

Pfeiffer, Jane K - DNR

From: Angy Singh <angy.singh@ksinghengineering.com>
Sent: Saturday, April 20, 2024 2:11 PM
To: Pfeiffer, Jane K - DNR
Cc: Mylotta, Pamela A - DNR; Shane LaFave; Que El-Amin; Robert Reineke; rfedorchak@patrioteng.com; Kathryn Balachandran
Subject: RE: Community Within the Corridor - East Block (02-41-263675) - Information Requested
Attachments: CWC EB - GC Unit Calibration - March 2024.pdf; CWC East Block - YTD Indoor Air TCE Data.xlsx; CWC EB Rev. Vacuum Measurements.pdf; 101-150644-02P-GBR123 240V.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

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Jane,

Please see below for responses to your questions regarding our Second Round of Commissioning (the Report):

- Provide up-to-date raw excel sheets with the indoor air data collected to-date. Attached is an example of the raw excel datasheets that CWC provided to the DNR in December 2023. The DNR requests that the data be provided in a similar format as the attached example. In addition to the data presented by month, please include a sheet that presents all data (April 2023 – April 2024). The DNR will use this information to aid in our review of the indoor air contamination trends to-date.
 - Attached please find the updated raw data spreadsheet which includes data through the end of the 2nd round of commissioning (March 21, 2024). Given the large amount of data (more than 3,000 data points), we have separated the data by month. We are in the process of combining all months into one sheet, but this will require more time and extensive QC. In the meantime, we request that you evaluate the Report using the attached spreadsheet.
 - We have included a sheet in this workbook that shows the average reading per month of 13 select units/rooms at CWC EB from April 2023 to March 2024. Please note that the number of samples in each room over the course of the past year varies, and the average does not account for the readings listed as <0.6 ug/m3.
- Indicate whether blower/fan vacuum measurements were collected during the March 2024 commissioning event. If so, provide this data.
 - Blower/Fan vacuum measurements were not proposed or taken. The 2nd Round of Commissioning Plan included measuring vacuum from the 55 vapor pins on the 1st level. Part E of the Commissioning Plan titled “Blower Efficiency,” indicates that commissioning would include measuring velocity of the exhaust as well as TCE concentrations from the exhaust. Table 5 of the Report details the velocity, flow rate, TCE reading, and TCE removal.

As indicated by the GBR 123 Spec (attached), vacuum can be measured by the flow rate and be calculated using the performance curve.

- Provide the calibration information/graphs for the GC unit.
 - Attached please find calibration data for the GC unit for the month of March 2024. Hartman Environmental Science assisted KSingh to ensure that calibration of the GC unit was conducted properly, and that standards were being run regularly.
- Provide a figure displaying both the PFE information and the VMS layout.
 - Attached please find the requested figure. The figure has been revised to reflect the vacuum measurements on the as-built VMS layout.

Please let us know if you have any questions or need any additional information in order to provide a review of our Report and the 3rd Round of Commissioning Plan.

Thank you,

Angy K. Singh, Ph.D.

Director of Business Development | angy.singh@ksinghengineering.com

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From: Pfeiffer, Jane K - DNR <jane.pfeiffer@wisconsin.gov>

Sent: Tuesday, April 16, 2024 3:15 PM

To: Pratap Singh <psingh@ksinghengineering.com>

Cc: Angy Singh <angy.singh@ksinghengineering.com>; Robert Reineke <rreineke@ksinghengineering.com>; Kathryn Balachandran <kbalachandran@ksinghengineering.com>; Shane LaFave <Shane@roerscompanies.com>; Que El-Amin <que@scott-crawford.com>; Mylotta, Pamela A - DNR <Pamela.Mylotta@wisconsin.gov>

Subject: Community Within the Corridor - East Block (02-41-263675) - Information Requested

Greetings,

On April 9, 2024, the DNR received *Second Round of Commissioning* (the Report) for the subject site. To assist with the DNR's review of this report, please provide the following information/documentation:

- Provide up-to-date raw excel sheets with the indoor air data collected to-date. Attached is an example of the raw excel datasheets that CWC provided to the DNR in December 2023. The DNR requests that the data be provided in a similar format as the attached example. In addition to the data presented by month, please include a sheet that presents all data (April 2023 – April 2024). The DNR will use this information to aid in our review of the indoor air contamination trends to-date.
- Indicate whether blower/fan vacuum measurements were collected during the March 2024 commissioning event. If so, provide this data.
- Provide the calibration information/graphs for the GC unit.
- Provide a figure displaying both the PFE information and the VMS layout.

