Virtual Open House will begin at 6:00 p.m. and end at 7:30 p.m.

October 6, 2021

Please hold while we prepare the meeting

Becton Dickinson and Company (BD)
New Medical Product Ethylene Oxide (EO) Sterilization Facility
Becton, Dickinson and Company (BD)
New Medical Product Ethylene Oxide (EO)
Sterilization Facility

Rupesh Patel
Air Program Manager
Overview

- Facility Location & Layout
- Understanding Commercial EO Sterilization
- EO Sterilization Process
- Regulations for EO Sterilization
- Air Permitting & Compliance
- Environmental Justice Analysis
Location of Proposed BD Sterilization Facility

7345 E. Valencia Road, Tucson AZ 85747

½ mile South of the Airplane Boneyard Historical Landmark

North of Amazon Fulfillment Center at intersection of Kolb Rd and Valencia Rd
Location of Proposed BD Sterilization Facility
Becton Dickinson Facility

6

Add Picture of 3D projected view of facility supplied by Mr. Anderton
What is Ethylene Oxide Sterilization?

- Approximately 50% of medical devices are sterilized with EO.
- EO is the method of choice for sterilization of a variety of medical devices and in many cases EO is the only viable method of sterilization due to material incompatibility and product functionality.
- Ethylene Oxide (EO) is a regulated hazardous air pollutant listed in 112(b) of the Clean Air Act.

- The source category standard for this facility is found in 40 CFR Part 63 (NESHAP), Subpart O – EO Emissions Standards for Sterilization Facilities.
Design of Proposed BD Sterilization Facility

(3) Drybed Systems
- WIP Warehouse
- Chamber Rooms
- Gas Dispense & Vaporizer Rooms

(6) Sterilization Lines

(2) Catalytic Oxidation Systems

Boilers, Compressors, N2

EO Storage, Gas Dispense, Vaporizers

Laboratory

Lobby, Offices
Application received April 8, 2021

Proposed permit limits emissions to not exceed 709 lb of EO per year.

The EO impact assessment demonstrates EO ambient air concentrations will remain below levels required to adequately protect the public health of residents in the impact area.
The site will surpass what the NESHAP requires by a significant margin.

Emissions from process and fugitive EO emission controls will be tested to verify their performance and compliance with permit conditions.

Compliance inspections will be conducted by PDEQ inspectors to ensure permit conditions are met.
Environmental Justice (EJ) Analysis

Goals:

- Ensure that there are no disproportionately high adverse human health or environmental effects of facility on minority or low-income populations.
- Provide nearby communities access to public information and participation in the process.
- Ensure low-income and minority communities are included in the outreach.
Demographics of Impact Area

Average Demographics for Proposed Project Location & Surrounding Area

<table>
<thead>
<tr>
<th>City/Area</th>
<th>Population 2010 Census</th>
<th>Percent People of Color</th>
<th>Low Income Population</th>
<th>Percent Linguistically Isolated</th>
<th>Percent w/o High School Diploma</th>
<th>Percent under Age 5</th>
<th>Percent Over 64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Area</td>
<td>41,760</td>
<td>49%</td>
<td>30%</td>
<td>3%</td>
<td>10%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>City of Tucson</td>
<td>548,073</td>
<td>61%</td>
<td>51%</td>
<td>6%</td>
<td>17%</td>
<td>6%</td>
<td>14%</td>
</tr>
<tr>
<td>Pima County</td>
<td>1,047,279</td>
<td>53%</td>
<td>40%</td>
<td>4%</td>
<td>12%</td>
<td>5%</td>
<td>20%</td>
</tr>
<tr>
<td>Arizona</td>
<td>6,641,928</td>
<td>45%</td>
<td>36%</td>
<td>4%</td>
<td>13%</td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>United States</td>
<td>328,239,523</td>
<td>39%</td>
<td>33%</td>
<td>4%</td>
<td>13%</td>
<td>6%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Demographic information was obtained through the EPA’s EJSCREEN mapping tool: Environmental Justice Screening and Mapping Tool. [https://ejscreen.epa.gov/mapper/](https://ejscreen.epa.gov/mapper/) or the U.S. Census Bureau
Public Outreach

- Host 1 virtual open house, 1 in-person open house (near proposed facility) and 1 virtual public hearing
- Spanish versions provided for public notice and meeting mailer and translation available at meetings
- Media release on public comment period and meetings sent to 16,515 people
- Meeting notice (in English and Spanish) mailed to 18,679 addresses in impact area
- Expanded impact area to 3-miles (1 mile is EPA recommendation)
- Extended typical 30-day public comment period to 90 days
Step 1: Proposed Permit

**Step 2:** Open House (Q&A)

Step 3: Virtual Public Hearing (formal public comment)

November 3, 2021, 5:30 - 6:30 p.m.

