Lititz, PA
MW Line 2008 ELV
&
TRP Band Inspections
Proposal

Presented To: Candido Gonzalez
Proposal: 2205.0099 Rev.1
Date: 07-JUL-2022

1.1 Revision History

Date	Rev.	Description	Author
09-JUN-2022	0	Initial Issue	Joseph Meyer
07-JUL-2022	1	Updated Proposal	Ash Ayyaswamy

1.2 Referenced Documents

Document Number	Document Name	Rev.
GPLV_FRS_3.6	Johnson & Johnson Manufacturing Science and Technology Consumer Global Product Label Verification Functional Requirement Specification version 3.6	6
URS Line 2008 Label Verification and TRP Detection Rev 0	Scope of Work for Line 2008 Electronic Label Verification (ELV) & TRP Band Inspection	
ELV and TRP Band Inspection System	Request for Proposal (RFP) – Lititz Mouthwash Line 2008 Electronic Label Verification (ELV) & TRP Band Inspection System	0
2021 05 11 URS Line 2008 New Labeler - Lititz Format_rev07	Scope of Work for Line 2008 New Labeler	7

1.3 Contact Information

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2 Introduction

2.1 Executive Summary

Johnson & Johnson, a global health provider for over 130 years, has approached Grantek to provide a solution for a site Electric Label Verification (ELV) and Tamper Resistant Package (TRP) Band Inspection at their Lititz facility in Pennsylvania. Johnson & Johnson has developed a Request for Proposal (RFP) that outlines constructing the ELV and TRP Band Inspection systems for their new Line 2008. Grantek has been instructed to use the RFP as a basis for this proposal.

Grantek has implemented over 380 label verification and defect detection systems across North America. Based on this success, Grantek has developed its Label Verification product and built out template applications that can be reused for this project to shorten timelines, reduce cost, reduce downtime, and drive harmonization of the systems throughout the site. As a result of this process, we have long-standing successful partnerships with multiple Fortune 500 customers. This has saved our customers money, effort, and potential recalls.

In addition, we have built tools and features throughout the years to save our customer's training and support costs. In turn, this sets up our customers for success by making it easier for the plant to maintain a Grantek provided system. Our solution is open and uses standard hardware. Johnson & Johnson can edit the code and add cameras and other features to J&J's benefit. Grantek has demonstrated the process to the engineering team with the product and shown the concept of how it would work; a video can be provided upon request.

Throughout this project, Grantek would also partner with Johnson & Johnson, and via the open source, the team would look to help develop a playbook that would allow for rolling out a solution to other products, lines, and plants. This will allow Johnson & Johnson to look at long-term and effective solutions for easy roll-out, testing, training, and support. Grantek has included an investment credit to enable the partnership, as reflected in the price section.

With deployments in the pharmaceutical industry, our solutions have been audited and cleared by multiple regulatory agencies across years of running smoothly. In addition, Grantek has worked with its clients to ensure that their policies and procedures are not compromised during the installation of these systems. Grantek's agility in providing customized solutions across stable architectures enables our clients to achieve operational success.

With over 16 years of experience delivering projects in the state of Pennsylvania, Grantek Systems Integration is a leading provider of integrated manufacturing solutions in the region. The trust and recognition Grantek has gained in the region is from our ability to deliver successful projects and from our ability to understand our customer's business goals. A significant portion of our business comes from repeat customers who consider us partners in helping them achieve their short-term and long-term goals.

At Grantek, we value partnerships, working collaboratively and transparently to ensure the successful delivery of projects for our clients. Grantek is committed to making this a successful project for Johnson & Johnson, and we will provide the partnership and support to make that happen. As a result, we will have a Customer Success Manager assigned to you and this project. This person has access to the highest levels within Grantek and is empowered to make sure this project is successful, and that Johnson & Johnson is satisfied with the project.

We thank you for the opportunity to respond to this request for proposal,

Joseph Meyer
Sales Engineer,
Grantek Systems Integration

2.2 Grantek Systems Integration Overview

2.2.1 General Overview

Grantek Systems Integration is a leading provider of integrated manufacturing automation services. Our innovative solutions are designed to increase our customers' return on investment and reduce time to market through improved manufacturing productivity, product quality, asset utilization and integrated technology.

Our customers are among the most respected manufacturers of global brands, as well as niche manufacturers seeking improved performance and competitive advantage. Since 1980, we have been enabling greater profits to customers by creating better processes for them in:

- ✓ New Plant Installations
- ✓ Continuous Improvement Initiatives
- ✓ Business Intelligence and Enterprise Manufacturing Intelligence
- ✓ Conversion of Non-Automated Facilities
- ✓ Support, Maintenance and Troubleshooting
- ✓

Through our total system solution approach and the dedication of our professional staff, the Grantek team guarantees a manufacturing facility, line or process that has been skillfully designed, professionally engineered and executed for a vertical start-up.

Grantek is a full-service Systems Integration Company dedicated to providing services to the manufacturing community in the areas of:

- ✓ Control Systems Design
- ✓ Information Management
- ✓ Project Management
- ✓ IT Design & Support
- ✓ Electrical Design
- ✓ ERP Integration
- ✓ MES Implementation
- ✓ GE Intelligent Platforms Solutions Provider
- ✓ Web Enabled Solutions
- ✓ Panel Fabrication
- ✓ Process Design
- ✓ Building Automation
- ✓ RFID Solutions

Grantek has the following professional certifications:

- ✓ Control Systems Integrators Association Certified
- ✓ Certificate of Authorization, PEO
- ✓ Rockwell Automation Recognized System Integrator
- ✓ Wonderware SI ArchestrA Certified
- ✓ Inductive Automation Enterprise Integrator
- ✓ Siemens Solution Partner (Advanced Factory Automation, Process Control System PCS7)
- ✓ GE Intelligent Platforms Solutions Provider
- ✓ MESA Recognized Practitioners

Grantek Systems Integration has offices located in British Columbia, Ontario, Quebec, Illinois, Pennsylvania, Ohio, California, Florida, and Bangalore.

2.2.2 Grantek's Life Sciences Sector Experience

Grantek has over 20 years of experience working in the Life Sciences sector, providing automation and integration services. Grantek's team of 142 engineers, designers, MES engineers, consultants, and project managers have a strong understanding and deep knowledge of the Life Sciences industry, including full plant integration, process automation, network infrastructure/design, and OEM equipment integration. We have selected two projects to highlight our capabilities in Life Sciences. In 2021, Grantek executed over 450 projects in the Life Sciences sector across the Biotechnology, Pharmaceutical, and Medical Device sub-sectors. The projects ranged in size from service & support calls to greenfield new builds. Scopes included preliminary engineering, HMIs, Controls, Process Automation, Batching, Recipe management, SCADA, panel design and fabrication, GAMP Documentation, Data Integrity, Electronic Batch Records, Vision Systems, Building Automation and Environmental Monitoring Systems, implementation of FactoryTalk Batch and PCS7.

2.2.2.1 List of Relevant Projects

Below is a snapshot of relevant projects for Johnson & Johnson to review. Please feel free to contact us regarding these projects if you have any questions or require clarification. In addition, Grantek provided Johnson & Johnson with a live demo of our Label Verification solution with Listerine bottles in March 2021.

2.2.2.1.1 Packaging Label Verification and SQL Solution

Grantek provided a SQL Database solution to the existing Ignition system and the addition of a Cognex InSight Camera to a cartoner that verifies the laser date code printed on each package. The SQL Database contained all the information for the Cognex Date Code OCV, Label Verification System, Laser Marker SKU Management, and Print and Apply Systems. Grantek additionally provided the onsite commissioning and training. This project was completed in August 2021.

Technologies: Cognex InSight D902, InSight ViDi, and Microsoft SQL Server.

Project Size: $100k – $150k USD

Results: Saved Money, Time and avoided costly recalls. Large return on investment.