The requested information should be presented all together and can be submitted to the DNR via email. The DNR will continue our technical review of the Report once this information is submitted.

Thank you, Jane

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jane Pfeiffer

(she/her/hers)

Hydrogeologist & Project Manager - Remediation & Redevelopment Program

Wisconsin Department of Natural Resources

Phone: (414) 435-8021

jane.pfeiffer@wisconsin.gov



dnr.wi.gov



Community Within the Corridor - East Block
GC Unit Calibration/Standard Data
March 2024

Filename	Date	Time	COC	R-Time	Area Counts	ppbv	ug/m3	unit	COC	R-Time	Area Counts	ppbv	ug/m3	unit
KSingh 051623-3166.chr	3/1/2024	12:09:20	TCE	3.456	768.3048	0.9518	5.2348	ug/m3	PCE	6.573	4716.3632	1.2473	8.6314	ug/m3
KSingh 051623-3167.chr	3/1/2024	12:26:27	TCE	3.466	1039.1001	1.3948	7.6712	ug/m3	PCE	6.586	211.2806	0.023	0.1594	ug/m3
KSingh 051623-3203.chr	3/4/2024	8:44:30	TCE	3.516	1446.0912	2.0563	11.3099	ug/m3	PCE	6.733	7172.7454	2.1041	14.5604	ug/m3
KSingh 051623-3285.chr	3/6/2024	10:17:56	TCE	3.573	1433.617	2.0283	11.1558	ug/m3	PCE	6.85	10869.876	4.2574	29.4609	ug/m3
KSingh 051623-3358.chr	3/8/2024	8:43:42	TCE	3.523	1584.72	2.3676	13.022	ug/m3	PCE	6.73	8093.1802	2.6402	18.27	ug/m3
KSingh 051623-3400.chr	3/11/2024	9:15:12	TCE	3.54	1354.4104	1.8945	10.4196	ug/m3	PCE	6.77	7830.4612	2.4872	17.2112	ug/m3
KSingh 051623-3449.chr	3/12/2024	7:47:35	TCE	3.513	1285.8878	1.7859	9.8223	ug/m3	PCE	6.7	6282.4237	1.7648	12.2127	ug/m3
KSingh 051623-3503.chr	3/13/2024	8:00:27	TCE	3.54	1313.6678	1.8299	10.0645	ug/m3	PCE	6.773	6164.626	1.7259	11.9433	ug/m3
KSingh 051623-3547.chr	3/14/2024	7:45:18	TCE	3.523	1461.9047	2.0919	11.5052	ug/m3	PCE	6.726	6880.3812	1.9625	13.5802	ug/m3
KSingh ECD2 P2-3390.chr	3/21/2024	14:02:06	TCE	3.516	1141.988	2.0904	11.4973	ug/m3	PCE	6.7	5050.3482	1.4665	10.1485	ug/m3

