOUT

5' 0 5' 15' 30'

GRAPHIC SCALE

Exhibit D

PRELIMINARY

FUELCELL ENERGY, INC PROPRIETARY THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND MAY NOT BE DISCLOSED, COPIED OR REPRODUCED EXCEPT BY WRITTEN PERMISSION FROM FUELCELL ENERGY INC CAGE CODE 63131	SIGNATURES DRAWN K.GROSS 12/12/14 CHECKED I.COREA 12/12/14 APPROVED RELEASED UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16" REVISION INDICATOR FLAG NOTE	FuelCell Energy 3 Great Pasture Rd. Danbury CT 06813 TITLE DFC1500 BL 5 POWER PLANT PEPPERIDGE FARM - BLOOMFIELD, CT SITE LAYOUT SIZE D | Location --- | DWG NO 14-0050 | REV 1 SCALE AS SHOWN | SHEET 1 OF 1


USGS
science for a changing world
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map
US Topo
HARTFORD NORTH QUADRANGLE
CONNECTICUT-HARTFORD CO.
7.5-MINUTE SERIES
Bloomfield
Windsor
Wilson
Blue Hills
Cottage Grove
Stowe Village Housing Project
Childrens Village of the Hartford Orphan Asylum
West Hill
Fernridge Place
West Hartford
Hamilton Hill
Johnson Hill
Parkville
HARTFORD
Smith Tower Housing
Dutch Point Colony
East Hartford
Gurney Bridge
Bissell Bridge
Day Hill
Cook Hill
Metacomet Ridge
Produced by the United States Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
HORTH AMERICAN VERTICAL DATUM OF 1988
ROAD CLASSIFICATION
HARTFORD NORTH, CT
2015

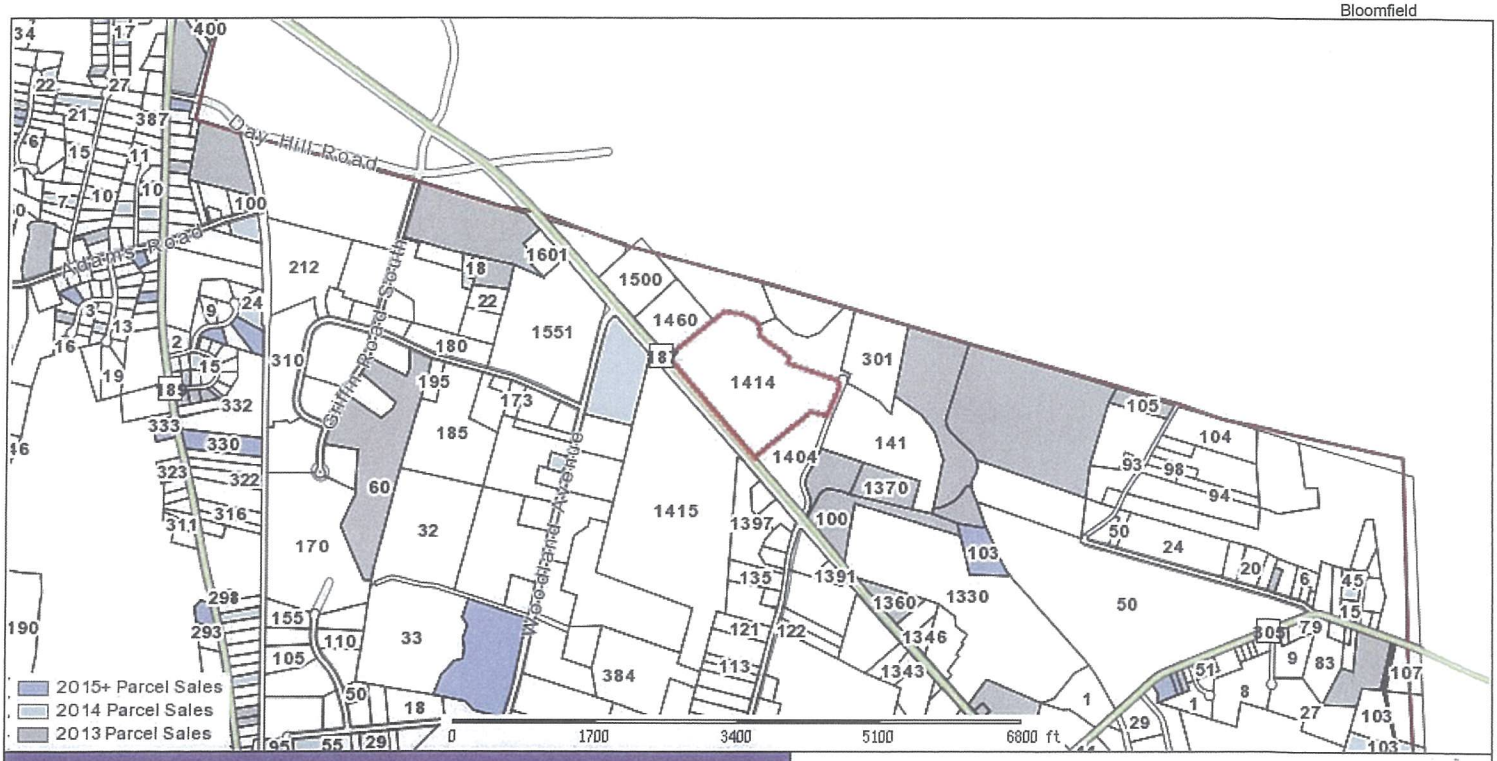
Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