2.2.2.1.2 Food and Beverage Label Verification System

Grantek provided documentation, electrical design, and software design for a label verification solution over 7 different lines that started using Cognex InSight hardware to verify labels using pattern matching and/or OCV. Eventually, the lines transitioned to using a 2D barcode matrix. Grantek additionally provided the onsite commissioning and training. This project was completed in March 2021.

Technologies: Dataman 362x with associated 10.3mm lens, Cognex VisionView CE-SL, AB 9356-PRO2300, and handheld scanners

Project Size: $400k – $500k USD

Results: Saved Money, Time, and avoided costly recalls. Large return on investment.

3 Scope of Work

Johnson & Johnson approached Grantek to provide a Label Verification solution and TRP Band Inspection System for the integration of the new liquid filling and packaging line 2008. As part of this project, Grantek will provide services for Label Verification best practices, scope, inspection and controls hardware for installation at the plant floor.

This proposal covers the preliminary engineering and execution of label verification for Line 2008 within the Johnson & Johnson, Lititz facility.

3.1 Electronic Label Verification – Bottling Overview

The Listerine bottles will have a laser printed Lot/Expiration Date code on the rear label of the bottle. The ELV system will inspect each bottle inside the Fuji labeler for the following:

- Read and verify the 2D Data Matrix RMC (raw material code) – Front, Back, and Shoulder Labels.
- Read and Confirm laser printed lot number and expiration data – Back Label Only.
- Check label skewing – Front, Back, and Shoulder Labels. Skew check limited to label orientation to within + / - 3 degrees of desired orientation.

If a bottle is non-conforming, it will be rejected using the integrated reject provided by the Fuji labeler. Lastly, the ELV will be integrated with the Fuji labeler to stop the labeler for the conditions in Section 3.4.

3.2 Electronic Label Verification – TRP Bander Project Overview

The Listerine bottles will have a sleeve applied based on the defined variable speeds. The ELV will inspect the bottles to ensure they have a TRP band, and it is applied correctly – the band position is within a specified tolerance of $\pm$1.5 mm, or wider tolerance specified by Customer, of desired position. If the band is outside the tolerance as specified by Customer for a given product, or missing, the Listerine bottle will be rejected using the integrated reject provided by Sleever International. Lastly, the ELV will be integrated with the Sleever International bander to stop the bander for the conditions in Section 3.4.

3.3 Johnson & Johnson System Requirements

- The Label Vision System shall be capable of inspecting and verifying the 2D code printed on each of the three labels (Front, Back and Shoulder) travelling through the labeler at:
    - Maximum OEM rate at 354 bpm and 335 bpm considering machine availability for 1L bottles / based on 300 bpm nominal speed at filler machine
    - Maximum OEM rate at 378 bpm and 358 bpm considering machine availability for 250mL and 500mL bottles / based on 320 bpm nominal speed at filler machine

- The Vision System shall be integrated with the labeler in order to receive the trigger signal and will maintain a shift register to send a signal to trigger rejects to the labeler reject station. OEM machine will send an index shift or clock pulse signal to Grantek ELV panel for bottle tracking.
- The system shall be able to receive a trigger from the sleever system to capture an image and will send a signal to trigger rejects to the sleever reject station. OEM machine will send an index shift or clock pulse signal to Grantek ELV panel for bottle tracking.
- The system shall have a Cognex vision system to check 2D information on each label. Range of 2D Data Matrix code size is 4x4mm to 8x8mm with 12x12 (rows and columns).
- The Camera brackets shall have the ability to be adjusted left-right, up-down, and angled to compensate for 2D Code position on the label or for glare
- The system shall have a Cognex vision system to check laser printed information by means of OCV. Range of fonts is 5.5 point (equivalent to 1.15mm in OCR-B font) to 12 point (equivalent to 3.0mm in OCR-B font).
- Vision System must have a name plate that states serial number, model number, OEM, date of construction, and voltage

3.4 Label Verification Details:

To operate the line, the operator will select the current product from a new HMI that will be installed for the Label Verification system. A single no-read, incorrect code date, or skewed label will be rejected from the Fuji labeler. Missing, too high, or too low bands will be rejected from the TRP bander. If either vision system rejects three (configurable) consecutive bottles in a row, per label position, or if a single wrong barcode is detected, the Fuji labeler or Sleever International bander will stop immediately and will require operator or supervisor intervention to restart.

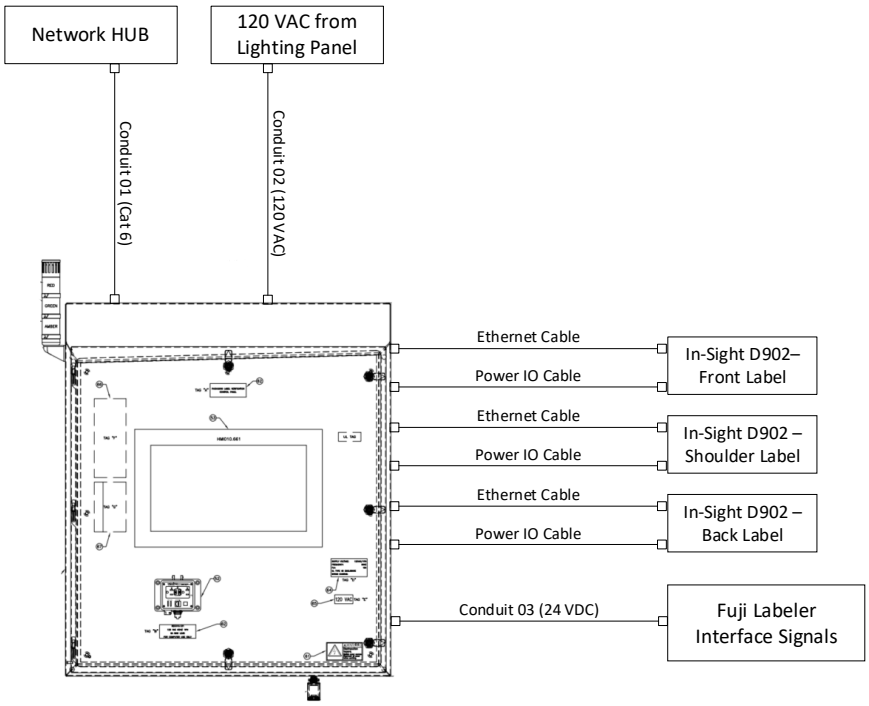

Figure 1 – Proposed conduit layout for labeler ELV system.

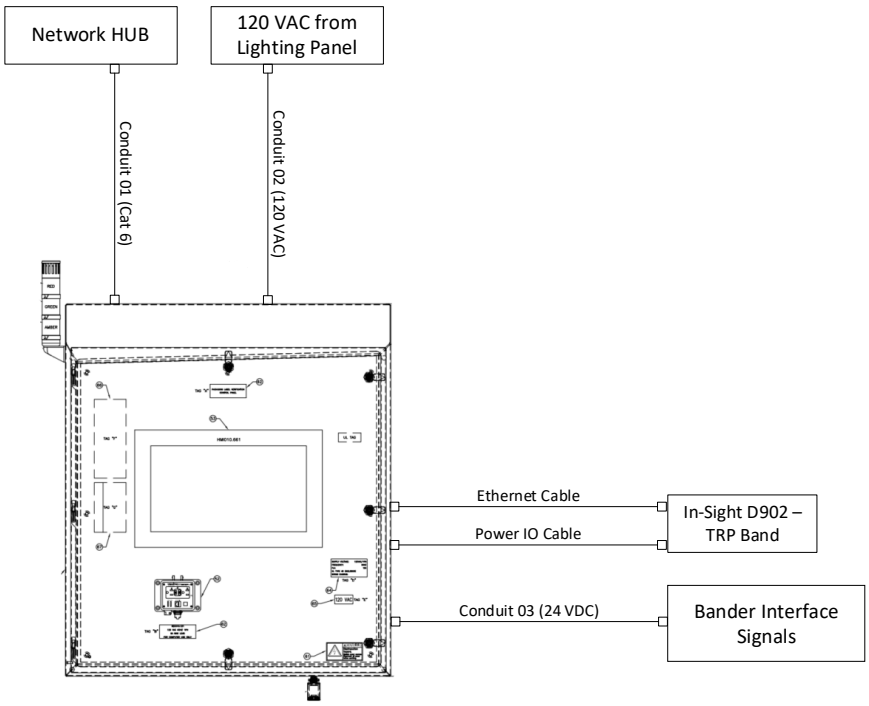

Figure 2 - Proposed conduit layout for TRP inspection system.

