

Sustainability Program - A Start

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Corporate Vision, Mission, Values



Vision

Committed to be a **leading manufacturer** of pharmaceutical ingredients that support **safe** drugs and vaccines that deliver **consistent, reliable therapeutic effect** with every dose



Mission

To manufacture the highest quality, safest and sustainable Pharmaceutical ingredients under the supervision of the most rigorous quality system while upholding the most stringent compliance standards





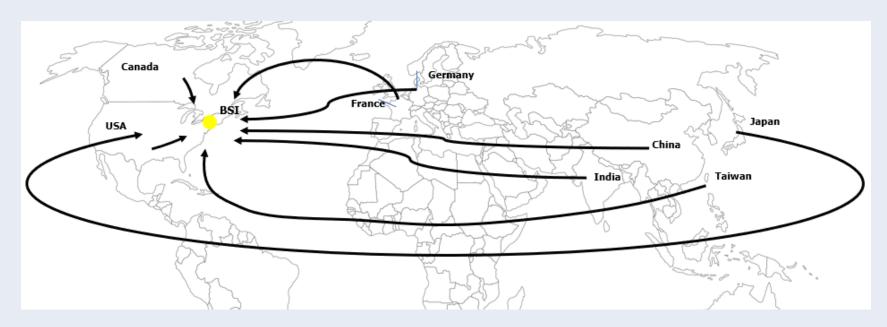
Values

Honesty / Integrity / Respect / Safety / Sustainability
BioSpectra rigorously upholds uncompromised standards because...
"people matter"

Sustainability and Supply Chain Security

Sustainability

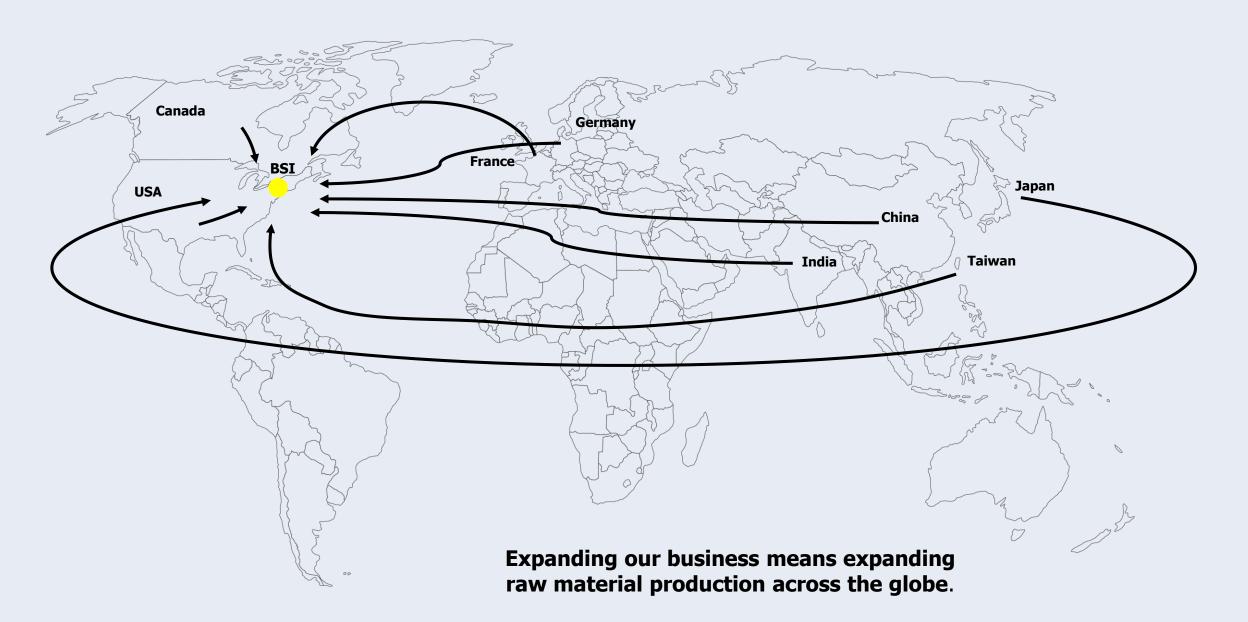
BioSpectra is committed to the ideals of Sustainability and had launched a three-year thirty million dollar capital investment program to help achieve these goals. We are currently working on an external program that will be made available on our website and we have registered with ECOVADIS and are currently working through the review process which will be made available to Key Accounts.



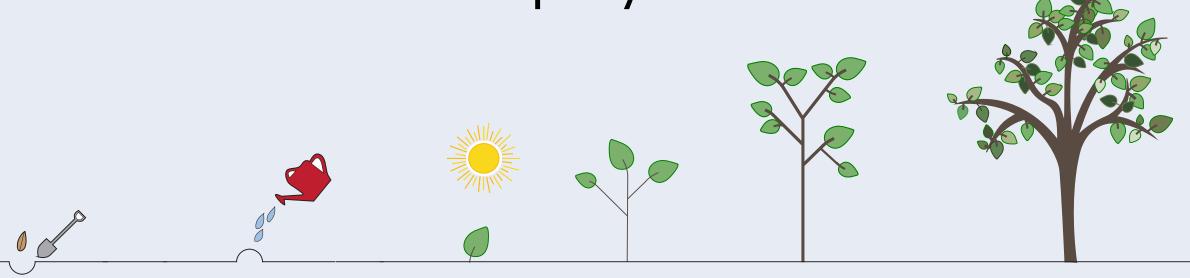
Supply Chain Security

BioSpectra is fundamentally committed to the ideals of Supply Chain Security. We prosecute an aggressive raw material supplier qualification program. Our Quality Program is posted and available on our website. We take very seriously the global supply-chain situation assessing and reacting to threats with real solutions. BioSpectra is in its second year of actively expanding our raw material supply base to other regions of the world for any raw material or intermediate that is currently sole sourced in China.

Countries that Produce Raw Materials for BSI



Our Company Growth



1993- The BioSpectra Organization was created on December, 26, 1993 and operated at the original site in Sciota, PA.

1995- BioSpectra Inc. (BSI) was incorporated in Pennsylvania, USA on September, 15, 1995

2001- BSI committed to opening the Stroudsburg, Rockdale Lane facility, the first U.S production site fully dedicated to repurified GMP Buffers.

2006- BSI created BioBuffer Solutions Brand to support the need for upstream materials to our critical customers.

2011- BSI acquired the much larger facility in Bangor, PA. Here to expand manufacturing and expand our portfolio of GMP Pharmaceutical Process Fine Chemicals, Excipients and API's

2019-2020- BSI acquired several other local properties to house external services such has Fleet for cars and trucks, buildings and ground equipment and non-controlled storage

2021- BSI opened the Corporate Services Center in Wind Gap, PA in April of 2021

2023- In January of 2023 BSI opened the 60,000 sq. Ft. GMP storage facility at 3rd Street Stroudsburg, PA.