Step 4: Response to Comments

Step 5: Finalize and Issue Permit
Contact

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(520) 724-7341

Natalie Shepp, Environmental Justice Manager
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(520) 724-6885
October 6, 2021
BD Air Quality Permit Virtual Open House

We are here to answer questions.

Please use the Raise Hand Button if you have a question.

To review permit documents and/or submit a comment:
Building Critical Healthcare Infrastructure

Tucson, AZ - Becton, Dickinson and Company (BD)

PDEQ Open House – October 6, 2021
Agenda & BD Speakers

Agenda
• Introduction to BD, our existing work in AZ and our interest in the City of Tucson
• New facility and our commitment to quality and safety
• Timing Expectations

BD SPEAKERS
• Paddy O'Brien, Worldwide President, Peripheral Intervention, BD
• Travis Anderton, Vice President, Sterilization – Global Supply Chain, BD
About BD

Founded in 1897, BD is a medical technology company providing innovative solutions that advance medical research, improve the diagnosis and treatment of disease, and improve patient outcomes.

Headquarters: Franklin Lakes, NJ

Global position: One of the top 5 medical technology companies in the world

Global reach: Serving 190+ countries

Manufacturing: 71 locations

Associates: 70,000+

Annual R&D Investment: $1B
Specimen collection & transport – used for the collection and transport of clinical specimens, including viruses.

Swabs – Used to collect clinical specimens from various body sites.

UVT Medium Vials – used for the transport of clinical specimens, including viruses.

UVT Kit – A prepacked, individually wrapped kit that includes swab(s) and a vial for the collection and transport of clinical specimens, including viruses.

BD MAX™ – an open platform system that enables exploratory development of rapid tests for COVID-19. Two FDA EUA assays are currently available for the rapid detection of SARS-CoV-2 infection. Combination assay for Flu A/B and COVID-19 in development.


Injection devices – specific needles and syringes used to administer medications required for COVID-19 treatment, as well as vaccination clinical trials and future campaigns.

Sharps collection and disposal – safe, effective medical sharps disposal products used to collect injection devices for vaccination campaigns.

Real-time surveillance, reporting and understanding of geographic impact for COVID-19 along with medication use tracking.
BD’s Arizona Footprint

- Nearby business headquarters in Tempe and are proud of our existing footprint in Arizona.
- 725+ associates in Arizona.
- Hired 150 new associates since January 2019 (40%+ have an AZ university degree).
- Tempe Chamber Large Business Excellence Award (2021).
BD in Tucson: Local Impact

$122M ECONOMIC IMPACT

40 HIGH-WAGE JOBS

Planned Partnerships with Community, Regional, and State Colleges in Tucson Area

We're thrilled to welcome BD to Tucson. Tucson's strategic location, coupled with our tech companies, university, workforce and proximity to Mexico, were key strengths that led to this successful outcome for our region.

—Tucson Mayor Regina Romero

Becton, Dickinson and Co. – Welcome to Ward 4! My team and I had the opportunity to meet with BD before they chose Tucson and are thrilled they are investing in our beautiful community.

—Tweet from Tucson Vice Mayor Nikki Lee
Experience With Sterilization

The majority of BD product is sterilized in-house to control safety, quality, and to ensure continuity of supply.

BD operates 24 sterilization sites globally, 12 of which are EO facilities.
Operating at the Highest Standards

BD’s Environmental Health and Safety (EHS) standards ensure facilities are designed and operate with the **highest level of process safety** and environmental controls.

The facility **will meet or exceed** all applicable federal, state, and local EHS requirements and we collaborate closely with state and federal agencies.
State-of-the-Art Technology At this Facility

• Our Tucson facility has been **purpose-built** to be one of the most efficient facilities in the world at capturing and controlling EO emissions.

• This facility will include advanced **process emissions control technology** (**catalytic oxidation**) and new **fugitive emissions control technology** (**dry bed absorption**).

• **State-of-the-art process control systems** will monitor and control process conditions to ensure continued safety for personnel and the community.
Highlights of Equipment And Facility Design

- Fail safe instrumentation and controls
- Automatic material handling systems
- Integrated emissions control systems
- Gas detection and alarm systems
- Non-combustible construction
- Full fire protection coverage
- Perimeter security, access control, CCTV
- Segmented IT network (Cyber)
Tucson Facility Project Manager: Miguel Serafin Rodriguez

- 14 years at BD working in various positions like Sterilization Process Engineer, Sterilization Specialist, and most recently Sr. Project Manager.

- Committed to engaging with community and listening to all Tucson voices.

- Tucson facility represents an opportunity to improve healthcare in Arizona and across the country.