At each ELV system, Grantek will design a label verification control panel. This panel will:

1. Allow the operator to select the product to run from a pre-populated SKU list.
2. Provide an operator interface to view real-time images from the camera.
3. Interface with the production line via Discrete I/O to stop the line in event of a failure.
4. Interface with the inspection trigger signal from the OEM equipment.
5. Control the product reject and reject timing for new rejects where applicable.
6. Interface with the camera via Ethernet/IP.
7. Control the stack lights and audible alarm.
8. Receive operator commands from the new HMI.

Each Label Verification panel will contain its own layer 2 managed Ethernet switch to connect the Cameras, PLCs, and HMIs. This will ensure that traffic between these items remains local to the panel.

3.5 Administration Application

A web-based SKU Management application will be developed and installed by Grantek using Inductive Automation Ignition Perspective with a SQL Express database. This web application will allow for adding and editing products and their packaging barcodes; a supervisor can modify the list of products, and their expected barcodes which will then be automatically distributed to the ELV inspection systems for selection by the operators at the ELV HMIs.

3.6 On-Site Services

Onsite services have been estimated based on a 10-hour workday in addition to the associated travel time. Below lists the estimated number of days and trips currently allocated for commissioning, start-up, and training. If more trips are required due to an issue outside of Grantek's direct control, those additional trips will be processed as a change order. For example, production delays, key stakeholders being unavailable to answer questions or approve work, inability to access the lines, or unresolved network connectivity issues are all considered examples of items outside of Grantek's direct control.

Each line label verification panel will pass FAT (provided at OEM facility) and onsite SAT to verify that the system performs as expected.

European OEM Trips: Trips will happen one after the other to support one overseas flight.

FAT at Fuji OEM in Italy (5 Days):

- Construction Support (1 day)
- I/O Checkout (1 day)
- Commissioning (2 days)
- FAT (1 day)

FAT at Sleever International OEM in France (5 Days):

- Construction Support (1 day)
- I/O Checkout (1 day)
- Commissioning (2 day)
- FAT (1 day)

Onsite Startup Support, Training, and SAT at Lititz, PA facility (1 Trip, 3 Days)

- Startup Support, Training, and SAT (3 days)

Training:

- 3 operator training sessions lasting 30 minutes per Line
- 3 maintenance training sessions lasting 1 hour
- 3 SKU Management application training sessions lasting 1 hour.
- Training will be scheduled during commissioning and start-up; no additional travel days have been provided in this estimate for training. If required, travel for separate training days can be provided in a Change Order.

Post commissioning support will be processed as a change order.

3.7 Management

- Internal project management and design reviews.
- Coordinate meetings related to Grantek's scope of work and communicate minutes.
- Prepare, maintain, and communicate the action register.
- Monitor the scope of work against project progression.
- Attendance at weekly scheduled project meetings.
- All meetings will be conducted remotely and scheduled between 9AM – 5PM EST.

4 Deliverables

4.1 Grantek Deliverables

4.1.1 Documentation

- A User's Manual will be developed for each of the control systems. The User's Manual will include a graphical depiction of each screen along with a description of how the control elements on each screen are used and complete description for each alarm along with a recommended course of corrective action.
- A Maintenance Manual will be developed to describe in detail how to maintain/troubleshoot the control system and backup/restore system components.
- A recommended spare parts list will be provided.
- A Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) protocol will be developed to test the full functionality of the installed system.
- A SKU Management Application Manual to describe how to add and edit the barcode recipe database.
- Installation Scope of Work (SOW) document for the electrical and mechanical installation.
- One "review / revise" iterations for each released document are included in this proposal. Additional revisions of the documentation will be charged on a time and expense basis, at standard Grantek rates.

4.1.2 Software Design

- Cognex In-Sight programming for 2D barcode reading, code date OCV, and defect detection tools and interface with ELV PLC for primary packaging.
- Label Verification PLC programming to include:
    - Interface with the SKU Management Database to receive product/resource code associations.
    - Interface with the production line via Discrete I/O to stop the line in event of a failure.
    - Interface with the production line via Discrete I/O to stop the line in the event that the line is producing, and packages are not detected at the verification station. This requires the Fuji labeler and the Sleever International bander to provide a machine producing signal to the ELV PLC.
    - Interface with the cameras via Ethernet/IP.
    - Interface with the reject via discrete I/O signals to the labeler and bander.
    - Control the stack lights and audible alarm.
- Configuration of HMI and cameras for real-time and failed image display.
- SQL Server Database Architecture Design and Installation
- Ignition based SKU Management application Development and Installation

- PLC programs and HMI configurations will be tested and simulated prior to installation.
- All software development will be done in a well-documented manner.

4.1.3 Electrical Design

- Development of a standalone electrical drawing package for each ELV system.
- Provide electrical schematic diagrams set to meet the requirements of the project. All drawings will be provided in soft and hard copy, in AutoCAD format. The electrical design package will include:
    - PLC Architectural drawings.
    - Electrical Schematic Drawings.
    - Bill of Materials.
    - Panel Layout drawings.
- Provide as-built electrical drawings in hard copy and AutoCAD format.
- Provide Bill of Materials outlining items to be purchased by Johnson & Johnson and/or the Electrical Contractor.
- Provide an electrical installation scope of work for the Electrical Contractor.

4.1.4 Electrical Hardware and Panel Assembly

- Panel Assembly.
- Grantek panels come complete with all mounting hardware, wire duct, terminals, applicable fusing, wire tags, device tags, and assembly.
- Cognex camera model, lens, and lighting hardware has been estimated based on initial requirements from Johnson & Johnson. The final BOM will need to be confirmed with a feasibility study by Grantek and Cognex after receipt of PO. Changes to the estimated BOM as a result of the feasibility study may impact the project price and will be handled as a Change Order.
- Estimated/Generalized Bill of Materials as follows:

Quantity	Description
2	ELV Control Panel – CompactLogix PLC, Industrial PC, 10-port Stratix 5700 Switch, Operator HMI Touchscreen, 24VDC Power Supply
4	Cognex In-Sight D902M Camera (ISD902M-61-3701), Integrated Light and Lens (ISAF-7000-8MM, ISLM-7000-00, ISL-7000-RD, COV-7000-PLFULL), 5-meter Ethernet and Power I/O cables
2	Reject Confirmation Photo Eye and 5-meter cable, mounting hardware
2	ELV Control Panel Floor Stand
4	Camera mounting brackets for up/down, left/right, in/out, and tilt adjustment

Table 1 – Hardware supplied by Grantek

4.1.5 Commercial Software

The following Commercial Software has been included in this proposal for the SKU Management application and floor HMI applications. It is assumed the Windows Servers to host the Inductive software and SQL Server database will be provided by Johnson & Johnson at the Lititz, PA facility.

Description	Quantity
Ignition Platform	1
OPC UA Server Module and Core Drivers	1
Alarm Notification Module	1
SQL Bridge Module	1
Perspective Module (Unlimited)	1
Vision Module (Unlimited)	1
Tag Historian Module	1
Web Browser Module	1
Reporting Module	1

All other licenses are provided by Johnson & Johnson.

4.1.6 Programming and Operator Interface

A fully documented source code will be provided to the client upon completion of the project.

4.1.7 Meetings

Grantek has provided for 6 hours of meetings in this proposal – 30 minutes per week for 12 weeks. Additional meetings will be charged on a time and expense basis, at standard Grantek rates.