SCALE	VARIES
PROJECT NUMBER	200102
SET TYPE	CONSTRUCTION DOCUMENTS
DATE ISSUED	09/25/20
SHEET NUMBER	A210E

LEGEND

RED LINES ARE FOR EXISTING UNDERGROUND MITIGATION PIPING

ORANGE LINES ARE ADDITIONALLY ADDED UNDERGROUND MITIGATION PIPES

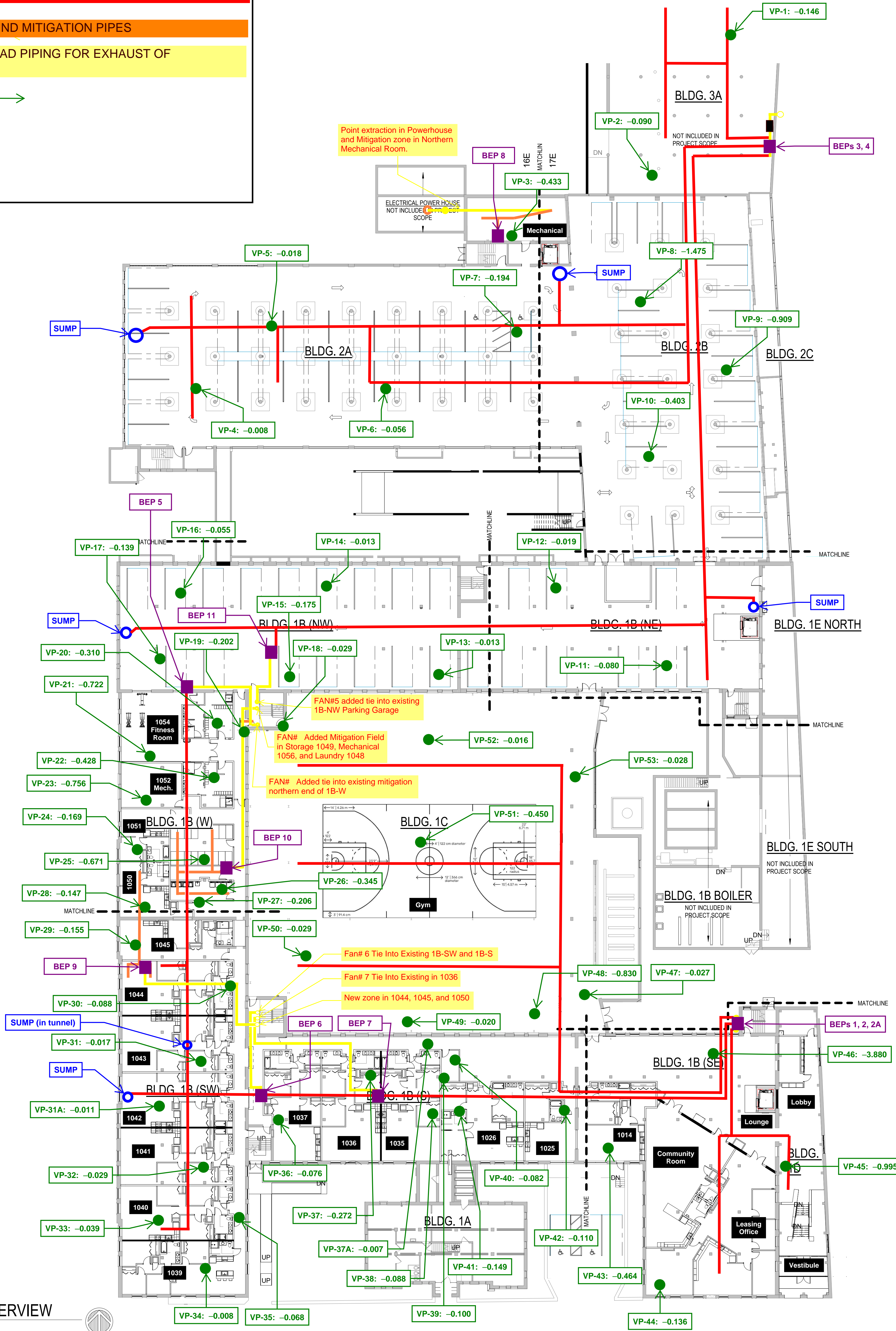
YELLOW LINES ARE FOR ADDITIONALLY ADDED OVERHEAD PIPING FOR EXHAUST OF MITIGATION PIPED TO FANS ON ROOF

