

**New Jersey Department of Environmental Protection**  
**Reason for Application**

**Permit Being Modified**

**Permit Class:** PCP      **Number:** 80001

**Description**      This is a permit revision application for PCP080001.

**of Modifications:**

This application is being submitted for the installation of a new natural gas fired CHP cogeneration system - Caterpillar 1990KW, 17.73 mmbtu/hr, 4.88 L/cylinder, equipped with SCR and oxidation catalyst to be manufactured in 2021. Since the CHP will share the same emission stack as the existing 3 boilers, this is being submitted as a permit revision to the existing PCP080001 for the boilers.

CHP steam generation system will be connected to the main boiler plant header. The engine's jacket water heat rejection loop will be connected to secondary side of reheat heat exchangers during winter and to new absorption chiller in the summer. CHP meets the SOTA emission performance levels in Table 1.

Since a permit revision needed to be submitted, we are requesting the following changes with regards to the boiler permit conditions.

- Modify the natural gas fuel limit to 450 mmcf/yr for all three boilers.
- No. 2 fuel oil is only utilized as back-up fuel source
- Sulfur content of fuel oil to be 15 ppm
- No changes to emission rates (manufacture rates utilized)

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Facility Name (AIMS):** NEWARK BETH ISRAEL MEDICAL CENT

**Facility ID (AIMS):** 05393

**Street** 201 LYONS AVE  
**Address:** PLANT AND ENGINEERING  
NEWARK, NJ 07112

**Mailing** 201 LYONS AVE  
**Address:** PLANT AND ENGINEERING  
NEWARK, NJ 07112

**County:** Essex  
**Location** HOSPITAL  
**Description:**

**State Plane Coordinates:**

**X-Coordinate:**

**Y-Coordinate:**

**Units:**

**Datum:**

**Source Org.:**

**Source Type:**

**Industry:**

**Primary SIC:** 8062

**Secondary SIC:**

**NAICS:** 622110

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Contact Type: Air Permit Information Contact**

**Organization:** NEWARK BETH ISRAEL MEDICAL CENTER      **Org. Type:** Hospital  
**Name:** ED GROGAN      **NJ EIN:** 00223452311  
**Title:** DIRECTOR OF PLANT ENGG  
**Phone:** (973) 926-8140 x      **Mailing Address:** 201 LYONS AVE  
**Fax:** ( ) - x      NEWARD, NJ 07112  
**Other:** ( ) - x  
**Type:**  
**Email:** EDWARD.GROGAN@RWJBH.ORG

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**Contact Type: BOP - Operating Permits**

**Organization:** Newark Beth Israel Medical Center      **Org. Type:** Private  
**Name:** Michael Morrow      **NJ EIN:** 00223452311  
**Title:** Chief Engineer, Plant & Engineering  
**Phone:** (973) 926-5162 x      **Mailing Address:** 201 Lyons Avenue  
**Fax:** (973) 926-3793 x      Newark, NJ 07112  
**Other:** ( ) - x  
**Type:**  
**Email:**

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**Contact Type: Consultant**

**Organization:** LOCKATONG ENGINEERING      **Org. Type:** Corporation  
**Name:** TRICIA ROMANO, P.E.      **NJ EIN:** 22379478800  
**Title:** VICE PRESIDENT  
**Phone:** (609) 397-4106 x      **Mailing Address:** 99 KINGWOOD STOCKTON RD  
**Fax:** (609) 397-8774 x      PO BOX 146  
**Other:** ( ) - x      ROSEMONT, NJ 08556  
**Type:**  
**Email:** TLR@LOCKATONG.COM

**New Jersey Department of Environmental Protection  
Facility Profile (General)**

**Contact Type: Fees/Billing Contact**

**Organization:** NEWARK BETH ISRAEL MEDICAL CENTER      **Org. Type:**  
**Name:** ED GROGAN      **NJ EIN:**  
**Title:** DIRECTOR OF PLANT ENGG  
**Phone:** (973) 926-8140 x      **Mailing Address:** 201 LYONS AVE  
**Fax:** ( ) - x      NEWARD, NJ 07112  
**Other:** ( ) - x  
**Type:**  
**Email:** EDWARD.GROGAN@RWJBH.ORG

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**Contact Type: General Contact**