4.2 Customer Deliverables

- Detailed project schedule.
- All existing electrical drawings relating to the current systems.
- Copies of the latest PLC programs, HMI applications, and configuration files as required.
- All mechanical, electrical, and network relocations and installations.
- Electrical inspections as required (UL/NEC).
- All risk assessments and recommendations.
- All electrical components and instrumentation not listed within Grantek's scope of supply.
- Technical Support for Commissioning & Start-up.
- Appropriate downtime.
- Johnson & Johnson is responsible for supplying all label types for evaluation so that Grantek can confirm image acquisition performance. Grantek cannot be held responsible if an unknown or untested label type requires further hardware or additional initiative to obtain the specified/required result. Any modifications or changes will be treated as a change order.

4.3 Summary of Deliverables

The following table summarizes the split of key responsibilities this proposal aligns with.

Deliverables	Grantek	Customer or Others	Not In Scope
Management and Meetings			
Meeting scheduling and meeting minutes	✓		
Production schedule and project schedule		✓	
Production downtime coordination		✓	
Construction management		✓	
Attendance at scheduled meetings	✓	✓	
Action register	✓		
Monitor scope, communicate potential change orders	✓		
Documentation			
Operator Manual	✓		
Technical Manual	✓		
SKU Management application manual	✓		
FAT and SAT	✓		
Document review and approvals		✓	
Hardware and Devices			
Hardware as outlined in 4.1.4.	✓		
All other hardware		✓	
Software			
Software licensing and activation for items in Section 4.1.5.	✓		

Deliverables	Grantek	Customer or Others	Not In Scope
Supply Windows Server virtual machines, Windows Licensing on Johnson & Johnson provided servers at Lititz facility.		✓	
Provide existing PLC/HMI programs		✓	
Server setup for ELV SQL database and SKU Management web application	✓		
OEE Integration			✓
On-Site			
Coordination of contractors		✓	
Commissioning schedule coordination		✓	
Training	✓		
Production support during commissioning	✓		
Post commissioning support requests			✓

Table 2 – Division of Responsibilities Matrix

4.4 Assumptions, Clarifications, and Exclusions

4.4.1 Project Specific

Reference	Description
Assumptions	
PSA0	This quote is based on the design detailed in the document URS Line 2008 Label Verification and TRP Detection Rev 0. Any variances from this design will be handled as a change order.
PSA1	Lititz, PA facility has server infrastructure in place to host Inductive Automation Ignition software. Servers will be able to communicate with the ELV industrial PCs on the plant floor prior to commissioning.
PSA2	Onsite trips have been included as indicated in the onsite services section of this proposal. Additional onsite trips will be processed as a change order.
PSA3	Johnson & Johnson will provide remote access to all cameras and PLCs for remote troubleshooting.
PSA4	Commissioning will occur at least 8 weeks from the receipt of a PO.
PSA5	Cognex camera model, lens, and lighting hardware has been estimated based on initial requirements from Johnson & Johnson. The final BOM will need to be confirmed with a feasibility study by Grantek and Cognex after receipt of PO and product samples of all SKUs. Changes to the estimated BOM as a result of the feasibility study may impact the project price and will be handled as a Change Order.
PSA6	Training of back labels for inspection using code date OCV and vision tools will be completed for the quantities listed in this proposal. Any additional training of labels will be handled as a change order.
PSA7	All labels will be shipped to Grantek prior to beginning of design. Labels will be shipped organized by production line.
PSA8	It is assumed all labels contain a 2D Data Matrix prior to the start of commissioning. If 2D barcodes are not available, the cameras may be configured and aligned for 1D UPC inspection if requested. A change order will be required to convert inspection from 1D to 2D at a later date.
PSA10	The 2D barcode will be in the same location for all products running on a line. Any changes required to accommodate multiple barcode locations will be handled as a change order.
PSA11	Production will be available for commissioning after installation and I/O checkout. Any commissioning delays or extra trips required due to lack of production will be handled as a change order.
PSA12	All 2D Data Matrix codes for 250ml, 500ml, and 1L bottles will be visible within a fixed 75mm x 75mm field of view for inspection, based on information provided in 2021 05 11 URS Line 2008 New Labeler - Lititz Format_rev07 and the 2D size requirements in Section 12 of the GPLV_FRS_3.6 document.
PSA13	Johnson & Johnson will supply all necessary server licenses not explicitly listed, including, but not limited to Windows, MS-SQL.
PSA14	Fuji and Sleever International machines have sufficient mounting space for Grantek's existing camera brackets. Additional mechanical design to accommodate smaller spacing inside the OEM machine may require a Change Order.
PSA15	Efficiency, Reject Rate, and False Reject Rate may be impacted by factors outside the Label Verification system's control. Target rates are acceptable provided factors outside the Label Verification system's control have been excluded from the rate calculations. These factors include but not limited to the following: dirt or residue buildup on the camera lens cover, print defects on the 2D or Code Date text, improperly applied labels, missing labels, damaged labels or other defects such as wrinkles or folds on the 2D or Code Date text.
PSA16	TRP band defects limited to presence/absence of a band and relative location (high/low) position of the band with respect to a target position reference. Position tolerance should be +/- 1.5mm or greater from desired position.
PSA17	Expiration date and lot number information for the back label OCV inspection will be supplied by J&J, either at runtime by the Operator or as part of a stored parameter for each SKU.
PSA18	Grantek assumes OEM will provide the reject in the Fuji labeler and Sleever International bander. Grantek will integrate by sending a reject signal to the machine. OEM to provide Grantek a machine clock pulse or shift index signal for Grantek to track the bottle in the machine.

Reference	Description
PSA19	Grantek to provide Fuji and Sleever International OEMs with a LV permissive (permit to run) signal. If this signal goes low, the OEM machine should perform a controlled stop, and it may not restart until the signal transitions back high.
PSA20	All expiration and lot code text for 250ml, 500ml, and 1L bottles will be visible within a fixed 75mm x 75mm field of view for inspection, based on information provided in 2021 05 11 URS Line 2008 New Labeler - Lititz Format_rev07 and the font requirements in Section 12 of the GPLV_FRS_3.6 document.
PSA21	To support future proofing the system, greater reliability and a better user experience, the ability to edit or modify camera settings will be via Cognex Web HMI, or via Cognex Insight Explorer or Cognex DataMan Configuration Tool. These will require manual change control processes.
Clarifications	
PSC0	No additional project specific clarifications have been listed.
Exclusions	
SPE1	Software licenses not specifically outlined in this proposal are not included.
SPE2	Update to the MES OEE system is not included.
SPE3	Electrical and Mechanical installation of the ELV system for the OEM FAT and onsite at Lititz, PA facility is not included.
SPE4	Qualification deliverables and support beyond Grantek's standard FAT / SAT for ELV are not included.

Table 3 – Project Specific Assumptions, Clarifications, and Exclusions

4.4.2 Assumptions

Reference	Description
Assumptions	
General	
AG1	All hardware and design time quoted by Grantek is assumed to be for non-hazardous environments unless in writing, the client has explicitly advised Grantek that hardware will operate in hazardous environments. Should hazardous environment requirements be raised later in the project lifecycle, Grantek will issue a change order for alternate hardware and additional design time as required.
AG2	Customer project manager will have overall responsibility and authority for driving all project decisions, ensuring deliverables are reviewed and approved as per the Project Management Plan, facilitating discussion and communication among all parties as needed, and securing any required Customer or third-party resources.
AG3	Customer shall commit the necessary skilled resources and management time, as described above, to support Grantek services, to perform the review and acceptance cycles in a timely manner, and to accomplish the objectives of the project.
AG4	Decisions to be made by Customer will be made promptly and communicated through Customer 's project manager. Customer's project manager and various team leads and project resources shall have all necessary authority to commit Customer with respect to the subject matter of this project.
AG5	Documents will have one (1) review cycle only; all edits and changes must be indicated in the first review and once made, the document will be finalized.
AG6	The scope of the project as documented above shall remain unchanged, except as otherwise agreed by Grantek and the Customer in writing via Change Order document.
AG7	If specifications and/or acceptance criteria or procedures have not been agreed to, they will be promptly agreed to prior to Grantek's completion of the applicable deliverable.
AG8	For the duration of the project, Customer will provide an acceptable working location (physical and virtual) for the team.
AG9	The Customer will attend scheduled meetings and respond to Grantek inquiries within two (2) business days.
AG10	The Customer will review and comment on project documentation submitted for review within five (5) business days.
AG11	The Customer will provide remote access to all systems (PLC, HMIs, databases, servers, etc.) affected by the scope of this project for remote code updates and troubleshooting.