The town of Bloomfield Assessor

Bloomfield Home Search Return To Starting Point Street View(If available)

Website design and integration by & qPublic.net

Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

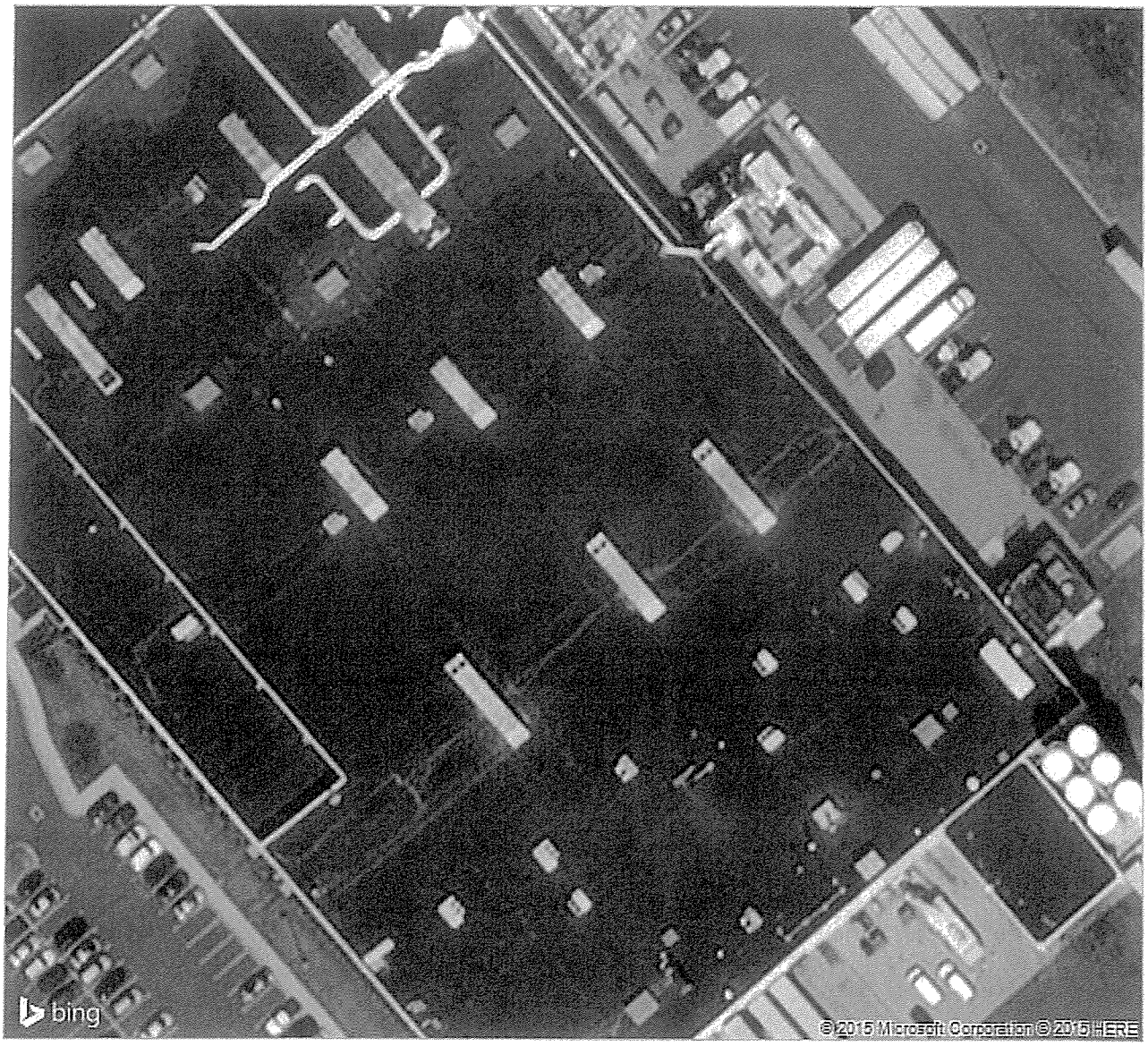


1414 Blue Hills Ave. Bloomfield			
Parcel: 5314 Acres: 41			
Name:	PEPPERIDGE FARM INC	Land Value	5535000
Site:	1414 BLUE HILLS AVE	Building Value	10387200
Sale:	0 on 2002-04-29 Reason=U Qual=34	Misc Value	950900
Mail:	CORPORATE TAX DEPARTMENT CAMDEN, NJ 08101	Just Value	16876500
		Assessed Value	0
		Exempt Value	0
		Taxable Value	0