**Organization:** Newark Beth Israel Medical Center      **Org. Type:** Hospital  
**Name:** George Thomas      **NJ EIN:** 00223452311  
**Title:** Director, Plant & Engineering  
**Phone:** (973) 926-8140 x      **Mailing Address:** 201 Lyons Avenue  
**Fax:** ( ) - x      Plant & Engineering  
**Other:** ( ) - x      Newark, NJ 07112  
**Type:**  
**Email:** GThomas@sbhcs.com

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**Contact Type: On-Site Manager**

**Organization:** Newark Beth Israel Medical Center      **Org. Type:** Hospital  
**Name:** Alvin St. Paul      **NJ EIN:** 00223452311  
**Title:** Facility Maintenance  
**Phone:** (973) 926-5312 x      **Mailing Address:** 201 Lyons Avenue  
**Fax:** (973) 926-3793 x      Newark, NJ 07112  
**Other:** ( ) - x  
**Type:**  
**Email:** Ast.Paul@SBHCS.com

**NEWARK BETH ISRAEL MEDICAL CENTER (05393)**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Contact Type:** Responsible Official

**Organization:** NEWARK BETH ISRAEL MEDICAL CENTER

**Org. Type:** Hospital

**Name:** ED GROGAN

**NJ EIN:** 00223452311

**Title:** DIRECTOR OF PLANT ENGG

**Phone:** (973) 926-8140 x

**Mailing** 201 LYONS AVE

**Fax:** ( ) - x

**Address:** NEWARD, NJ 07112

**Other:** ( ) - x

**Type:**

**Email:** EDWARD.GROGAN@RWJBH.ORG

NEWARK BETH ISRAEL MEDICAL CENTER (05393)  
PCP200002

Date: 2/25/2021

**New Jersey Department of Environmental Protection  
Equipment Inventory**

<b>Equip. NJID</b>	<b>Facility's Designation</b>	<b>Equipment Description</b>	<b>Equipment Type</b>	<b>Certificate Number</b>	<b>Install Date</b>	<b>Grand- Fathered</b>	<b>Last Mod. (Since 1968)</b>	<b>Equip. Set ID</b>
E602	BOILER #1	HURST BOILER #1	Boiler	PCP 020002	1/1/2001	No	1/1/2001	
E604	BOILER #2	HURST BOILER #2	Boiler	PCP 020002	1/1/2001	No	1/1/2001	
E606	BOILER #3	HURST BOILER #3	Boiler	PCP 020002	1/1/2001	No	1/1/2001	
E1000	CAT CHP	CAT CHP 1990KW	Stationary Reciprocating Engine		8/1/2021	No		

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 E602 (Boiler)  
Print Date: 2/25/2021

Make:	Hurst Wetback Series 400
Manufacturer:	Hurst
Model:	S4-GA4-600-150
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	25.20
Boiler Type:	Fire Tube
Utility Type:	Non-Utility
Output Type:	Steam Only
Steam Output (lb/hr):	20,700.00
Fuel Firing Method:	Wall-fired or cross-fired
Description (if other):	
Draft Type:	Forced
Heat Exchange Type:	Direct

Is the boiler using? (check all that apply):

Low NOx Burner:	<input checked="" type="checkbox"/> Type: ProFire Industrial Combustion
Staged Air Combustion:	<input type="checkbox"/>
Flue Gas Recirculation (FGR):	<input checked="" type="checkbox"/> Amount (%): 20.00

Have you attached a diagram showing the location and/or the configuration of this equipment?

No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

No

Comments:

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 E604 (Boiler)  
Print Date: 2/25/2021

Make:	Hurst Wetback Series 400
Manufacturer:	Hurst
Model:	S4-GA4-600-150
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	25.20
Boiler Type:	Fire Tube
Utility Type:	Non-Utility
Output Type:	Steam Only
Steam Output (lb/hr):	20,700.00
Fuel Firing Method:	Wall-fired or cross-fired
Description (if other):	
Draft Type:	Forced
Heat Exchange Type:	Direct

Is the boiler using? (check all that apply):

Low NOx Burner:	<input checked="" type="checkbox"/> Type: ProFire Industrial Combustion
Staged Air Combustion:	<input type="checkbox"/>
Flue Gas Recirculation (FGR):	<input checked="" type="checkbox"/> Amount (%): 20.00

Have you attached a diagram showing the location and/or the configuration of this equipment?