Reference	Description
AG12	All existing documentation relevant to Grantek's scope of work will be provided by the Customer.
AG13	The Customer will schedule to have the appropriate resources available to run production in order to provide support for commissioning, process modifications, programming changes, startup, and post-installation activities, so that Grantek can monitor and test system updates. Any commissioning delays or extra trips required due to lack of production will be handled as a change order.
Requirement	
AR1	In the absence of Customer Standards or Specification documentation, the Customer will assume any additional costs incurred for changes to the system required at a later date to conform to Standards and/or Specifications.
AR2	All aspects of mechanical, electrical and process safety are requirements of the Customer.
AR3	Classification of Hazardous Areas will be provided by others.
Installation	
AI1	Electrical installation including all material to be provided by others.
AI2	All field wiring, conduit, junction boxes, etc. to be provided by the electrical installer.
AI3	Mechanical installation including all material to be provided by others.
AI4	Utility installation including all material to be provided by others.
AI5	Installation area has sufficient power capacity at all required voltages to support all additional equipment to be added as part of the scope of this project.
AI6	Installation area has sufficient pneumatic capacity to support all additional equipment to be added as part of the scope of this project.
AI7	Resolution of any UL/CSA/NEC or equivalent issues found during the investigations of existing equipment is outside the scope of this estimate.
AI8	All hardware additions/modifications are to pass regulatory inspection by others.
AI9	Any additional construction management not specified elsewhere in this proposal requires a Change Order document prior to commencing.
AI10	Customer will provide required downtime for retrofitting of equipment, if required.
AI11	Grantek Automation On-site Configuration Environment Requirements: - Customer Automation contact available each day. - Customer IT contacts available as consultants as needed. - IT related tasks including security, networking, etc., to be setup by site IT group before Day 1 Commissioning.
Development	
AD1	Unless otherwise stated, all hours for design, installation and commissioning are to occur during normal weekday business hours (i.e.. 9am to 5pm Monday to Friday local time).
AD2	For 21 CFR Part 11, audit trail will not include the users' screen navigation actions (screen display requests).
Timeline	
AT1	Project timeline to be provided by others.
AT2	If Grantek is delayed, or changes are made to the scope or schedule, Grantek will execute a change management process. Upon approval from the Customer, Grantek will implement changes.
Performance	
AP1	Grantek will not be held responsible for performance issues related to individual machines built by other equipment vendors.
AP2	Grantek will not be held responsible for the late delivery of any third party supplied goods to Grantek.
AP3	Services and recommendations provided do not guarantee or warranty complete protection against all cyber security incidents.
AP4	In the event that a data restore is required, there is no guarantee that the last restore point or backup will recover all information lost.

Reference	Description
Version (Software)	
AV1	Unless otherwise stated, the latest version of all software required for design and configuration will be used for all programming.
AV2	Microsoft Office will be used for all document and spreadsheet creation.
AV3	AutoCAD will be used for all drawing creation (native DWG format).

Table 4 – Assumptions

4.4.3 Clarifications

Reference	Description
Clarifications	
General	
CG1	At its sole discretion, Grantek reserves the right to determine if a warranty claim qualifies as warranty work.
CG2	All project work and installations will be completed no longer than one (1) year after receipt of PO. Work extending beyond one (1) year may be subject to a change order.
CG3	In the event that any of the assumptions, exclusions or limitations specified in this proposal are not satisfied, these situations will be re-evaluated on a case-by-case basis and Grantek is not responsible for affected related scope.
CG4	The Customer is responsible for ensuring that all existing field devices that are in use, or that are to be reused, are in good working order, or will be repaired or replaced by the Customer when required. Grantek is not responsible for repair and/or replacement of damaged existing field devices.
CG5	Any changes to the BOM will result in a Change Order.
CG6	The Customer is responsible for providing a safe and secure work environment and for providing personal protection in connection with the work (including at the work site, transportation to and from the work site and any necessary stay in the vicinity of the worksite in connection with the work).
CG7	All prices in this document which are referred to as “time and expense”, “time and material”, or “estimate” or in a related spirit thereof, are subject to changes in accordance to future contractual rate agreements between Grantek and the Customer. In the case where the costs associated with this proposal are incurred during a future period where Grantek’s associated billable rates have changed, those costs will be charged to the Customer at the higher of (1) the billable rates outlined in this agreement or (2) the billable rates in place at that time.
CG8	This proposal does not include any “time and expense not to exceed” terms, either in direct terminology or in spirit.
CG9	"Supplier Background Technology" means all software (in source code, object code, and executable formats), data, know-how, ideas, methodologies, algorithms, designs, inventions, processes, methods, specifications, tools, documents, manuals, and technology, including all Intellectual Property Rights therein, that are developed by or proprietary to Supplier or to its third-party providers.
CG10	Grantek is and shall remain the sole owner of all right, title, and interest in and to "Supplier Background Technology" (refer to CG9, above), subject to the following license granted to the Customer. Upon payment of the agreed compensation to Grantek, the Customer will be deemed to have been granted a non-exclusive, non-transferable, royalty-free, perpetual license to use the "Supplier Background Technology" for the purposes contemplated in the applicable Statement of Work, except that “off-the-shelf” third-party software or hardware provided through Grantek will be subject to the Customer’s compliance, at its own costs, with all applicable third-party licensing requirements except as otherwise provided in the applicable Statement of Work. The Customer may not sell, sublicense, assign or transfer its license to "Supplier Background Technology" provided by Grantek without the prior written consent of Grantek (except as specified in the applicable Statement of Work), nor may the Customer reverse engineer the "Supplier Background Technology".

Reference	Description
CG11	Grantek makes reasonable efforts to avoid introducing any malware to the client's environment, but Grantek can make no guarantees regarding the cybersecurity of the Customer's systems. Grantek shall not be held liable for any breach of security to the client's systems arising from or in connection with its work.
CG12	In addition, if the costs that Grantek bears to provide the goods and/or services are materially and adversely impacted by supply chain disruptions, an equitable adjustment to the Price (to be paid by the Customer) shall be made as mutually agreed upon by the Parties.
Hazardous Materials	
CH1	Grantek is not responsible for the removal of, or protection from, hazardous materials.
Support	
CS1	Unless explicitly stated within this document, no additional support services have been included, excluding warranty work if applicable.
CS2	Any Customer requested warranty work that is performed and found to be outside the warranty terms will be billed at unscheduled work rates.
CS3	Work will be considered unscheduled if a PO has not been received referencing a Grantek proposal four (4) weeks prior to the work being commenced. Unscheduled work includes: - Four (4) hour minimum charge. - Travel Time at Unscheduled Work Hourly Rate. - 1.5x hourly rate for Monday – Friday 9am to 5pm - 2x hourly rate outside of Monday – Friday 9am to 5pm
CS4	When a completed resolution is not possible within the resolution time (i.e., lead time of a replacement part), a resolution plan and timeline will be delivered to the Customer within an agreed upon timeline.
CS5	Unused support hours cannot be transferred from plant to plant.