What's next?- BSI is busy working to expand our manufacturing footprint overseas as well. In 2024/2025 BSI plans to open another 80,000 sq. Ft. facility adjacent to our GMP Storage Facility to house our expanding analytical services and automated packaging operations and so much more!



Bangor PA, Majestic Way Plant:

Bulk Manufacturing Facility & Head Corporate Offices: Administration, Regulatory Affairs, Quality Assurance & Control

Address: 100 Majestic Way, Bangor, PA 18013 Staff: 125+ Employees | Site: 150,000+sq. ft. on 37+



Stroudsburg, PA Warehouse

Shipping and Receiving & Security HQ Address: 3rd Street, Stroudsburg, PA 18360 Staff: 20+ Employees | Site: 60,000+sq. ft. on 2+



AMES Building, Stroudsburg, PA

Analytical Services and Automated Packaging Operations Address: 3rd, Street Stroudsburg, PA 18360 Staff: XX Employees | Site: 80,000+sq. ft. on x+ Acres

Facility Profile

Overall

Facilities: 343,000 sq. ft. 52+ Acres 4 Campuses in PA and 1 NY Staff: 300+ Employees

More Info: www.biospectra.us



Rensselaer NY, University Place Facility:

R&D Kilo-Scale GMP Manufacturing Address: 11 University Place, Rensselaer, NY

Staff: Growing | Site: 10,000+sq. ft.



Dextran Products

Address: Comstock Road, Toronto, Ontario, Canada M1L 2H5 Staff: XX Employees | Site: XX. ft. on X Acres



Stroudsburg PA, Rockdale Lane Plant:

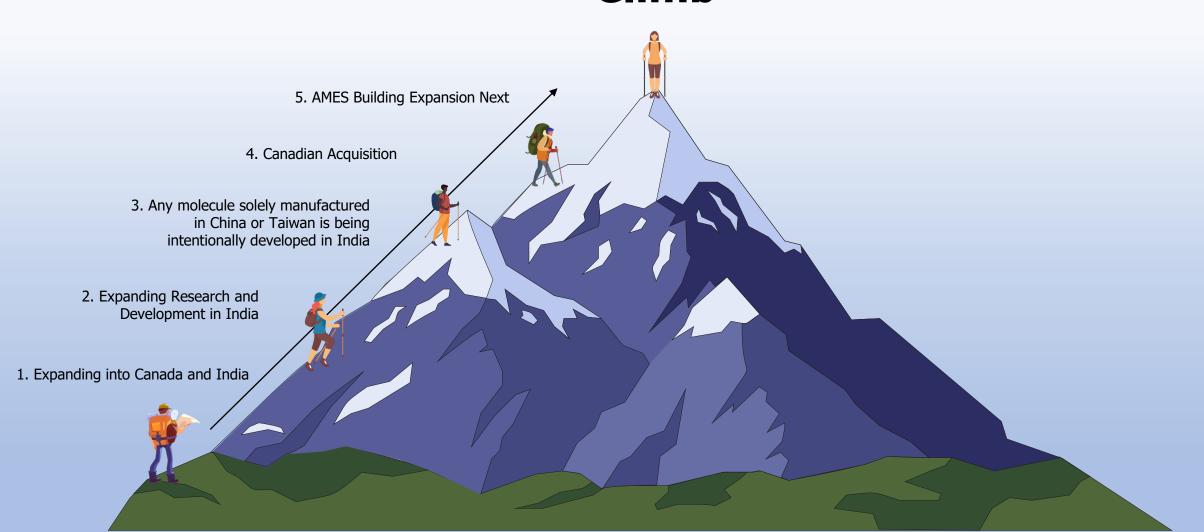
Bulk Manufacturing Facility, Quality Assurance & Control Address: 1474 Rockdale Lane, Stroudsburg, PA 18360 Staff: 50+ Employees | Site: 25,000+sq. ft. on 3+ Acres



Wind Gap PA, Jacobsburg Road Facility:

Commercial, IT, HR, Finance & Training Center Address: 1349 Jacobsburg Road, Wind Gap, PA 18091 Staff: 30+ Employees | Site: 25,000+sq. ft. on 2+ Acres With Great Growth, Comes Great Responsibility to Increase Our Security of Supply of Raw Materials