No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

No

Comments:



05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 E606 (Boiler)  
Print Date: 2/25/2021

Make:	Hurst Wetback Series 400
Manufacturer:	Hurst
Model:	S4-GA4-600-150
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	25.20
Boiler Type:	Fire Tube
Utility Type:	Non-Utility
Output Type:	Steam Only
Steam Output (lb/hr):	20,700.00
Fuel Firing Method:	Wall-fired or cross-fired
Description (if other):	
Draft Type:	Forced
Heat Exchange Type:	Direct

Is the boiler using? (check all that apply):

Low NOx Burner:	<input checked="" type="checkbox"/> Type: ProFire Industrial Combustion
Staged Air Combustion:	<input type="checkbox"/>
Flue Gas Recirculation (FGR):	<input checked="" type="checkbox"/> Amount (%): 20.00

Have you attached a diagram showing the location and/or the configuration of this equipment?

No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

No

Comments:

**05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 E1000 (Stationary Reciprocating Engine)**  
**Print Date: 2/25/2021**

Make:	<input type="text" value="CHP"/>	
Manufacturer:	<input type="text" value="CATERPILLAR"/>	
Model:	<input type="text" value="G3516H"/>	
Maximum Rated Gross Heat Input (MMBtu/hr):	<input type="text" value="17.73"/>	
Class:	<input type="text" value="Lean Burn"/>	
Description:	<input type="text"/>	
Duty:	<input type="text" value="Base Loaded"/>	
Description:	<input type="text"/>	
Minimum Load Range (%):	<input type="text"/>	
Maximum Load Range (%):	<input type="text"/>	
Stroke:	<input type="text" value="4-stroke"/>	
Power Output (BHP):	<input type="text" value="2763"/>	
Electric Output(KW):	<input type="text" value="1990"/>	
Compression Ratio:	<input type="text" value="12.1"/>	
Ignition Type:	<input type="text" value="Spark"/>	
Description:	<input type="text"/>	
Engine Speed (RPM):	<input type="text" value="1500"/>	
Engine Exhaust Temperature (°F):	<input type="text" value="758"/>	
Air to Fuel Ratio at Peak Load:	<input type="text"/>	
Ratio Basis:	<input type="text"/>	
Lambda Factor (scfm/scfm):	<input type="text"/>	
Brake Specific Fuel Consumption at Peak Load (Btu/BHP-hr):	<input type="text" value="5696"/>	
Output Type:	<input type="text" value="Cogeneration"/>	
Heat to Power Ratio:	<input type="text"/>	
Is the Engine Using a Turbocharger?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Is the Engine Using an Aftercooler?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Is the Engine Using (check all that apply):		
A Prestratified Charge (PSC)	<input type="checkbox"/>	A NOx Converter <input type="checkbox"/>
Air to Fuel Adjustment (AF)	<input checked="" type="checkbox"/>	Ignition Timing Retard <input type="checkbox"/>
Low Emission Combustion	<input type="checkbox"/>	Non-Selective Catalytic Retard (NSCR) <input type="checkbox"/>
Other	<input checked="" type="checkbox"/>	
Description:	<input type="text" value="SCR/OXIDATION CATALYST"/>	
Have you attached a diagram showing the location and/or the configuration of this equipment?	<input type="radio"/> Yes <input checked="" type="radio"/> No	Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application? <input type="radio"/> Yes <input checked="" type="radio"/> No

Comments:

Include Emission Rates on the Potential to Emit Screen for each contaminant in ppmvd @ 7%O2 in addition to lbs/hr and tons/yr.

**NEWARK BETH ISRAEL MEDICAL CENTER (05393)**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Control Device Inventory**

<b>CD NJID</b>	<b>Facility's Designation</b>	<b>Description</b>	<b>CD Type</b>	<b>Install Date</b>	<b>Grand- Fathered</b>	<b>Last Mod. (Since 1968)</b>	<b>CD Set ID</b>
CD1	CHP SCR	SCR	Selective Catalytic Reduction	8/1/2021	No		
CD2	CHP Oxidizer	Oxidizer	Oxidizer (Catalytic)	8/1/2021	No		

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 CD1 (Selective Catalytic Reduction)  
Print Date: 2/25/2021