Table 5 – Clarifications

4.4.4 Exclusions

Reference	Description
Exclusions	
General	
EG1	This proposal does not include any additional review meetings beyond those explicitly described in this proposal. Additional review meetings and associated changes will be handled through a Change Order document.
EG2	This proposal does not cover other factors including, but not limited to, actions such as strikes, lockouts, labor disputes of any kind, delay of transport, delay of other contractors, war, local emergency, regional emergency, nation emergency and compliance to government emergency order of any kind.
EG3	Grantek does not provide any guarantee associated with throughput performance of the system.
EG4	Interaction with 3rd party equipment or devices that is not specifically outlined in this proposal is not included.
EG5	Software licenses not specifically outlined in this proposal are not included.
EG6	Training not specifically outlined in this proposal is not included.
Safety	
ES1	Grantek is not tasked with ensuring the solutions and services outlined in this proposal provide an adequate level of personnel protection. Any protective measures, safeguarding devices or safety-related parts of controls systems currently in place are assumed to be correct and appropriate for level of risk. It is the Customer's responsibility to perform a proper risk assessment to evaluate the potential risks associated with the proposed modifications and to determine the appropriate risk reduction measures that may be required to lower the risk to an acceptable level.

Reference	Description
ES2	The Customer shall provide a complete set of requirement specifications for all associated safety design and safety performance criteria. These specifications may include the application of guarding or safeguarding devices and/or the requirements for safety-related parts of control systems (SRP/CS). Only guards, safeguarding devices, or safety-related parts of control systems (SRP/CS) identified by The Customer will be included in the scope of work.
ES3	Where aspects of requirement specifications are not provided or unknown, Grantek's modification will be designed to meet or exceed the existing performance (e.g., circuit performance, holding force, response time, etc.) and maintain equivalent functionality (e.g. stop category, control of hazardous energy, etc.).
ES4	Any safety-related aspects discovered throughout the project lifecycle that appear to be insufficient, inappropriate or non-compliant to industry best practice standards will be brought to the attention of the Customer to determine appropriate actions.
ES5	All safety requirement specifications provided by Customer as part of this project are assumed to be correct and appropriate. In the event there is any missing or conflicting information, it is the Customer's responsibility to determine the correct course of action.
ES6	Grantek will apply well-tried safety engineering principles to all design elements within this project. This includes careful selection, combination, arrangement, design, assembly and installation of components/system related to the application.
ES7	All existing safeguarding devices, complementary devices, Safety-Related Parts of Control Systems included in the scope of work shall be identified by the Customer before any design or engineering is performed.
Industrial Information Technology	
EIIT1	Grantek is not tasked with developing system requirements related to technical infrastructure to support the system, including but not limited to project scope, network design, virtualization, storage, or computation. The Customer will provide a User Requirements Specification detailing the exact scope requirements and criteria for acceptance. Grantek cannot be held responsible for the network or computing performance including infrastructure availability, speed, connectivity, bandwidth, and overall performance of the system's infrastructure. If infrastructure upgrades are required, it is expected that the Customer will perform the necessary upgrades to support the system or Grantek's Industrial IT services may be added to the project to troubleshoot, define requirements, or design and deploy infrastructure.
EIIT2	Grantek is not tasked with developing system requirements related to cybersecurity to the system, or deploying compensating controls beyond those which are explicitly mentioned in this proposal. The Customer understands it is responsible for securing its own equipment, facilities, systems, and networks, and as such will provide a User Requirements Specification detailing the exact security criteria for system acceptance. If cybersecurity risk and business continuity is a concern, Grantek's Industrial IT services may be added to the project to assess cybersecurity risk to the system, understand the Customer's risk tolerance, and define and implement the required security controls to reduce risk to a tolerable level.

Table 6 – Exclusions

5 Schedule

Grantek is currently booking resourcing approximately 6-8 weeks after receipt of PO. Upon receipt of PO, Grantek will provide estimated lead times of hardware within Grantek's scope of supply. Note that due to global supply chain constraints hardware lead times are longer than normal at this time.

NOTE: COVID-19 restrictions may impact tentative schedule provided below based on state, regional, and company policies that are currently in flux.

6 Pricing

This project will be completed on a Fixed Price basis.

Item	Total
Total Design, engineering, management and meetings	$106,689.10
Total Software Costs	$22,845.90
Total Hardware Costs	$125,100.86
Travel Time and Expenses to OEM sites in EU for FAT	$8,179.73
Estimated on Site Commissioning, Testing and training	$31,441.02
Partnership, Technology, and Template Development Investment	($42,000.61)
Total Price	**$252,256.00**

Note: Additional travel expenses in excess of quoted amount will be invoiced back to the Customer at 5% or the applicable amount agreed to with the Customer.

6.1 Travel

Grantek employees will travel home every weekend unless otherwise agreed to in writing.

7 Commercial Terms

7.1 Payment Schedule

- The Payment Schedule is as follows:
    - 20% when order placed, upon invoice receipt
    - 40% upon successful completion of FAT
    - 20% upon receipt of at the Lititz site
    - 20% upon completion SAT

7.2 Payment Terms

- All prices in this document are in USD Funds.
- All shipping excluded from this quote
- All prices in this document are FOB Allentown, Pennsylvania, United States.
- This proposal is valid for thirty days.
- Taxes are not included in any prices listed in this document.
- Net 60 days,1.5% per month on overdue accounts.

7.3 Ownership

All software and hardware purchased under this order will become the property of and registered to the Customer. Grantek reserves the right to use any source code and other developments produced by this order on any future Johnson & Johnson projects.

8 Grantek's Partnership with J&J

8.1.1 Grantek's Partnership with Johnson & Johnson

Grantek is committed to developing a partnership with Johnson & Johnson. As part of this partnership, Grantek will leverage our local resources at our Allentown, PA office to provide long term ongoing local support to J&J in Lititz, PA.

Grantek is committed to making this a successful Label Verification project for Johnson & Johnson, as discussed during the presentation, Grantek will work with J&J to refine and develop the terms and scope around the following additional items:

- Additional Support for the successful implementation of this solution at Lititz, PA
- Additional Training Material and a Training SharePoint Site
- Provide online training material for Ignition Training and Certification
- Provide Long Term Grantek "Engineer-In-A-Box" Remote Support
- Provide Documentation, User Manuals, CAD Files and Vendor Reference Material

If selected, in additional to the Partnership, Technology, and Template Development Investment of $ 42,000 as outlined in Section 6, Grantek will further provide access to a Sales Engineer to develop the Label Verification program for J&J. Grantek is committed to the successful implementation of the Label Verification solution at the J&J Lititz site.

8.1.2 Grantek's Inductive Partnership

With over 10 years of experience developing solutions using Inductive Automation's Ignition SCADA software, Grantek is a Premier Integrator and one of seven Enterprise Ignition integrators in the world, a credential which represents the strong engineering workforce certified on the product, track record of successful implementations, and ability to scale for multi-site, enterprise-level initiatives. Grantek has extensive experience guiding customers from business objectives and system requirements to value-add solutions that enable clients to achieve operational success using the Ignition Platform.

In addition to accolades, Grantek has led the way in development on the platform. Leveraging its knowledge of the Inductive platform, Grantek has created Ignition modules for deploying solutions to customers, including Cognex Camera interface modules and various other device drivers (such as printers).

Year over year, Grantek has been one of the top implementers of Inductive's platform, consistently a top 25 reseller of Ignition software in the world. This distinction has been a testament not only to Grantek's

vast experience & number of projects executed using the platform, but also the adoption of Ignition as the preferred software of choice by the market.

Each of Grantek's ten offices are Gold Certified, having more Gold certifications in North America than any other Enterprise Integrator. Grantek ensures projects executed in any region on the continent are served by engineers that have the latest training and using the current best practices from Inductive.

Grantek has 60 developers and engineers that are certified in Ignition (21 Gold certified and 39 Core certified) with several based in our Allentown, PA office. Furthermore, Ignition training is part of our onboarding process for all new employees.

The success and recognition Grantek has gained using Ignition originates from our ability to deliver successful projects and from our ability to understand our customer's business goals.