It is an Uphill Climb



Sustainability Plan Rollout

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Date		Q1
	3/31/2023	6/30/2023	9/30/2023	12/31/2023	3/31/2024	6/30/2024	9/30/2024	12/31/2024	3/31/2025	6/30/2025	9/30/2025	Closed		3/31/2023
I: Organizational Excellence													IV: Operational Excellence	
Business Continuity Plan	BCP Review and Book of Books Introduction and Preparation	Draft BCP Crisis Mgmt., Disaster Recovery and Business Continuation	Approve and Upload of information for Book of Books	Review and Simulate BCP s elements	Complete Required Actions post Simulation	Review and Close all Action items from Simulation of BCP	Annual Review Complete BCP and Book of Books- Verification of Roles	Completion of all actions from Review of BCP and Book of Books		-	Annual Review Complete BCP and Book of Books- Verification of Roles		100% Sustainably Renewed Buildings	Implement Approved Program for Renewal
Succession Plan	President Prepares Plan concept	President meets with Sr. Leadership discuss Plan and deliverables	Sr. Leadership provide deliverables to President	Draft Plan reviewed by Senior Leadership and President	Succession Plan submitted for legal review	r First Succession Plan published and stored in safe.	Plan reviewed with Key Financial partners (Banks)	Succession Plan tested in multi- day activity	ti-	Succession Plan annual review by Senior Leadership	=		100% of space will be compliant to our four levels of classification	Develop Air Classification Program and guidelines
100% Validated and Implemented ERP/MRP	Complete Execution of SAGE Validation	Completion of all Follow up Actions for Full Use of Sage	Full Implementation of Sage across all BioSpectrafacilities and BDI	Elimination of All Paper based Inventory Management	Integration with MasterControl	Next Phase ERP/MRP of Management and Integration with Work Centers	Validation of Integrations and Next Phase actions	→	=	-	=		100% Uniform and standardized workspaces, break areas and offices	-
Human Development Plan	21 Job Categories Defined across Organization	Regional/State assessment of Employee Benefits completed	Skill/ Responsibility to nay 1		Roles, Responsibilities and Behaviors added to each Job Description	updates recommended provided to Senior Leadership for action.	Propose touch screen system for function-responsibility	=	Launch Touchscreen version of data	Build/Maintain policies and SOPs in paper and electronic format	=		Property beautification at every facility completed	-
													1	
II: Quality Excellence													V: Environmental Excellence	
100% Validated and implemented Digital QMS	Validation of eBr and execution of first batch record- Rockdale lane	Validation of FBS forms and implementation across all BioSpectra	Creation of all eforms for implementation of electronic QMS	Launch FBS and eforms across all BioSpectrafacilities	Develop upgrade management for electronic QMS records	t Validation integration of QMS with other electronic GMP systems	Transition creation of forms to QS	Continuous Verfication of Validation status for all electronic GMP Systems	=	=	=		Dust Collection/Cyclone Upgrade Program	Assess all Cyclones and Dust collection systems in the Organization
100% Validated and Implemented UMS	Master Data Upload and Training	Configuration/URS and FRS with Development Use	Start Validation of UMS	Method, SOP and product code linking into LIMS	End of Validation and first CoA issuance from LIMS	Fully electronic Laboratory Notebooks across all BioSpectra Organization	=	=	=	=	=		Commercial Recycling program implemented	Assess Recyclable materials being discarded around the Organization
Expansion of Data Integrity and Quality Programs	Develop and train on paper record archive and upload plan	Quality Programs launch - Implement ICH Q10 principles	Verify GAMP compliance across all computerized systems	Closure of open CAPAs beyond the 18 month issuance date	Completion of paper record upload with true copy-Site Paper Retention=18 mos	Complete Computer System	040 10 11 11 1	Continuous Improvement and Audit Program for Compliance		Verify Discrepancy and CAPA reduction new Quality Program	Closure of open CAPAs beyond the 12 month issuance date		Solid Waste Reduction program implemented	Build Report for Solid Waste data collection for all sites for past three years
Buildout of New Laboratory	Propose technologies and headcount for new lab with suggested space requirements	Borough for approval	Order casework and long lead-	Start Office and space buildout	·	Install casework/hoods	Install furniture	Install Instrumentation / Notify customers	y Qualify/Validate Instrumentation	Train team onsite and move staff to the new facility	Transfer testing to new laboratory		Liquid Waste Reduction Program implemented	Build Report for Liquid Waste data collection for all sites for past three years
													in a stable and	
III. Manufacturing Excellence													VI: Sustainability Excellence	
100% Validated and implemented EBR's	Execute eBr template for first electronic Batch Record Launch	Continue Template creation across BioSpectra Rockdale lane Facility	Build templates for eBr at Majestic Way facility and BDI	Conversion of all batch records to electronic format in Rockdale Lane facility	s Transfer of eBr template creation responsibility to manufacturing division	Majestic Way facility launching of converted to EBR's	Majestic Way facility fully converted to EBR's	→	-	All BioSpectra facilities fully converted to eBr and eBr creation team established	⇒		Vertically Integrated HCl Gas/Liquid supply	Install HCI Generator Tower
30 Days Critical Product Inventory	Establish list of Critical Products and current Annual volumes	Propose equipment expansions/additions necessary to meet objective	Establish History of sales by package configuration	Minimum 30 days volume of Finished Tris in Inventory	Minimum 30 days volume of Tris HCl in Inventory	Minimum 30 days volume of MOPS in Inventory	Minimum 30 days volume of Guanidine HCl in Inventory	Minimum 30 days volume of NaOH in Inventory	Minimum 30 days volume of all API's in Inventory	Minimum 30 days volume of all Critical Products in Inventory	=		100% Energy Efficient HVAC Systems	Build plan to replace every HVAC system in the organization to new standard
100% Qualified Equipment and Validated Systems	Organizational Qualification and Validation program created and approved	Team formed, staffed and trained	→	University Place Completed	→	Rockdale Lane Completed	-	→	=	Majestic Way Completed	=		Unified and expandable Utilities at each site	Propose plan to Senior Leadership Team
Spray Drying Technology Expansion	Establish Spray Drying Expansion Plan	Qualified materials from the Model 1's at University Place		Qualification of Model 50	Commercial Material from Model 50 C22	Commercial Material from Model 32 #2	Validated Materials from both Model 1 Units at University Place	→	All Nitrogen Spray Dryers Validated	All Nitrogen Spray Dryers Commercially producing material	=		Inter-site Supply Chain Management Program	Fully Operational McConnel Street #3 facility

Sustainability Plan Rollout

Q2 6/30/2023	Q3 9/30/2023	Q4 12/31/2023	Q5 3/21/2024	Q6 6/30/2024	Q7 9/30/2024	Q8 12/31/2024	Q9 3/31/2025	Q10 6/30/2025	Q11 9/30/2025	Date Closed
Complete Jacobsburg Road Renewal Plan Renewal	→	Complete University Place Renewal Plan	→	Complete Rockdale Lane Renewal Plan	→	Complete Majestic Way Renewal Plan	→	Complete Murray Street Renewal Plan	→	
=	Measure quality of air in every zone/area of Organization	Develop plan for necessary changes	→	Order balance of HVAC equipment	→	Installations complete at Jacobsburg Road and Rockdale Lane	→	Installations Complete at Majestic Way and Murray Street	Installations complete at McConnell Street	
New design complete at Jacobsburg Road	→	New design complete at University Place	†	New design complete at Stroudsburg	→	New design complete at Majestic Way	†	All office locations complete	→	
Jacobsburg Road Complete	Rockdale Lane Complete			Murray Street Complete	Majestic Way Complete	=	=	191 Property Complete	→	
Assess 2025 and 2030 Dust Collection CFM Needs	Design single or multi point Dust Collection system	→	Order new dust collection systems for Rockdale lane and Majestic Way	=	Install core Dust collection systems with Cyclones at Rockdale Lane	=	Install core Dust collection systems with Cyclones at Majestic Way	Add Dust collection and Cyclones where possible at University Place	Verify compliance to objectives & Remove old systems	;
Qualify all potential recyclables	Propose plan for reduction of waste by Recycling materials currently being discarded	→	→	Implement plan for Recycling at Majestic Way	Implement plan for Recycling at Rockdale Lane	→	Implement plan for Recycling all other Organizational sites	Document, with annual updates, benefits/outcomes of recycling plan	Add recycling benefits/outcomes to annual updates	
Collect, verify, assemble and format all data for Senior Leadership Review	Formulate objectives for Solid Waste reduction for each facility	Establish format for tracking of Solid Waste by Kg of output and by headcount	Implement plan at each facility	=	Update Strategic Plan with current data	+	Assess year-one outcome and build standards for future years with goals.	=	→	
Collect, verify, assemble and format all data for Senior Leadership Review	Formulate objectives for Liquid Waste reduction for each facility	_	Implement plan at each facility	→	Update Strategic Plan with current data	→	Assess year-one outcome and build standards for future years with goals.	=	=	
Build and test HCl Generator	Qualify/Validate HCl Generator	Build necessary gas distribution system within the Majestic Way facility	Add Generated Gas to Zone N	Qualify 21% cGMP HQ liquid	Develop an internally synthesized reverse Acid/Base manufactured product.	Qualify a Liquid HCl Product	Validate a Liquid HCI generated product	Fully commercialized HCI Gas and Liquid vertically integrated system complete	=	
Place orders for phase 1 systems	Complete McConnell Street #3	Complete Jacobsburg Road	→	Complete Rockdale Lane	→	Complete Majestic Way	→	Complete Murray Street	⇒	
Senior Leadership Team Approval of Plan	Build site for Unified Utilities at Majestic Way	Install updated Heating, Chilling and Steam Systems at Majestic Way	Build utility Blending systems for each process suite at Majestic Way	Qualify Majestic Way Heating, Chilling and Steam Systems	→	Build site for Unified Utilities at Rockdale Lane	Install Heating, Chilling and Steam Systems at Rockdale Lane	Build utility Blending systems for each process suite at Rockdale Lane	Qualify Rockdale Lane Heating, Chilling and Steam Systems	
Assessment of traffic across Organization related to Regulated Inventory delivery	Propose Plan to reduce the number of trucks at each site through consolidation	Implement traffic consolidation plan	Measure truck traffic necessary at each site to manage Regulated Inventory	Develop full Inter-site Regulated Materials Plan with policies and procedures	Launch the BioSpectra Inter- Site Supply Chain Management Program	→	→	Assess benefits of Program for Senior Leadership	→	