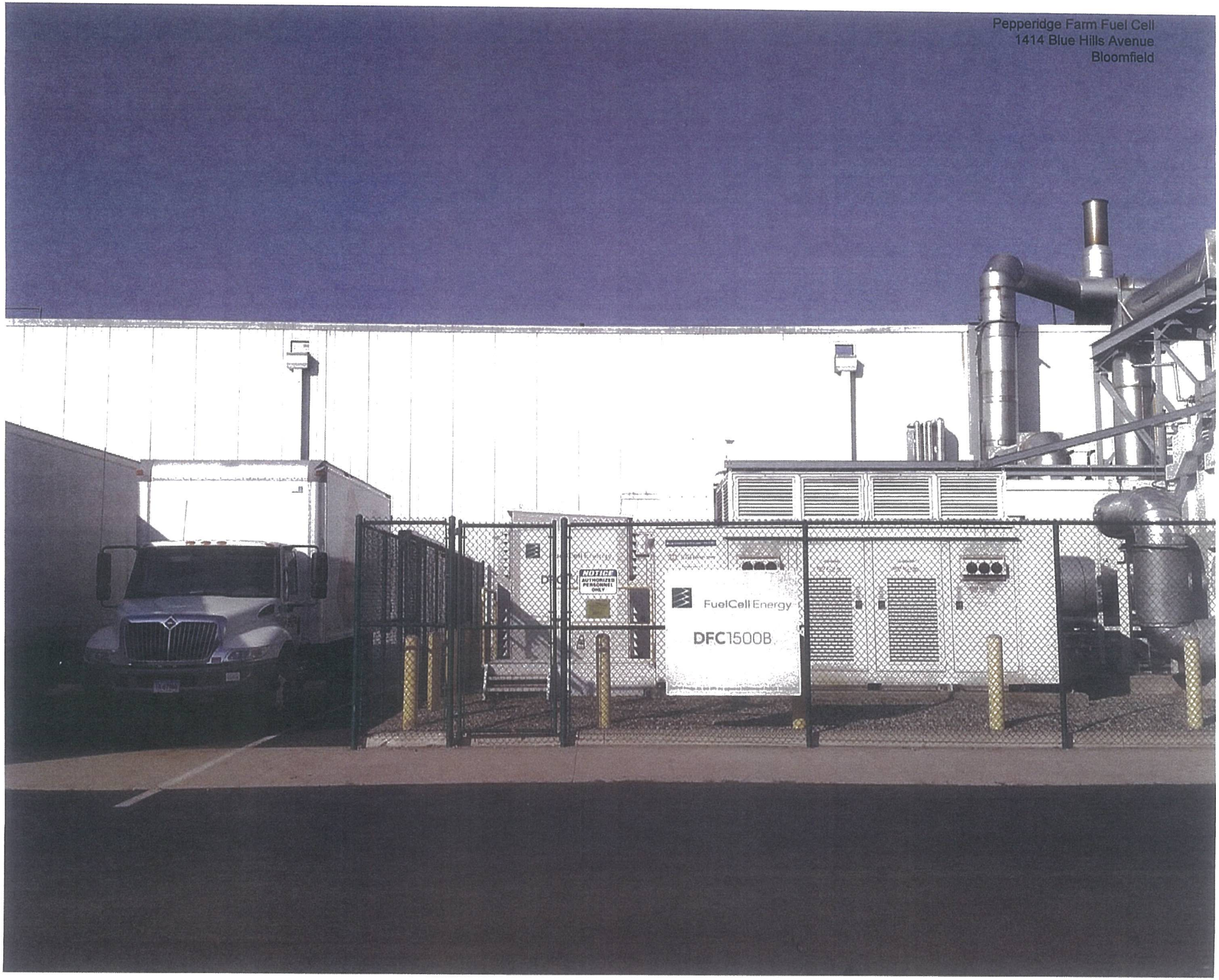
bing Maps

Pepperidge Farm Fuel Cell, 1414 Blue Hills Avenue, Bloomfield

On the go? Use **m.bing.com** to find maps, directions, businesses, and more



Bird's eye view maps can't be printed, so another map view has been substituted.



Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

December 4, 2015
Exhibit D

December 4, 2015
Exhibit D

Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

December 4, 2015
Exhibit D

Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

December 4, 2015
Exhibit D

Pepperidge Farm Fuel Cell
1414 Blue Hills Avenue
Bloomfield

December 4, 2015
Exhibit D

November 18, 2015

Ms. Jennifer D. Arasimowicz
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810
jarasimowicz@fce.com

Project: Construction of a Fuel Cell Power Plant in Parking Lot of Pepperidge Farm Located at 1414 Blue Hills Avenue in Bloomfield, Connecticut
NDDB Determination No.: 201508667

Dear Jennifer,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed Construction of a Fuel Cell Power Plant in Parking Lot of Pepperidge Farm Located at 1414 Blue Hills Avenue in Bloomfield, Connecticut. According to our records we have known extant populations of State Special Concern *Terrapene c. carolina* (box turtle) in the vicinity of the project site.

Eastern Box Turtle: Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Recommended Protection Strategies for turtles:
If any work will occur when these turtles are active (April 1st to September 30th) I recommend the additional following protection strategies in order to protect these turtles:

- Silt fencing should be installed around the work area prior to construction, please avoid erosion control products that are embedded with netting as these can be fatal to wildlife;

- Where possible, AVOID installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;

- After silt fencing is installed and prior to construction, a sweep of the work area should be conducted to look for turtles;

- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;