9 Standard Terms and Conditions

Agreement

The Owner issuance of a purchase order for this proposal indicates that they are in complete agreement with all the terms and conditions contained in this document and agree to be exclusively bound by these terms and conditions. The Owner agrees that they must contact Grantek for clarification if they do not agree with any term in this Agreement. The terms of this Agreement also cover any third-party goods and services procured through Grantek.

This Agreement is the entire Agreement between Grantek and the Owner and supersedes the terms of any purchase orders and any other communications, including electronic mail or oral agreements with respect to this project. If any provision of this Agreement is held invalid, the remainder of this Agreement shall continue in full force and effect. This Agreement may be modified only by written agreement signed by authorized representatives of the Owner and Grantek.

This Agreement covers all goods and services (including without limitation: engineering services, design services, software products [including firmware], hardware products and post-sales support including commissioning and training) associated with this project.

Cybersecurity

Grantek's scope of work does not include creating, modifying or ensuring compliance with The Owner's cybersecurity policies. Although Grantek will not intentionally violate The Owner's cybersecurity policies or intentionally cause a security breach of The Owner's systems, The Owner acknowledges that The Owner is responsible for the creation, implementation, enforcement and adequacy of its cybersecurity policies and that The Owner retains the risk of data theft or destruction and the impacts of malware and ransomware, whether arising from Grantek's work or access to The Owner's systems or otherwise. The Owner will have Grantek's work reviewed and approved at appropriate times by The Owner's information technology (IT) and operational technology (OT) personnel to ensure that any cybersecurity policies (such as connectivity availability and monitoring, multi-factor authentication, data import/export screening, network segmentation, and unescorted user screening, training and monitoring) implemented at The Owner's direction are sufficient to adequately protect The Owner's systems from improper access or use. In accordance with the foregoing, to the fullest extent permitted by law, The Owner shall defend, indemnify and hold harmless Grantek and its subcontractors, agents and employees from and against all claims, losses, and expenses of any nature, including but not limited to reasonable attorneys' fees, arising out of or related to any actual or alleged improper access to or use of The Owner's systems, except to the extent the relevant security breach was determined to be caused solely by Grantek's intentional improper access or use of The Owner's systems.

Access to Information

The Owner agrees to make available to Grantek all information relevant to the project. Errors and omissions beyond Grantek's control are not covered under the scope of this project and will be managed as cost-plus extras.

The Owner agrees that in the event they are unable to provide prompt and timely consideration to the review of items including, but not limited to, contract documents and engineering documents that this may result in cost-plus delay charges for engineering time.

The Owner agrees that in the event they are unable to meet scheduled dates for installation and delivery of hardware or allied components that they will provide climate-controlled, secure storage for the goods in question. The Owner also agrees that this storage time encompasses part of the project warranty period.

The Owner agrees to arrange access to systems associated with this project for engineering services including, but not limited to, design, installation and commissioning. Furthermore, the Owner agrees that delays as the result of restricted access are not part of the scope of this project and will be managed as cost-plus extras.

Project Delays, Cancellation of Order or Termination of Agreement

Excluding Force Majeure events, Grantek reserves the right to charge its additional costs incurred due to project delays beyond its control. Such additional costs will be managed as cost-plus extras.

A cancellation fee of 30% of the remaining project purchase order total is payable by the Owner if the project is cancelled at any time after receipt of order. This fee is added to any time and materials already purchased in the project. Should the Owner no longer require any hardware or associated goods (including software licenses) purchased for the project, any original equipment manufacturer (OEM) fees or their restocking or return fees will be passed on to the Owner. Additionally, the Owner agrees that any hardware or associated goods (including software licenses) that cannot be returned to the OEM must be paid for in full and will become the property of the Owner. The Owner explicitly acknowledges that cancellation fees on some customized goods may be equal to 100% of the purchase price as the goods cannot be used elsewhere.

If a petition is filed by or against a party under any provision of the appropriate bankruptcy laws, the other party may terminate this Agreement and allied agreements immediately upon written notice.

If this Agreement is terminated, the Owner agrees to cease using any Grantek-supplied equipment and return to Grantek all drawings, design documents, discs, DVDs or other memory devices associated with the Agreement. The Owner will not retain copies, notes or excerpts thereof including copies on any storage media.

Contract Resolution

The Owner agrees to reimburse Grantek for any costs incurred in enforcing this Agreement including but not limited to those of an attorney.

When a dispute arises as the result of this Agreement that cannot be resolved in the normal course of business, Grantek or the Owner must provide written notice outlining the nature of the dispute. Grantek and the Owner will attempt in good faith to resolve the dispute promptly by negotiation between executives who have sufficient authority to settle the dispute. Grantek and the Owner agree to seek the services a mutually agreeable non-binding conciliator or mediator to resolve the dispute if sixty (60) days have passed without a resolution agreed to by both parties.

The Owner agrees that disputes involving third-party services requiring Grantek's expertise to resolve but beyond Grantek's scope of supply will be treated on a cost-plus basis.

Equal Opportunity

Grantek is an equal opportunity employer and has instituted an affirmative action program.

Safety, Health and Environment

Grantek provides its employees, sub-contractors and therefore its Owner s with an industry-leading health, safety and environment program. The Owner agrees to provide Grantek's employees and its agents with a safe working environment. Furthermore, the Owner agrees, at their cost, to provide adequate safety, health and environmental training (including, but not limited to: site orientation, WHMIS, GMP/cGMP, HACCP and clean room access training). The Owner will also supply all specialized clean room or Personal Protective Equipment (PPE) in good working order and also provide adequate training on the use of the aforementioned equipment.

The Owner agrees to notify Grantek in advance of any confined space entry requirements or working at height requirements associated with this project. Grantek personnel require access to adequate fall safety equipment when working at heights as covered by US law. The Owner also agrees to notify Grantek in advance of any environmental situations such as the requirement for self-contained breathing apparatus, extreme cold, extreme heat, work in pressurized areas, work in de-pressurized areas, oxygen levels below 19.5% or above 22.0% or the presence of noxious gases. In particular, the Owner also agrees that electronic equipment normally used by Grantek personnel is not rated for hazardous environments or clean rooms or other GMP/cGMP

areas and any specialized equipment must be furnished by the Owner or hired by Grantek as part of the scope of the project.

The Owner agrees to take reasonable precautions in protecting Grantek and its agents from unusual conditions that may result from working in a construction or other project zone such as debris, paint or other contaminants. For summer work when HVAC systems are not yet commissioned, reasonable efforts will be made to provide for re-circulation of air and adequate access to drinking water. Similarly, for winter work similar provisions will be made to provide access to portable heaters.

The Owner agrees to take a reasonable and rational approach with regards to enforcing their Safety, Health and Environmental policies at their facility in regards to Grantek and its agents. This includes, but is not limited to, extra verbal advice on use of PPE or other safety procedures unique to its site.

The Owner agrees to protect Grantek work zones from incursion by other persons not familiar with site safety including but not limited to machine safety and electrical safety (particularly during commissioning when machine guarding and panel doors are not in place or are by-passed). The Owner also agrees that normal safety rules applying to its facility may not necessarily apply including, but not limited, to by-passing of machine guarding, open panel doors, disabled safety circuits and disabled fusing.

The Owner agrees that circumvention of Safety, Health and Environmental safeguards in equipment supplied by Grantek as the result of negligence, misuse, unauthorized modification, inadequate maintenance or other factors nullify any liability or warranty claims made against Grantek.

The Owner agrees that after the review and approval of the Functional Specification associated with this project that any design or associated Safety, Health and Environment items are cost-plus extras. As such, at time of contract quotation, the Owner will explicitly list all federal, state, municipal or other regulations that govern the use of equipment associated with this project. The Owner agrees to furnish Grantek copies of aforementioned regulations for use during the project design. Grantek does not assume any responsibility for compliance with regulations outside of its direct scope of supply.

Conformance with regulatory changes initiated after the approval of the Functional Specification or as the result of the re-location of equipment is the responsibility of the Owner.