Strategic Initiatives

Organization	al Excellence
Business Continuity Plan	Dora Meissner- Executive Vice President of Quality Systems
Succession Plan	Rick Mutchler- President
100% Validated and Implemented ERP/MRP	Dora Meissner- Executive Vice President of Quality Systems
Human Development Plan	Renee Sommo – Senior Director of Human Development
Quality E	ixcellence
100% Validated and Implemented QMS	Dora Meissner- Executive Vice President of Quality Systems
100% Validated and Implemented LIMS	Amy Yencho- Vice President of Laboratory Services
Expansion of Data Integrity and Quality Programs	Dora Meissner- Executive Vice President of Quality Systems
Buildout of New Laboratory	Amy Yencho- Vice President of Laboratory Services
Manufacturir	ng Excellence
100% Validated and Implemented EBR'S	Peter Underwood- Senior Director of Information Systems
30 Days Critical Product Inventory	Eric Gentile- Vice President of Manufacturing Operations
100% Qualified Equipment and Validated Systems	Dora Meissner- Executive Vice President of Quality Systems
Spray Drying Technology Expansion	TBD

Operationa	l Excellence
100% Sustainable Renewed Buildings	Rick Mutchler- President
100% of Workspace will be Compliant to our Four Levels of Classification	Rick Mutchler- President
100% Uniform and Standardized Workspaces, Break Areas and Offices	Rick Mutchler- President
Property Beautification at Every Facility Completed	Rick Mutchler- President
Environmen	t Excellence
Dust Collection/Cyclone Upgrade Program	Rick Mutchler- President
Commercial Recycling Program Implemented	Rick Mutchler- President
Solid Waste Reduction Program Implemented	Rick Mutchler- President
Liquid Waste Reduction Program Implemented	Rick Mutchler- President
Sustainabilit	y Excellence
Vertically Integrated HCl Gas/Liquid Supply	Rick Mutchler- President
100% Energy-Efficient HVAC Systems	TBD
Unified and Expandable Utilities at Each Site	Rick Mutchler- President
Inter-Site Supply Chain Management	Garret Agee- Vice President of Supply Chain

This Strategic Plan will be based on our expectations and goals for our **thirtieth anniversary** and **define primary measurables for the 32-month period starting February 1, 2023 and ending September 30, 2025**

Strategic Initiatives- A Deeper Look

Quality Excellence	 Maintaining an unblemished Record with the FDA
Manufacturing Excellence	 Commitment to safety first / Safe Systems / Reduction in Safety Incidents
Environmental Excellence	 Lowering Energy Consumption per kilo Carbon Reduction Reduction in emissions Increased in renewable energy use Water Purification Systems
Sustainability Excellence	 Sustainable Procurement (alternative Sourcing) Supply Chain Security (New GMP Warehouses) Financial Stability & Cost Reductions OOS Product Supply Base Auditing – Quality practices; Environmental Practices; and Social/HR Practices
Corporate Commitment to Social Responsibility	Diversity Hiring ProgramCommunity Outreach programs

Sustainability Program Communication

Issued to Senior Management on January 9th, 2023



Organizational Excellence

Quality Excellence

Manufacturing Excellence

Operational Excellence

Environmental Excellence

Sustainability Excellence

Organizational Strategic Plan for February 1, 2023 through September 30, 2025

Pharmaceutical Ingredient Manufacturing 100 Majestic Way, Bangor, PA

Biological Buffer Manufacturing

Corporate Services Center 1349 Jacobsburg Road, Wind Gap, PA

> Quality Services Center 53 North 3" Street, Stroudsburg, PA

Bio Development, Inc. 11 University Place Densselaer NV

Supply Chain Center 51 North 3rd Street, Stroudsburg, PA

Fleet Services

BI**®**SPECTR A

The BioSpectra Organization is a group of companies committed to manufacturing and nicals, of Exceptional Quality and Regulator to the Global BioPharmaceutical Industry.

MISSION

BioSpectra provides safest, most sustainable and highest-quality materials for drug and vaccine

BioSpectra will be a leading member of the pharmaceutical community committed to providing ingredients supporting safe and consistently therapeutically effective drugs and vaccines for

VALUES

INTEGRITY: in our systems and work

SUSTAINABILITY: in our business and decisions

COMPLIANCE: to the true meaning of our standards and commitments

RESPECT: for people, communities and the environment

The BioSpectra Organization operates 343,000 sq. ft. of space on 52 acres of land in 6 Municipalities of Pennsylvania and New York. BioSpectra owns over 97% of the land, facilitie

The RioSpectra Organization owns and operates an FDA Registered Rulk Chemical Premium harmaceutical Ingredient manufacturing facility in Bangor, PA, an FDA Registered, Bulk Chemical, Biological Buffer manufacturing facility in Stroudsburg, PA and a cGMP Kilo-Scale Center facility in Wind Gap, PA, a Supply Chain facility in Strougsburg, PA, and a Fleet

While the BioSpectra Organization was created on December 26, 1993, BioSpectra, Inc. was first incorporated in Pennsylvania, USA, on September 15, 1995 (BioSpectra 1.0). The Original BioSpectra operated from a site in Sciota, PA. In 2001, we committed to opening the Stroudsburg facility and changing the scale of available cGMP Biological Buffers to our Industry (BioSpectra 2.0). In 2006, we created BioBuffer Solutions to support the need for upstream facility to launch into specialty materials and API's (BioSpectra 4.0). In 2018, we started the Using the September 15, 1995 incorporation date, we will celebrate our thirtieth Anniversary in 24 2025. This Strategic Plan will launch the BioSpectra 6.0 phase

This Strategic Plan will be based on our expectations and goals for our thirtieth anniversary and define primary measurables for the 32-month period starting February 1, 2023 and ending

The period of time from October 1, 2025 through November 30, 2025, "the Landing Period" will be dedicated to formulating BioSpectra's next five year plan. This 60-day period will include the Executive Leadership Team meeting extensively with the Leadership Team and other key stakeholders to formulate the growth plan for the BioSpectra Organization as it relates to chemistry, technology, facilities and product lines for the following five-year span of time (BioSpectra 7.0). The 2025-2030 Strategic Plan will be approved, published and shared with all

The Goal of this Strategic Plan

Entering the Landing Derind RioSpectra 6.0, as an organization, will ensure all properties owned by ready to launch BioSpectra 7.0.