- No vehicles or heavy machinery should be parked in any turtle habitat;

- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and

- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

- Stockpiles of soil should be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

- Use native plantings if possible. Any plantings should be composed of species native to northeastern United States and appropriate for use in riparian habitat.

Thank you for including the protection strategies and protocols that will be in place to protect box turtles from project impacts. If these protection strategies are followed then the proposed activities will lessen the impact on the eastern box turtle. I have attached a fact sheet on this turtle. This determination is good for one year. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by November 18, 2016.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Eastern Box Turtle

Terrapene carolina carolina

Description

The eastern box turtle is probably the most familiar of the 8 species of turtles found in Connecticut's landscape. It is known for its high-domed carapace (top shell). The carapace has irregular yellow or orange blotches on a brown to black background that mimic sunlight dappling on the forest floor. The plastron (under shell) may be brown or black and may have an irregular pattern of cream or yellow. The length of the carapace usually ranges from 4.5 to 6.5 inches, but can measure up to 8 inches long. The shell is made up of a combination of scales and bones, and it includes the ribs and much of the backbone.

Each individual turtle has distinctive head markings. Males usually have red eyes and a concave plastron, while females have brown eyes and a flat plastron. Box turtles also have a horny beak, stout limbs, and feet that are webbed at the base. This turtle gets its name from its ability to completely withdraw into its shell, closing itself in with a hinged plastron. Box turtles are the only Connecticut turtle with this ability.