Vapor Pin ID: PFE measurement [inches of water] →

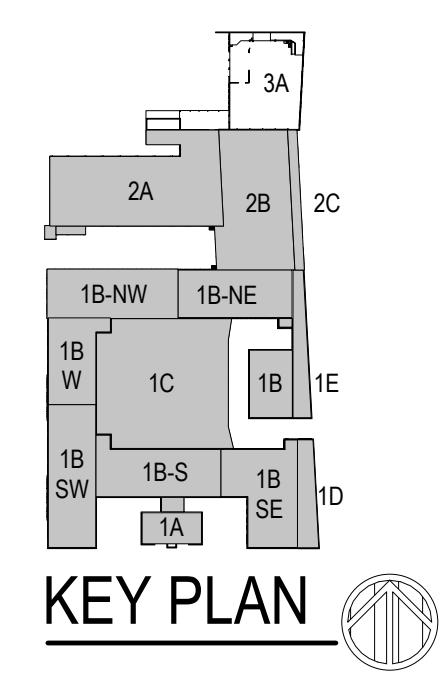
SUMP →

Blower Extraction Point (BEP) ID →

Room/Unit ID



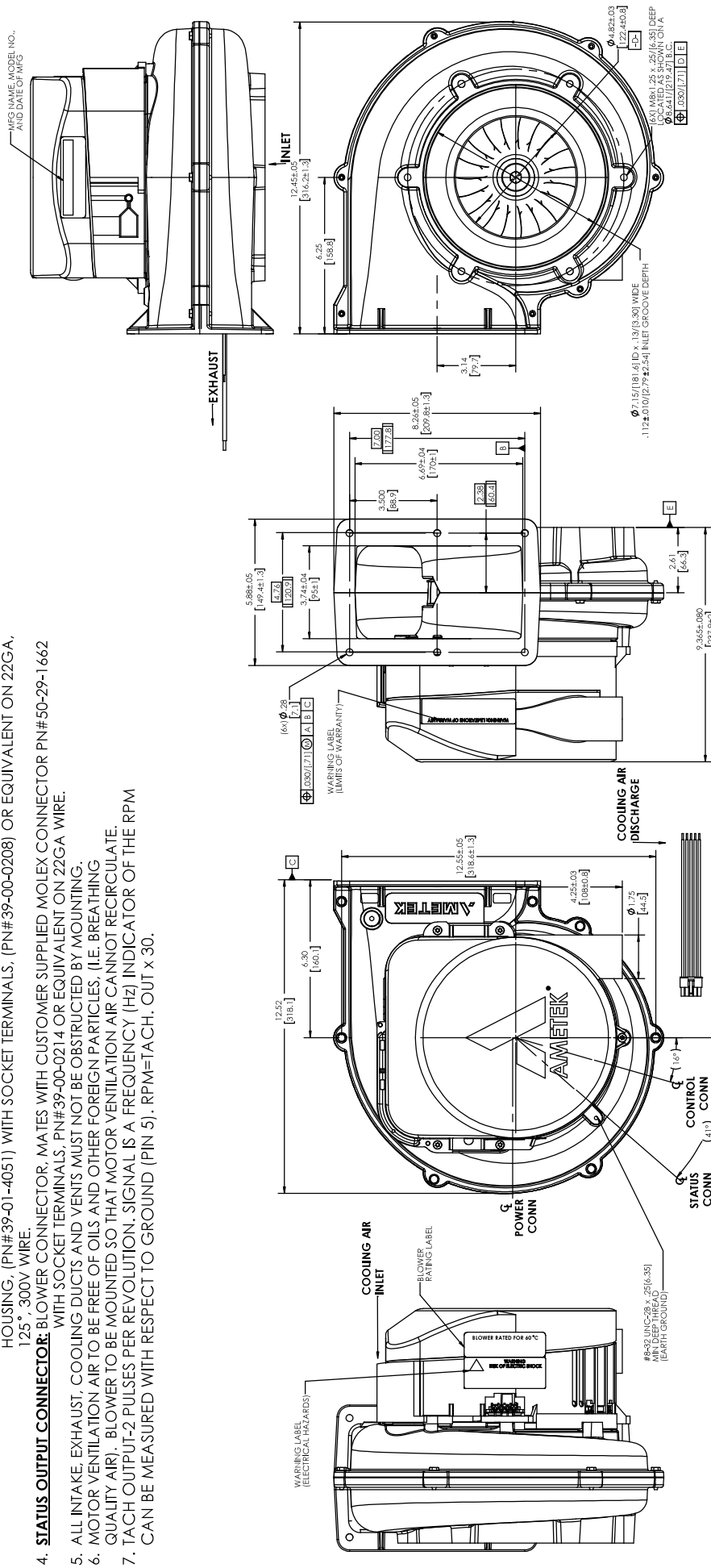
NEW WORK PLAN - LEVEL 01 OVERVIEW
Scale: 3/64" = 1'-0"
0' 2.65' 5.3' 8'