The Owner agrees to provide Grantek staff with adequate facilities while on site including but not limited to access to first aid facilities, potable water, toilet facilities, shower facilities (if required), a break/lunch room and safe storage for tools, laptops and allied equipment. If the Owner is unable to undertake such an agreement, then they agree to compensate Grantek for the hire of a project trailer, lockers or equivalent including any fees for electricity, Internet access and waste disposal.

Force Majeure

"Force Majeure" means an event or circumstance, the cause of which is beyond the reasonable control of the party affected thereby and which could not reasonably have been foreseen and provided against by the party affected thereby, including, without limitation, acts of god, strikes, lock outs or other labor or industrial disturbances, accidents, fires, explosions, weather conditions materially preventing or impairing work, inability to secure fuel, power, materials, contractors or labor, mechanical breakdown, failure of equipment or machinery, delays in transportation, wars, civil commotion, riot, sabotage, medical epidemics, quarantines or other public health risks or responses thereto, applicable legislation and regulations thereunder, interruption by government or court orders and future orders of any regulatory body of competent jurisdiction. Notwithstanding any other provision of the Agreement, if by reason of Force Majeure, either party is wholly or partly unable to perform certain elements of its obligations hereunder, or is materially hindered or interfered with in its performance of such obligations, it shall be relieved of those obligations (excluding the payment of money due to the other party under this Agreement) to the extent, and for the period, that it is affected by Force Majeure, provided that the affected party gives the other party prompt notice of such inability, hinderance or interference. In addition, if the costs to Grantek to perform the Services and/or provide the Deliverables are materially and adversely impacted by Force Majeure, an equitable adjustment to the Total Price shall be made and mutually agreed upon by the parties. The party affected by Force Majeure shall use all reasonable efforts to remedy the situation and remove, so far as possible and with reasonable speed, the cause of its inability to perform, or the hinderance or interference in its performance, provided that there shall be no obligation on a party so affected to settle labor disputes or to test or to refrain from testing the validity of any order, regulation or law in any court having jurisdiction.

Governing Law, Jurisdiction and Venue

The Agreement created by the Owner's issuance of a purchase order for this proposal shall be deemed to have been made in, and shall be construed pursuant to the laws of the State of Pennsylvania (Commonwealth of Pennsylvania), United States of America and any action or proceeding arising out of or related to this Agreement shall be brought only in the courts of such jurisdiction. The parties hereby consent to such jurisdiction and venue. Federal courts, where applicable under FAR, will overrule this item.

Licenses and Approvals

Except where specifically outlined in the contract documents or this Agreement, nothing contained herein this Agreement shall be construed as imposing responsibility of liability upon Grantek to obtain any permits, licenses (including export or import licenses) or approvals from any agency required in connection with the supply, erection or operation of the equipment.

Limitation of Liability

This clause is overruled as applicable by contract items such as the Performance Bond.

Grantek shall not be liable, whether in contract, warranty, failure of a remedy to achieve its intended or essential purposes, tort (including negligence), strict liability, indemnity or any other legal theory, for loss of use, revenue or profit, or for costs of capital or of substitute use or performance, or for indirect, special, liquidated, penal, incidental or consequential damages, or for any other loss or cost of a similar type, or for claims by the Owner for damages of the Owner 's customers. Grantek's maximum liability under this contract shall be the contract price. The Owner and Grantek agree that the exclusions and limitations set forth in this Agreement are separate and independent from any remedies which the Owner may have hereunder and shall be given full force and effect whether or not any or all such remedies shall be deemed to have failed of their essential purpose.

After the conclusion of Grantek's warranty, all claims for liability are terminated except as to title.

When others use the works associated with this project outside of Grantek's control, the Owner undertakes to provide Grantek with the protection provided in this Agreement.

Non-solicitation

Both Grantek and the Owner agree that during the Term of this Agreement and for a period of (12) months following the expiration or termination hereof, neither party shall, directly or indirectly, hire or offer to hire or entice away or in any other manner persuade or attempt to persuade any officer, employee, agent, or Customer of the other party to discontinue his or her or its relationship with the other party.

Ownership

The Owner will be given copies of all source code and all other developments produced by Grantek for this system, after Grantek has received full payment for all services related to this project. All developments produced by Grantek under this order shall remain the property of Grantek. Grantek retains the right to use any source code and other developments produced herein on any future projects.

Title of any goods delivered with this project remains with Grantek until final payment is received.

The Owner has the right to use all developments in perpetuity produced by this project for the original project only. As such, the Owner may not use any developments produced by this project for any other purposes or projects, without the written consent of Grantek. The Owner agrees that provision of Grantek's intellectual property to firms in competition with Grantek will cause Grantek irreparable injury and as such, the Owner agrees to protect Grantek's intellectual property with reasonable steps to ensure that unauthorized persons are not able to obtain Grantek's trade

secrets. The protection of Grantek's trade secrets will survive the termination of this Agreement for ten (10) years.

Grantek also notes that goods such as firmware, software and hardware supplied as part of this project may be subject to third-party license agreements. The Owner agrees to abide by these agreements including, but not limited to: transfer of license, exclusive use, prohibition of reverse engineering and disclosure to others.

The Owner and Grantek agree to notify each other within thirty (30) days of any breach of computer security affecting machine-readable data stored on any network or allied equipment. The Owner and Grantek undertake to put in place a reasonable security program to protect each other's intellectual property stored on system networks or allied equipment. However, the Owner and Grantek also agree that no liability applies for a breach of security unless gross negligence is involved.

Nuclear

To the fullest extent permitted by law, the Owner acknowledges and agrees that it shall be solely responsible and liable for, and shall defend, indemnify and hold harmless Grantek and its employees, agents, officers, directors, managers, insurers, affiliates, subsidiaries, subcontractors, consultants and vendors (collectively "Grantek Indemnitees") from and against any and all claims, action, suits, damages, obligations, liabilities, expenses, and losses (including but not limited to court costs, reasonable attorneys' fees, awards and settlements) arising out of, related to, or in connection with: (a) bodily injury or death or damage to property, psychological trauma that is suffered by a person resulting from bodily injury to that person or others, economic loss incurred by any person or entity as a result of bodily injury or damage to their property, costs incurred by a person or entity who loses the use of their property, and resulting wage losses related to the foregoing, caused by the hazardous, explosive, or toxic properties of Radioactive Material (as defined in this paragraph), including but not limited to ionizing radiation released from the Owner's premises, facility, equipment, fixtures, or the Owner's practices and procedures; (b) the Owner's use, storage, transportation, or transfer of Radioactive Material (as defined in this paragraph), and (c) preventative measures related to, or remediation or mitigation measures taken as the result of, the hazardous, explosive, or toxic properties of Radioactive Material (as defined in this paragraph), including but not limited to, ionizing radiation released from the Owner's premises, facility, equipment, fixtures, or the Owner's practices and procedure. As used in this paragraph, Radioactive Material means (i) nuclear fuel, other than natural uranium or depleted uranium, that can produce energy by a self-sustaining nuclear fission chain reaction outside a nuclear reactor, either alone or in combination with another material; (ii) radioactive material produced in the production or use of nuclear fuel other than natural uranium or depleted uranium; (iii) material that is made radioactive by exposure to radiation consequential on or incidental to the production or use of nuclear fuel other than natural uranium or depleted uranium; (iv) radioisotopes that have reached the final stage of fabrication so as to be usable for any scientific, medical, agricultural, commercial or industrial purpose.

To the fullest extent permitted by law, the Owner agrees to include the Grantek Indemnitees as insured (on a primary and non-contributory basis) on the Owner's insurance policies providing coverage, in whole or in part, for such damages, obligations, liabilities, expenses, and losses, and the Owner shall provide Grantek with evidence of such coverage and such insured status of the Grantek Indemnitees prior to commencement of the work hereunder and thereafter upon written request submitted to the Owner from time to time by Grantek until all potential liability for or exposure to such damages, obligations, liabilities, expenses, and losses has expired and all such claims, action, suits are barred by operation of law.

End of Document.