Organizational Excellence

BioSpectra's Leadership Team will undertake an in-depth review of our business system and Business Continuity Plan (BCP). The review of this plan will evaluate the key areas necessary for the successful continuity of all critical business functions and will focus on Crisis Management. Disaster Recovery and Uninterrupted Business Continuation. The Crisis Management, Disaster Recovery and Uninterrupted Studiess Continuation. The enhanced GDP will provide a guide to ensure that Biotopactis's critical Business Functions continue during a time of crisis, emergency, or disaster. There will be one printed version of this plant stored with the Biotopactra Book of Books in our Corporate center and a digital copy will be maintained on our file server to be made available to members of the Landesthip Team. This plan will be reviewed annually.

Vice Presidents are the operational backbone of the NioSpectra Organization and the President is the driving force of the Organization. There must be a documented plan outlining how the business model and facilities operate in the event the President o vice President is no longer able to serve in that capacity including death. The plan must outline roles and responsibilities for each member of the Senior Leadership Team and provide enough information that, when used in conjunction with the Book of Books and Leadership Team to ensure preparedness.

All aspects of order entry and fulfillment, Material Requirements Planning (MRP), Inventory, production scheduling, and financial systems will be operating using a validated thereprise Resource Planning System (ESP). We will continue to enhance the SAGE ESP system acquired and implemented during the BioSpectra Digital 2022 Capital Project. Inventory tracking will be controlled by our Supply Chain Division on a unified platform (SAGE) across the Organization for movement, tracking and verification of materials. Together, these systems will combine to provide the scalable and secure

We will commit to maintaining our proactive Compensation and Benefit managemen program including fully documenting the program and adding key aspects to the Organizational Leadership Calendar. By the time of the Landing Period. 100% of the roles at BioSpectra will be defined for clarity and accuracy. This is not an enhancemen to Job Descriptions, but rather a fully integrated and detailed list, chart and searchable program capable of defining all key responsibilities in the Organization including which

100% Validated and implemented Digital QMS

in electronic format before the Landing Period. The Document Management System (DMS), which has already been implemented electronically, will support the implementation of fully electronic Training Records, Standard Operating Procedures (SOP's), Work Instructions, Forms, and the electronic documentation of cGMP activity performed by BioSpectra. Training for the implementation of the remaining portions of the Cuality Management System to be fully electronic will be administered to all

100% Validated and Implemented LIMS

All BioSpectra Laboratory locations will be operating using a unified Laboratory Information Management System (LIMS). The LIMS system will be the main application used to store laboratory testing results. LIMS will utilize a validated sample workflow that provides full traceability of laboratory data with robust data reporting capabilities. All Test Methods, Analytical Procedures, Specifications, Standard Operating Procedures, and related document links will be set up and available for reference while using the Laboratory Information Management System. A training program will be developed to ensure that all BioSpectra employees with access to the aboratory Information Management System, have the documented skill set to navigate

nsion of Data Integrity and Quality Programs

BioSpectra's quality culture provides the assurance of compliance in our work and documentation. Data Integrity is vital to BioSpectra's Quality Culture. The expanded recording or data and ensure data is retained in a secure and compliant manner. The Data Integrity and Quality Programs will be enhanced to convert all paper copies to true electronic copies and will ensure that records are easily retrieved and retained for the required period of time. BioSpectra will continue to enforce all regulatory data integrity equirements and BioSpectra's Quality Program in all areas of the organization

A critical need, necessarily tied to many projects and initiatives, is the addition of a new A critical need, necessarily tend to many projects and initiatives, is the addition of a different testing facility at our Quality Services Center. This will become our primary, and larger testing facility which will drive innovation in our Laboratory environment and allow for the creation of an Advanced Technology Laboratory in the Bangor facility. This facility will also need to be integrated with the OMS_LIMS and FRP Systems

III: Manufacturing Excellence

Every Batch Record, for every product at every location, will be converted to an electronic format. This will allow for the execution, approval and record retention o batch records to be completely electronic. A training program specific to each batch record will continue to be delivered to all impacted personnel. The Training Program will ensure every chemical operator, and any person with access to Electronic Batcl Records (EBR's), has proven and documented skills to navigate the system required to ensure compliance with Organizational Quality System standards. All Standard Operating Procedures and Work Instructions required for all batch records will be linked Electronic Batch Record System.

backed legacy product is available, from inventory, with at least 30 days of forward stock (by volume) on hand in our Supply Chain Center at any time. This material may be n finished packages, or as available bulk finished goods needing only to be converted to final packaging.

Comment Applyment and varioused systems

BioSpectra develops and designs manufacturing suites for the compliant manufacturing
of high-quality ingredients. BioSpectra's Process Validation Program will ensure all
processes deliver high quality ingredients that consistently meet critical process parameters and quality attributes. The suitability and qualification of the equipment and parameters and upon actiones. The Stateshing and Qualification to the equipment and systems is critical in the successful manufacturing of all BioSpectra products. BioSpectra will enhance the development, design, installation and qualification of all equipment and utilities used in process suites. BioSpectra's qualification and validation program enhancement will also bring forth robust and effective manufacturing, cleaning and

By the time of the Landing Period, BioSpectra will have installed, qualified and validated commercial products from all five of the Polar Dry Spray dryers at our facilities, making our organization the largest nitrogen spray dryer in the pharmaceutical industry. These dryers will be manufactured of 316SS and C22 Hastelloy. This will give us the ability to

Operational Excellence

Every BioSpectra gwned facility, which is every facility we occupy other than our lensselaer, NY facility, will have a new energy efficient, safe, environmentally soun easily repairable and beautiful roof not more than five years old and with at least ten years of warranty against failure. Every window in every BioSpectra facility will be industrial, high energy efficiency, bronze framed, copper mirrored panels for energy conservation. All floors will be finished with Epoxy, Acrylic or another suitable, cleanable material. This upgrade will ensure uninterrupted opportunity for growth through the next multiple Strategic Plans.

100% of workspace will be compliant to our four levels of classification

BioSpectra will establish Standards of Air Quality and Air Flow for the following generalized areas: 1. Bulk Operational Space (i.e., warehouses, maintenance shops etc.), 2. Administrative Space (i.e., Offices, conference rooms, etc.), 3. Laboratory Spac and 4. Basic Manufacturing Space. The standards will be tied to an Internationally recognized system and will be tested annually for compliance. Specialized

100% Uniform and standardized workspaces, break areas and offices.