Range

Eastern box turtles are found throughout Connecticut, except at the highest elevations. They range from southeastern Maine to southeastern New York, west to central Illinois, and south to northern Florida.

Habitat and Diet

In Connecticut, this terrestrial turtle inhabits a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically, however, box turtles are found in well-drained forest bottomlands and open deciduous forests. They will use wetland areas at various times during the season. During the hottest part of a summer day, they will wander to find springs and seepages where they can burrow into the moist soil. Activity is restricted to mornings and evenings during summer, with little to no nighttime activity, except for egg-laying females. Box turtles have a limited home range where they spend their entire life, ranging from 0.5 to 10 acres (usually less than 2 acres).

Box turtles are omnivorous and will feed on a variety of food items, including earthworms, slugs, snails, insects, frogs, toads, small snakes, carrion, leaves, grass, berries, fruits, and fungi.

Life History

From October to April, box turtles hibernate by burrowing into loose soil, decaying vegetation, and mud. They tend to hibernate in woodlands, on the edge of woodlands, and sometimes near closed canopy wetlands in the forest. Box turtles may return to the same place to hibernate year after year. As soon as they come out of hibernation, box turtles begin feeding and searching for mates.

The breeding season begins in April and may continue through fall. Box turtles usually do not breed until they are about 10 years old. This late maturity is a result of their long lifespan, which can range up to 50 to even over 100 years of age. The females do not have to mate every year to lay eggs as they can store sperm for up

to 4 years. In mid-May to late June, the females will travel from a few feet to more than a mile within their home range to find a location to dig a nest and lay their eggs. The 3 to 8 eggs are covered with dirt and left to be warmed by the sun. During this vulnerable time, skunks, foxes, snakes, crows, and raccoons often raid nests. Sometimes, entire nests are destroyed. If the eggs survive, they will hatch in late summer to early fall (about 2 months after being laid). If they hatch in the fall, the young turtles may spend the winter in the nest and come out the following spring.

As soon as the young turtles hatch, they are on their own and receive no care from the adults. This is a dangerous time for young box turtles because they do not develop the hinge for closing into their shell until they are about 4 to 5 years old. Until then, they cannot entirely retreat into their shells. Raccoons, skunks, foxes, dogs, and some birds will prey on young turtles.

Conservation Concerns

The eastern box turtle was once common throughout the state, mostly in the central Connecticut lowlands. However, its distribution is now spotty, although where found, turtles may be locally abundant. Because of the population decline in Connecticut, the box turtle was added to the state's List of Endangered, Threatened, and Special Concern Species when it was revised in 1998. It is currently listed as a species of special concern. The box turtle also is protected from international trade by the 1994 CITES treaty. It is of conservation concern in all the states where it occurs at its northeastern range limit, which includes southern New England and southeastern New York.

Many states have laws that protect box turtles and prohibit their collection. In Connecticut, eastern box turtles **cannot** be collected from the wild (DEP regulations 26-66-14A). Another regulation (DEP regulations 26-55-3D) "grandfathers" those who have a **box turtle collected before 1998**. This regulation limits possession to a single turtle collected before 1998. These regulations provide some protection for the turtles, but not enough to combat some of the even bigger threats these animals face. The main threats in Connecticut (and other states) are loss and fragmentation of habitat due to deforestation and spreading suburban development; vehicle strikes on the busy roads that bisect the landscape; and indiscriminate (and now illegal) collection of individuals for pets.

Loss of habitat is probably the greatest threat to turtles. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Adult box turtles are relatively free from predators due to their unique shells. The shell of a box turtle is extremely hard. However, the shell is not hard enough to survive being run over by a vehicle. Roads bisecting turtle habitat can seriously deplete the local population. Most vehicle fatalities are pregnant females searching for a nest site.

How You Can Help

- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *Do not disturb turtles nesting in yards or gardens.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females and they should be helped on their way and not collected. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns. Spread the word to others on how they can help Connecticut's box turtle population.*

State of Connecticut
Department of Environmental Protection
Bureau of Natural Resources
Wildlife Division
www.ct.gov/dep

The production of this Endangered and Threatened Species Fact Sheet is made possible by donations to the Connecticut Endangered Species/Wildlife Income Tax Checkoff Fund.

5/2008