Make:	ecoCube
Manufacturer:	Safety Power Inc
Model:	Series 3WE
Minimum Temperature at Catalyst Bed (°F):	758
Maximum Temperature at Catalyst Bed (°F):	900
Minimum Temperature at Reagent Injection Point (°F):	758
Maximum Temperature at Reagent Injection Point (°F):	900
Type of Reagent:	Urea
Description:	
Chemical Formula of Reagent:	
Minimum Reagent Charge Rate (gpm):	0.1
Maximum Reagent Charge Rate (gpm):	1.3
Minimum Concentration of Reagent in Solution (% Volume):	32.5
Minimum NOx to Reagent Mole Ratio:	
Maximum NOx to Reagent Mole Ratio:	
Maximum Anticipated Ammonia Slip (ppm):	8
Type of Catalyst:	SCR
Volume of Catalyst (ft³):	15.74
Form of Catalyst:	rect prism homogenous ceramic
Anticipated Life of Catalyst:	16000
Units:	hours
Have you attached a catalyst replacement schedule?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Method of Determining Breakthrough:	SCR has post treatment NOx analyzer. Trend urea vs engine output to determine breakthrough
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 CD1 (Selective Catalytic Reduction)  
Print Date: 2/25/2021

Comments:

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 CD2 (Oxidizer (Catalytic))  
Print Date: 2/25/2021

Make:	ecoCUBE
Manufacturer:	SAFETY POWER INC
Model:	SERIES 3WE
Minimum Inlet Temperature (°F):	758
Maximum Inlet Temperature (°F)	900
Minimum Outlet Temperature (°F)	758
Maximum Outlet Temperature (°F):	900
Minimum Residence Time (sec)	0.06
Fuel Type:	Natural gas
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	
Minimum Pressure Drop Across Catalyst (psi):	
Maximum Pressure Drop Across Catalyst (psi):	0.418
Catalyst Material:	HOMOGENOUS CERAMIC BASED CATALYST, PRECIOUS METALS
Form of Catalyst:	Other
Description:	RECTANGULAR PRISM
Minimum Expected Life of Catalyst:	16000
Units:	hours
Volume of Catalyst (ft³):	15.74
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	

**NEWARK BETH ISRAEL MEDICAL CENTER (05393)**

Date: 2/25/2021

**PCP200002**

**New Jersey Department of Environmental Protection  
Emission Points Inventory**

PT NJID	Facility's Designation	Description	Config.	Equiv. Diam. (in.)	Height (ft.)	Dist. to Prop. Line (ft)	Exhaust Temp. (deg. F)			Exhaust Vol. (acfm)			Discharge Direction	PT Set ID
							Avg.	Min.	Max.	Avg.	Min.	Max.		
PT1	BOILER STACK	BOILER/CHP STACK	Round	102	169	72	450.0	70.0	900.0	21,700.0	6,824.0	50,839.0	Up	

**NEWARK BETH ISRAEL MEDICAL CENTER (05393)**

Date: 2/25/2021

**PCP200002**

**New Jersey Department of Environmental Protection  
Emission Unit/Batch Process Inventory**

**U 1 BOILERS CHP BOILER 1, 2, 3 & CAT CHP**

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	BOILER #1	25.2 MMBTU/HR DUAL FIRED BOILER NAT GAS	Normal - Steady State	E602		PT1	1-03-006-02	0.0	8,760.0		0.0	12,900.0	70.0	550.0
OS2	BOILER #1	25.2 MMBTU/HR DUAL FIRED BOILER NO. 2 FUEL OIL	Standby	E602		PT1	1-03-005-02	0.0	48.0		0.0	12,900.0	70.0	550.0
OS3	BOILER #2	25.2 MMBTU/HR DUAL FIRED BOILER NAT GAS	Normal - Steady State	E604		PT1	1-03-006-02	0.0	8,760.0		0.0	12,900.0	70.0	550.0
OS4	BOILER #2	25.2 MMBTU/HR DUAL FIRED BOILER NO. 2 FUEL OIL	Standby	E604		PT1	1-03-005-02	0.0	48.0		0.0	12,900.0	70.0	550.0
OS5	BOILER #3	25.2 MMBTU/HR DUAL FIRED BOILER NAT GAS	Normal - Steady State	E606		PT1	1-03-006-02	0.0	8,760.0		0.0	12,900.0	70.0	550.0
OS6	BOILER #3	25.2 MMBTU/HR DUAL FIRED BOILER NO. 2 FUEL OIL	Standby	E606		PT1	1-03-005-02	0.0	48.0		0.0	12,900.0	70.0	550.0
OS7	CAT CHP	CAT CHP 1990KW GAS	Normal - Steady State	E1000	CD1 (P) CD2 (P)	PT1	2-01-002-02	24.0	8,760.0		6,824.0	12,139.0	758.0	899.0



## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS1 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="Natural gas"/>
Description (if other):	<input type="text" value="Natural gas"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0100"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="1,020.00"/>
Units:	<input type="text" value="BTU/scf"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="150.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="65.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS2 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="#2 fuel oil"/>
Description (if other):	<input type="text"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0002"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="138,000.00"/>
Units:	<input type="text" value="BTU/gal"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="8,640.00"/>
Units:	<input type="text" value="gal/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="2,000.00"/>
Units:	<input type="text" value="gal/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS3 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="Natural gas"/>
Description (if other):	<input type="text"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0100"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="1,020.00"/>
Units:	<input type="text" value="BTU/scf"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="150.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="65.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS4 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="#2 fuel oil"/>
Description (if other):	<input type="text"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0002"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="138,000.00"/>
Units:	<input type="text" value="BTU/gal"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="8,640.00"/>
Units:	<input type="text" value="gal/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="2,000.00"/>
Units:	<input type="text" value="gal/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS5 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="Natural gas"/>
Description (if other):	<input type="text"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0100"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="1,020.00"/>
Units:	<input type="text" value="BTU/scf"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="150.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="65.00"/>
Units:	<input type="text" value="MMft^3/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

## 05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS6 (Primary Fuel)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="text" value="No"/>
Fuel Category:	<input type="text" value="Commercial"/>
Fuel Type:	<input type="text" value="#2 fuel oil"/>
Description (if other):	<input type="text"/>
Amount of Sulfur in Fuel (%):	<input type="text" value="0.0002"/>
Amount of Ash in Fuel (%):	<input type="text" value="0.01"/>
Fuel Heating Value:	<input type="text" value="138,000.00"/>
Units:	<input type="text" value="BTU/gal"/>
Estimated Maximum Amount of Fuel Burned Annually:	<input type="text" value="8,640.00"/>
Units:	<input type="text" value="gal/yr"/>
Estimated Actual Amount of Fuel Burned Annually:	<input type="text" value="2,000.00"/>
Units:	<input type="text" value="gal/yr"/>
Amount of Oxygen in Flue Gas (%):	<input type="text"/>
Amount of Moisture in Flue Gas (%):	<input type="text"/>
Comments:	

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS7 (Fuel Information Table)

Print Date: 2/25/2021

Is this fuel a blend?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Fuel Category:	Commercial ▼
Fuel Type:	Natural gas ▼
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,020.00
Units:	BTU/scf ▼
Estimated Maximum Amount of Fuel Burned Annually:	152.00
Units:	MMft <sup>3</sup> /yr ▼
Estimated Actual Amount of Fuel Burned Annually:	
Units:	▼
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS7 (Efficiency Table - CD1)  
 Print Date: 2/25/2021

Pollutant Category		Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO	▼	100	70	70
HAP (Total)	▼			
NOx	▼	100	93	93
Other (Total)	▼			
PM-10	▼			
PM-2.5	▼			
Pb	▼			
SO2	▼			
TSP	▼			
VOC (Total)	▼	100	65	65



**05393 NEWARK BETH ISRAEL MEDICAL CENTER PCP200002 U1 OS7 (Oxidizer (Catalytic) - CD2)**  
**Print Date: 2/25/2021**

Maximum Feed Rate to the Oxidizer (tons/hr):	0.01
Oxygen Content in Exhuast (%O2):	10
CO Concentration in Exhaust (ppmvd):	140
Total VOC Concentration in Exhaust (ppmvd):	15

**05393 NEWARK BETH ISRAEL MEDICAL CENTER**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Potential to Emit**

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS0 Summary

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Arsenic compounds			0.00004500	0.00004500	tons/yr	No
CO		12.38000000	21.89000000	21.89000000	tons/yr	No
Cadmium compounds			0.00024800	0.00024800	tons/yr	No
Cobalt compounds			0.00001900	0.00001900	tons/yr	No
Formaldehyde			0.98000000	0.98000000	tons/yr	No
HAPs (Total)					tons/yr	No
NOx (Total)		15.00000000	12.48000000	12.48000000	tons/yr	No
PM-10 (Total)		2.92000000	1.42000000	1.42000000	tons/yr	No
SO2		12.80000000	0.28000000	0.28000000	tons/yr	No
TSP		2.92000000	1.42000000	1.42000000	tons/yr	No
VOC (Total)		1.99000000	5.38000000	5.38000000	tons/yr	No