BioSpectra will complete the renovation of all existing office, conference and break spaces to conform to our new organizational standard of equity, form and function Every desk, flooring material, wall, chair, computer, etc., will be standardized to ensur everyone enjoys the same elevated work experience. All break areas will be fitted with Organization-subsidized fresh food and beverage vending systems to be available

· Property beautification at every facility completed

As part of our commitment to the environment, we will use the next 32 months to secure and beautify every piece of land we own and occupy. We will remove any non beneficial fallen trees/plant life. We will collaborate to ensure the removal of any invasive species of plant life, increase the amount of sustainable plant life and e that all land and water is protected, clean and readily available for the personal enjoyment of our staff to ensure its sustained wellbeing.

After more than ten years evaluating the benefit of adding dust collection cyclones to our dust collection systems in various manufacturing lines, we will standardize our manufacturing platform to include dust collection cyclones for every process using a dust collector. The immediate benefit is the massive reduction on load and life of the actual duct collectors, but this will also allow us to evaluate the overall number of dus collector systems in use at any one site for energy conservation and emergency

Commercial Recycling program implemented

As a large consumer of packaging to meet the needs of our customers. BioSpectra will launch an organization-wide effort to recycle as much of our incoming packaging materials as possible. We will evaluate new methods of reusing plastic drums, and safe methods of separating the metal portions from the paper portions of our fiber drums. We will start this program by quantifying the impact we make currently in our existing format and then offer evidence of significant improvements to our partners and stakeholders during audits and business visits.

Solid Waste Reduction program implemented

to the best degree of accuracy available, to form a plan to reduce all solid waste wherever possible. While the actual mass volume of solid waste attributed to paper may not be significant in relation to overall solid waste volume, we will also have transitioned to a paperless quality and business platform during this same period. We will develop metrics to indicate the amount of solid waste by headcount and by units of

 Liquid Waste Reduction Program implemented
 The BioSpectra Organization will establish a three-year history of liquid waste volumes, to the best degree of accuracy available, to form a plan to reduce all liquid waste wherever possible. We will separate our Liquid Waste into High-Risk waste and Low-Risk waste categories. We will develop metrics to indicate the amount of liquid waste by headcount and by units of materials produced. We will build a program to better The net benefit of this program will be tracked and monitored.

VI: Sustainability Excellence

o ensure that an event like the HCl Gas crisis of 2022 never impacts our organization again, and to ensure availability of Chlorinated Buffers, Salts and Aminos from trul secure supply chains, BioSpectra will become the first fully vertically integrated manufacturer of Chlorinated Life Science materials by building and qualifying redundan HCl Gas Generator systems and qualifying the first ever, cGMP HCl gas for HCl liquid to support other initiatives.

Energy-efficient HVAC Systems

Recognizing the need for clean air, BioSpectra will build out, design, purchase and instal 100% new HVAC air handling systems for every site in the Organization by the Landing eriod. Systems of the highest efficiency, environmental rating for sustainability, and ability to provide safe, clean, compliant and comfortable working conditions will be installed. We will track the benefits in energy consumption and sustainability throughout the process for reporting to key stakeholders at future business meetings.

Unified and expandable Utilities at each site

Responsible and urgently-flexible manufacturing for our industry requires access to qualified utilities. Historically, to provide time sensitive new products or scale-ups, this rebuild its current heating, chilling and steam systems that supply the manufacturing lines in our two bulk manufacturing facilities with state of the art, environmentall agreeable, sustainable and secure systems including fully qualified redundant back-ups for each system by the Landing Period. This massive investment in Sustainability and efficiency will allow immediate growth at any time without installing additional system We will build each system with significant excess available capacity and additional physically engineered space for add-on modules for the primary and secondary to expand well past the ability of either site to consume such utilities. These two systems will replace, when completed, over 20 significant systems, each requiring independen Preventative Maintenance programs, utilities, spare parts and risk management

As we prepare to open our new Supply Chain Center in Stroudsburg, PA, our newly formed Supply Chain Division will build a system and program that supplies, readily available, approved raw materials, components and critical supply items within hours to any site while simultaneously significantly reducing the number of trucks and vehicles any size wines annutaneously agrinuantly reducing the number of ours and ventiles required to supply the sites. By centralizing all incoming regulated shipments and building scheduled deliveries, customizable by the sites real-time, we will reduce traffic expand manufacturing space and better secure all raw materials and finished goods to better serve our customers and reach exceptional sustainability levels. Our Supply Chain team will document the effectiveness of this program starting at the beginning of

 At no time during the span of this Strategic Plan will BioSpectra reject the need to advance product lines and product offerings or restrict the need to increase capacities, but it may temporarily limit certain activities related to land/facility addition as well as activity related to acquisition of other manufacturing platforms to ensure our successful Landing Period during

 Further, to clarify the scope of this Strategic Plan, this plan does not address the other Project Management Office projects underway, of which there are nearly 100, representing over \$60MM in investment to increase capacities, implement new technologies and provide additional workplace safety to maintain our global leadership position in business model growth. This plan, while incorporating key projects from our PMO, is fully separate and necessary to build our platform into a business model that will comply with the needs of our

report to the PMO, but who will spend significant time working with and reporting results to the President to ensure daily, weekly and monthly compliance to these growth and internationally recognized standards and objectives for Sustainability and Reduction of Carbon

The Proposed timeline to complete the 24 Initiatives is shown on the following two Roadmap time charts. These charts are based on balancing these objectives within the full scope of all the Projects scheduled in our Organizational Business calendar.

TRIR Data 2023 Total Recordable Incident Rate

Date: 01.12.2023

TRIR Data 2023
Total Recordable Incident Rate

		Recordable	
2023	Hours Worked	Injuries	TRIR
Bangor	338,829.05	6	3.5



Date: 01.12.2024

Waste water Generation 2023 14,920 Jan 52564 Feb 34770 Mar 32368 Apr 39415 May 26365 Jun 18636 Jul 15492 Aug 30793 Sep 26030 Oct 9800 Nov 44042 Dec