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NOTES:

1. **ROHS AND REACH COMPLIANCE:** REFERENCE AMETEK ENVIRONMENTAL SPECIFICATION ES0010 FOR DETAILS.
2. **POWER CONNECTION:** BLOWER CONNECTOR, MATES WITH CUSTOMER SUPPLIED MOLEX CONNECTOR PN# 172672-2004 WITH SOCKET TERMINALS, PN# 171825 OR EQUIVALENT ON 12GA WIRE.
3. **CONTROL CONNECTION:** BLOWER CONNECTOR, MATES WITH CUSTOMER SUPPLIED MOLEX SERIES 5557 CONNECTOR HOUSING, (PN#39-01-4051) WITH SOCKET TERMINALS, (PN#39-00-0208) OR EQUIVALENT ON 22GA, 125°, 300V WIRE.
4. **STATUS OUTPUT CONNECTOR:** BLOWER CONNECTOR, MATES WITH CUSTOMER SUPPLIED MOLEX CONNECTOR PN#50-29-1662 WITH SOCKET TERMINALS, PN#39-00-0214 OR EQUIVALENT ON 22GA WIRE.
5. ALL INTAKE EXHAUST, COOLING DUCTS AND VENTS MUST NOT BE OBSTRUCTED BY MOUNTING.
6. MOTOR VENTILATION AIR TO BE FREE OF OILS AND OTHER FOREIGN PARTICLES, (I.E. BREA THING QUALITY AIR). BLOWER TO BE MOUNTED SO THAT MOTOR VENTILATION AIR CANNOT RECIRCULATE.
7. TACH OUTPUT-2 PULSES PER REVOLUTION. SIGNAL IS A FREQUENCY (HZ) INDICATOR OF THE RPM CAN BE MEASURED WITH RESPECT TO GROUND (PIN 5). RPM=TACH. OUT X 30.



THIS PRODUCT HAS BEEN TESTED AND VALIDATED TO BE ACCEPTABLE IN OUR APPLICATION.

APPROVED BY: _____
 PRINT NAME: _____
 TITLE: _____
 DATE: _____
 COMPANY: _____

POWER CONNECTION			
PIN #	CONTROL	DESCRIPTION	COLOR
1	INPUT	GROUND	GREEN
2	INPUT	2 (C) INPUT	WHITE
3	INPUT	4 (C) INPUT	BLACK

CONTROL CONNECTION			
PIN #	CONTROL	DESCRIPTION	COLOR
1	INPUT	15V-40V (OPTIONAL)	RED
2	OUTPUT	TACH-OUTPUT	WHITE
3	OUTPUT	TRANSISTOR	GREEN
4	INPUT	COMMON	BLACK

STATUS OUTPUT CONNECTION			
PIN #	CONTROL	DESCRIPTION	COLOR
1	OUTPUT	15V-40V (OPTIONAL)	RED
2	OUTPUT	TRANSISTOR	BLUE
3	OUTPUT	COMMON	BLACK

NAUTILAIR

Model: 150644-02P

MECHANICAL

DIAMETER: 12.3" (312mm)
DISCHARGE TYPE: Tangential
DISCHARGE: Large Rectangular Flange
APPROXIMATE WEIGHT: 28lbs/12.7kg