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS1 BOILER #1

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.93000000	0.93000000	0.93000000	lb/hr	No
Formaldehyde			0.00185000	0.00185000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		0.91000000	0.91000000	0.91000000	lb/hr	No
PM-10 (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		D	0.02000000	0.02000000	lb/hr	No

**05393 NEWARK BETH ISRAEL MEDICAL CENTER**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Potential to Emit**

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS1 BOILER #1

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
TSP		0.15000000	0.15000000	0.15000000	lb/hr	No
VOC (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS2 BOILER #1

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.98000000	0.98000000	0.98000000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		3.07000000	3.02000000	3.02000000	lb/hr	No
PM-10 (Total)		0.53000000	0.53000000	0.53000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		5.19000000	0.04000000	0.04000000	lb/hr	No
TSP		0.53000000	0.53000000	0.53000000	lb/hr	No
VOC (Total)		0.13000000	0.13000000	0.13000000	lb/hr	No

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS3 BOILER #2

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.93000000	0.93000000	0.93000000	lb/hr	No

**05393 NEWARK BETH ISRAEL MEDICAL CENTER**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Potential to Emit**

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS3 BOILER #2

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Formaldehyde			0.00185000	0.00185000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		0.91000000	0.91000000	0.91000000	lb/hr	No
PM-10 (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		D	0.02000000	0.02000000	lb/hr	No
TSP		0.15000000	0.15000000	0.15000000	lb/hr	No
VOC (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS4 BOILER #2

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.98000000	0.98000000	0.98000000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		3.07000000	3.02000000	3.02000000	lb/hr	No
PM-10 (Total)		0.53000000	0.53000000	0.53000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		5.19000000	0.04000000	0.04000000	lb/hr	No
TSP		0.53000000	0.53000000	0.53000000	lb/hr	No
VOC (Total)		0.13000000	0.13000000	0.13000000	lb/hr	No

**05393 NEWARK BETH ISRAEL MEDICAL CENTER**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Potential to Emit**

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS5 BOILER #3

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.93000000	0.93000000	0.93000000	lb/hr	No
Formaldehyde			0.00185000	0.00185000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		0.91000000	0.91000000	0.91000000	lb/hr	No
PM-10 (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		D	0.02000000	0.02000000	lb/hr	No
TSP		0.15000000	0.15000000	0.15000000	lb/hr	No
VOC (Total)		0.15000000	0.15000000	0.15000000	lb/hr	No

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS6 BOILER #3

**Step:**

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.98000000	0.98000000	0.98000000	lb/hr	No
HAPs (Total)				0.00000000	lb/hr	No
NOx (Total)		3.07000000	3.02000000	3.02000000	lb/hr	No
PM-10 (Total)		0.53000000	0.53000000	0.53000000	lb/hr	No
Pb				0.00000000	lb/hr	No
SO2		5.19000000	0.04000000	0.04000000	lb/hr	No
TSP		0.53000000	0.53000000	0.53000000	lb/hr	No
VOC (Total)		0.13000000	0.13000000	0.13000000	lb/hr	No

**05393 NEWARK BETH ISRAEL MEDICAL CENTER**  
**PCP200002**

Date: 2/25/2021

**New Jersey Department of Environmental Protection**  
**Potential to Emit**

**Subject Item:** U1 BOILERS CHP

**Operating Scenario:** OS7 CAT CHP

**Step:**

<b>Air Contaminant Category (HAPS)</b>	<b>Fugitive Emissions</b>	<b>Emissions Before Controls</b>	<b>Emissions After Controls</b>	<b>Total Emissions</b>	<b>Units</b>	<b>Alt. Em. Limit</b>
CO			3.04300000	3.04300000	lb/hr	No
Formaldehyde			0.21900000	0.21900000	lb/hr	No
NOx (Total)			0.91300000	0.91300000	lb/hr	No
PM-10 (Total)			0.00100000	0.00100000	lb/hr	No
SO2			0.01000000	0.01000000	lb/hr	No
TSP			0.00100000	0.00100000	lb/hr	No
VOC (Total)			0.91300000	0.91300000	lb/hr	No