Water Consumption 2023 vs 2022

Date: 01.12.2024

3Q 225,000 635,000 125,000 126,000 128,000 128,000 108, 4Q 185,000 640,000 138,100 108, 195,000 260,000 260,000 5 621.23 157,000 5 813.92 98,800 Feb 5 2,791.32 200,000 5 652.73 167,000 Apr 5 3,021.78 220,000 5 649.58 166,000 5 902.88 May 5 3,194.22 235,000 5 682.66 176,500 Jun 5 3,079.27 225,000 5 651.16 166,500 Jul 5 3,193.58 235,000 5 682.66 176,500 Aug 5 3,423.44 255,000 5 742.21 196,500 Sep 5 3,021.18 220,000 5 684.23 177,000 Cct 5 3,251.04 240,000 5 684.23 177,000 Nov 5 3,251.04 240,000 Dec 5 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 100,000 80,000 60,000 40,000 20,000		1Q	185,000	55	5,000					96,700	98,800
4Q 185,000 640,000 138,100 108, 195,000 260,000 260,000 5 621.23 157,000 5 813.92 98,800 Feb \$ 2,791.32 200,000 \$ 652.73 167,000 Apr \$ 3,021.78 220,000 \$ 649.58 166,000 5 902.88 May \$ 3,194.22 235,000 \$ 651.16 166,500 Jul \$ 3,193.58 235,000 \$ 682.66 176,500 S 976.80 Aug \$ 3,423.44 255,000 \$ 742.21 196,500 Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Sep \$ 3,251.04 240,000 \$ 684.23 177,000 \$ 920.48 108,400 Dec \$ 2,906.25 210,000		2Q	165,000	57	70,000					104,800	102,900
195,000 260,000 260,000 260,000 260,000		3Q	225,000	63	5,000					123,500	126,000
Jan		4Q	185,000	64	0,000					138,100	108,400
Jan S 2,623.18 220,000 S 621.23 157,000 Feb S 2,791.32 200,000 S 586.58 146,000 Mar S 3,136.74 230,000 S 652.73 167,000 Apr S 3,021.78 220,000 S 649.58 166,000 May S 3,194.22 235,000 S 682.66 176,500 Jun S 3,079.27 225,000 S 651.16 166,500 Jul S 3,193.58 235,000 S 682.66 176,500 Sep S 3,021.18 220,000 S 803.78 220,000 Oct S 3,251.04 240,000 S 684.23 177,000 Nov S 3,251.04 240,000 Dec S 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 100,000 80,000 40,000 20,000 40,000 20,000			195,000								
Feb \$ 2,791.32			260,000								
Mar \$ 3,136.74 230,000 \$ 652.73 167,000 Apr \$ 3,021.78 220,000 \$ 649.58 166,000 May \$ 3,194.22 235,000 \$ 682.66 176,500 Jun \$ 3,079.27 225,000 \$ 651.16 166,500 Jul \$ 3,193.58 235,000 \$ 682.66 176,500 Aug \$ 3,423.44 255,000 \$ 742.21 196,500 Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Oct \$ 3,251.04 240,000 \$ 684.23 177,000 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 60,000 40,000 20,000	Jan	\$ 2,623.18	220,000	s	621.23	157,000		\$	813.92	98,800	
Apr \$ 3,021.78 220,000 \$ 649.58 166,000	Feb	\$ 2,791.32	200,000	\$	586.58	146,000					
May \$ 3,194.22 235,000 \$ 682.66 176,500 Jul \$ 3,193.58 235,000 \$ 682.66 176,500 Aug \$ 3,423.44 255,000 \$ 742.21 196,500 Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Oct \$ 3,251.04 240,000 \$ 684.23 177,000 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 140,000 120,000 100,000 80,000 60,000 40,000 20,000	Mar	\$ 3,136.74	230,000	\$	652.73	167,000					
Jul \$ 3,079.27 225,000 \$ 651.16 166,500 Jul \$ 3,193.58 235,000 \$ 682.66 176,500 Aug \$ 3,423.44 255,000 \$ 742.21 196,500 Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Oct \$ 3,251.04 240,000 \$ 684.23 177,000 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 60,000 40,000 20,000	Apr	\$ 3,021.78	220,000	\$	649.58	166,000		\$	902.88		
Jul S 3,193.58 235,000 S 682.66 176,500 Aug S 3,423.44 255,000 S 742.21 196,500 Sep S 3,021.18 220,000 S 803.78 220,000 Oct S 3,251.04 240,000 S 684.23 177,000 Nov S 3,251.04 240,000 Dec S 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 40,000 20,000	May	\$ 3,194.22	235,000	\$	682.66	176,500					
Aug \$ 3,423.44 255,000 \$ 742.21 196,500 Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Oct \$ 3,251.04 240,000 \$ 684.23 177,000 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 40,000 20,000	Jun	\$ 3,079.27	225,000	\$	651.16	166,500					
Sep \$ 3,021.18 220,000 \$ 803.78 220,000 Oct \$ 3,251.04 240,000 \$ 684.23 177,000 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 40,000 20,000	Jul	\$ 3,193.58	235,000	\$	682.66	176,500		\$	976.80		
Oct \$ 3,251.04 240,000 \$ 684.23 177,000 \$ 920.48 108,400 Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 140,000 100,000 80,000 40,000 20,000	Aug	\$ 3,423.44	255,000	\$	742.21	196,500					
Nov \$ 3,251.04 240,000 Dec \$ 2,906.25 210,000 Gallons of Water Used by Production Facility 160,000 120,000 100,000 80,000 60,000 40,000 20,000	Sep	\$ 3,021.18	220,000	\$	803.78	220,000					
Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 40,000 20,000	Oct	\$ 3,251.04	240,000	\$	684.23	177,000		\$	920.48	108,400	
Gallons of Water Used by Production Facility 160,000 140,000 120,000 100,000 80,000 40,000 20,000	Nov	\$ 3,251.04	240,000								
160,000 140,000 100,000 80,000 60,000 40,000 20,000	Dec	\$ 2,906.25	210,000								
160,000 140,000 100,000 80,000 60,000 40,000 20,000			Gallons	of	Wate	r Used b	v Produc	ctic	n Faci	litv	
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Type a question

SBTi Receipt

Receipt from SBTi, showing we registered on the Platform and set our targets. We ae now waiting for the next step by them.

From: Jotform < noreply@jotform.com > Sent: Tuesday, December 26, 2023 9:29 AM To: Matt Rifenburg < Matt.Rifenburg@biospectra.us> Subject: We have received your response for SME Target Validation Booking System **SME Target Validation Booking System** 1. Company name Biospectra Inc. 2. Comapany main contact Matt Rifenburg person (only one contact) 3. Primary contact email matt.rifenburg@biospectra.us (only one email) +16105993564 5. Additional secondary Darian McCollian company contact name 6. Additional company Darian.McCollian@Biospectra.us contact email, if relevant 7. Company HQ location United States of America 8. Please provide your https://www.biospectra.us corporate website Linkedin: https://www.linkedin.com/company/biospectra-inc. Twitter: Other: Type a question No

NA

Type a question

Type a question	No
Type a question	NA
12. Please provide LEI number (if applicable) to be used to identify the company in the public SBTi database	NA
1.1 Sector classification based on the SBTi Sector Classification	Pharmaceuticals, Biotechnology and Life Sciences
Type a question	None of the above
Type a question	Privately-owned company
Number	290
Type a question	No
7. If your company is part of the Food, Agriculture and Forest sectors, do you confirm that you agree to recalculate your targets in line with the FLAG method?	N/A
Type a question	SMEs: Setting new or updating existing near-term targets

Type a question	Yes
	Scope 1: Mobile Sources Scope 2: Purchased and Consumed Electricity
Type a question	Yes
4. Scope 1 emissions (tCO2e) IN your chosen base year (base year e.g. 2018, 2019, 2020, 2021 or 2022).	105
5. Scope 2 emissions (tCO2e) IN your chosen base year (base year e.g. 2018, 2019, 2020, 2021 or 2022).	1013
Type a question	Location based
Type a question	Yes
Type a question	Yes
Would your company be interested in going through the normal corporate route	No

for a higher fee?