PERFORMANCE

FLOW CLASSIFICATION: High Energy
STAGES: 1 Stage

TEMPERATURE

OPERATING TEMP: 0°C to 60°C
STORAGE TEMP: -40°C to 85°C

ELECTRICAL

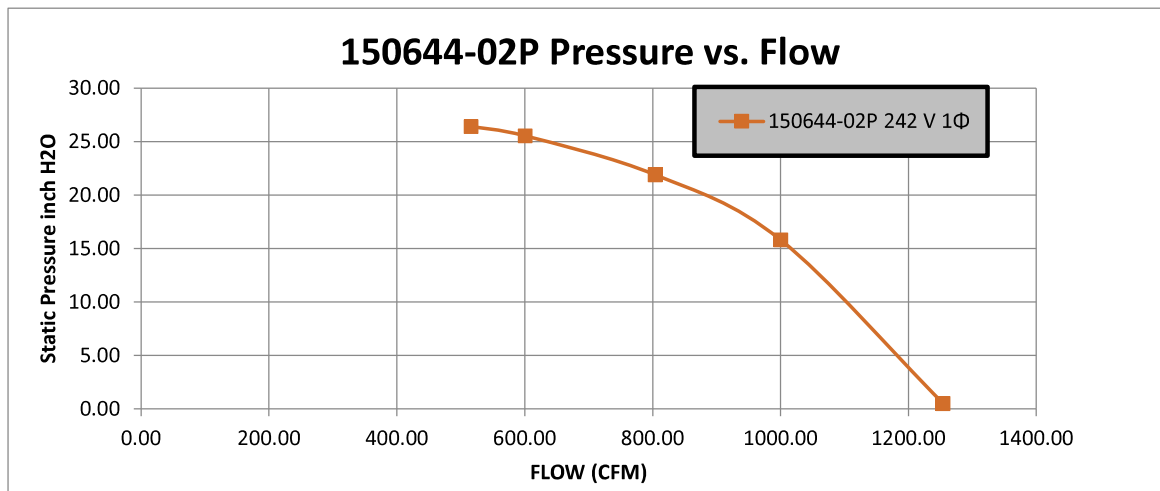
OPERATING INPUT VOLTAGE: RANGE: 180-264 VAC
OPERATING INPUT VOLTAGE: 240V 1Ø

OPTIONAL FEATURES

SPEED CONTROL: Remote Pot., Open Loop, 4-Pin Power, 5-Pin Control, 3-Pin Status

REGULATORY CERTIFICATIONS

COMPLIANCE: RoHS and Reach
UL FILE NUMBER: E94403
AGENCY FULL LOAD AMPS: 30A
REFERENCE: E-54147



Flow Rate <i>cfm</i>	Static Pressure <i>inch H2O</i>	Total Pressure <i>inch H2O</i>	Current <i>A</i>	Power Demand <i>W</i>	Voltage <i>V</i>	Flow Temp. <i>°C</i>	Rotational Speed <i>rpm</i>	Static Efficiency <i>%</i>	Total Efficiency <i>%</i>
1254.13	0.50	1.31	22.94	3668.54	241.71	26.45	7620	2.05	5.32
999.97	15.82	16.33	24.99	4002.16	241.73	27.99	8700	47.31	48.83
804.13	21.90	22.23	22.93	3651.93	241.61	28.78	9150	57.80	58.67
600.63	25.54	25.73	20.40	3214.99	242.38	29.50	9510	57.31	57.72
515.85	26.41	26.54	19.19	2994.57	243.03	29.99	9690	54.69	54.97

WARNING PERFORMANCE DATA IS FOR REFERENCE ONLY

DESIGN APPLICATION: Designed to provide variable airflow for low NOx and CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two-piece blower housing assembly sealed, and factory leak checked. Customer is responsible to check for any leakage once the blower is installed into the final application.

MISCELLANEOUS: Motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles. Blower is to be mounted so ventilation air cannot be re-circulated.