42% from a 2022 base year



Hazardous Waste Generation 2022 vs. 2023

2022.0	2023.0						
Waste Tons	Waste Ton ₹	Montl√	↓ 1	-			
0.0	5.6	Jan	1				
0.4	5.2	Feb	2				
0.0	5.8	Mar	3				
0.0	2.3	Apr	4				
0.3	0.0	May	5				
1.1	8.2	Jun	6				
0.0	8.5	Jul	7				
1.7	5.0	Aug	8				
8.7	0.0	Sept	9				
0	30.7	Oct	10				
4.6	0.0	Nov	11				
0.3	9.1	Dec					
0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	_0
0	Tons of Haza	rdous W	o	ped by	Moi	nth	_0
35.0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	_o
	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	0
35.0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	0
35.0 30.0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	0
35.0 30.0 25.0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	0
35.0 30.0 925.0 20.0	Tons of Haza	rdous W	o /aste ship	ped by	Moi	nth	0
35.0 30.0 25.0 20.0	Tons of Haza	rdous W	/aste ship	ped by	Mon	nth	 0



Waste Calculations

Waste Material	Disposal Method	Weight	Unit	CO ₂ e Emissions (kg)
	Landfilled	1,000	metric ton	
Mixed Electronics	Landfilled	653	pounds (lb)	7
Glass	Recycled	327	pounds (lb)	8
HDPE	Recycled	29,827	pounds (lb)	3,132
Mixed MSW municipal solid waste	Landfilled	35,627	pounds (lb)	9,263
Mixed Organics	Landfilled	121,668	Pounds (lb)	29,200
Mixed MSW municipal solid waste	Landfilled	163	Short ton	84,812
GHG Emi	issions			

Waste Totals 2023 – Bangor Site

Total Emissions by Disposal Method

Waste Materials	CO ₂ e(kg)
Recycled	3,140
Landfilled	123,282
Combusted	-
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	

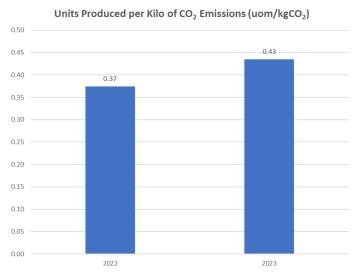
Total CO2 Equivalent Emissions (metric Tons) – 126.4 Waste

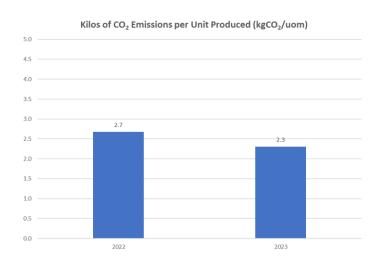


G. Tracking Air Emissions – GHG's (Green House Gases)

Tracking Air Emissions – GHG's

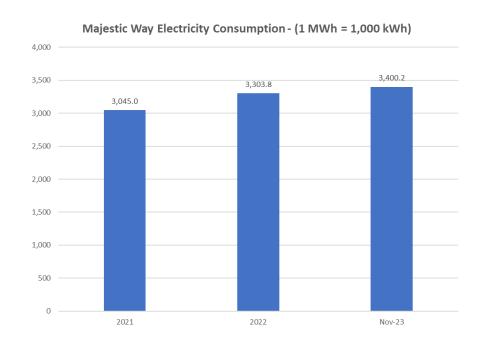
2. CO₂ Separately – ratio to outputs Data Used – 2022 & 2023 M2023 Calculated Baselines, SAGE- ZMFGITMTRK reports

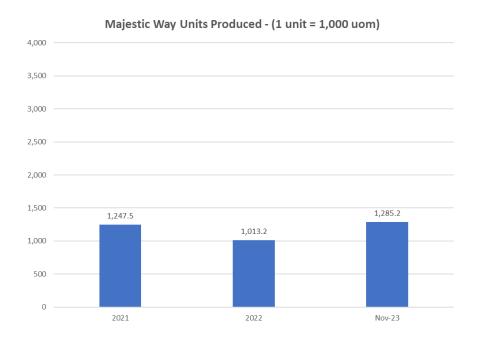






Energy Consumption – Production Output



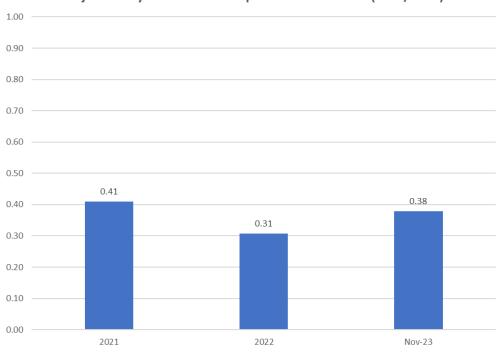


November 2023 – Currently using 0% renewable energy. Discussions of converting to 100% renewable energy are underway. The projects responsible for our future reduction in energy consumption are M2030 and SBTi.

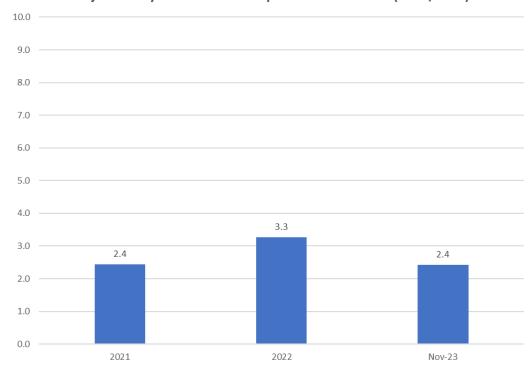


Energy Consumption – KPIs

Majestic Way Units Produced per KWh Consumed (uom/KWh)



Majestic Way KWh Consumed per Units Produced (KWh/uom)



Additional Organizational commitments

Ethical Commitments

- To follow all US and International Commerce Laws
- To sell only to ethical pharmaceutical companies, affiliates & CMO's
- To Financial Ethics and Accountability
- To Internationally recognized ethical business practices
- To work with only suppliers that provide for basic human rights

Human Development Commitments

- To maintain a happy, healthy and safe work environment
- To increasing efficiency and means of internal Communication
- To advancement in careers, training and education
- To a socially responsible work environment
- To personal growth and improvement through metrics, KPI's and evaluations

Customer Commitment

- To the highest level of customer care
- To the highest level of customer service
- To the highest level of consistent quality of response
- To product continuity (quality) and sustainability
- To customer health and safety

Additionally, BioSpectra is...

Overhauling our HR handbook to include practices we adhere to today in regard to Human Development

New software program (KeyedIn) to track all progress for key areas of Sustainability and our Strategic Plan Upgrading contractual commitments with key suppliers to include ethical standards and programs

Launching a diversity hiring program to increase our workforce diversity profile

Upgrading Supplier Base Auditing to include Human Rights issues