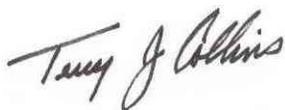


STATE OF OHIO



DEPARTMENT OF REHABILITATION
AND CORRECTION

SUBJECT:	PAGE <u> 1 </u> OF <u> 13 </u>
Material Resource Planning	NUMBER: 25-OPI-08
RULE/CODE REFERENCE:	SUPERSEDES: OPI 505 dated 4-15-06
RELATED ACA STANDARDS: 2-CI-6E-7	EFFECTIVE DATE: October 17, 2008
	APPROVED: 

I. AUTHORITY

This policy is issued in compliance with Ohio Revised Code 5120.01 which delegates to the Director of the Department of Rehabilitation and Correction the authority to manage and direct the total operations of the Department and to establish such rules and regulations as the Director prescribes.

II. PURPOSE

The purpose of this policy is to provide uniformed procedures for the daily operation of the industrial programs.

III. APPLICABILITY

This policy applies to all employees and those under contract as full and/or part-time employees with Ohio Penal Industries (OPI), as well as offenders working in the industry operation.

IV. DEFINITIONS

Bill of Material – A list of materials and supplies required to produce a product.

Job Tickets – A form used to report movement of an item from one workstation to another and ensures that the production processes are complete.

Material Pick List – A list of materials and supplies required to produce a job or production schedule.

Operation Listing – A list indicating product, quantity, and workstation routing steps.

Syteline – The production software used by OPI.

Transfer Order – A computer-generated order in SyteLine for the movement of materials among sites.

V. POLICY

It is the policy of the Ohio Department of Rehabilitation and Correction to ensure Ohio Penal Industries establishes and maintains a system to ensure that all industries programs operate under the same scheduling, productivity standards and inventory processes. Any exception(s) to this policy and procedure must be approved through the policy variance process.

VI. PROCEDURES

A. MATERIAL RESOURCE PLANNING (MRP) OPERATIONS

1. Order Entry

- a. Requirements are communicated to the shops through SyteLine. As orders are entered into SyteLine at Central Office they are then relayed to the specific shop as a requirement to be processed.
- b. Each customer order will be reviewed for accuracy, special requirements, and due dates by the OPI inside sales representatives. Special orders will be handled by the OPI Sales Manager.
- c. MRP will consolidate requirements into programmed time buckets nightly. A plan number and a due date will be assigned to each requirement.
- d. Plan numbers are then firmed in the system to create jobs or production schedule releases.

2. Planning

- a. An MRP Order Action Report will be run daily to determine requirements (manufacture, purchase and transfer) and their due dates.
- b. In accordance with Order Action Reports, a production will be scheduled and/or purchase orders will be released.
- c. Production capacities will be reviewed to determine if the specified delivery date can be achieved.
- d. Any special production requirements will need to be determined (i.e., tools, equipment, personnel, and special material).

3. Production Implementation/Scheduling

- a. The current production schedule that has already been firmed in SyteLine will be reviewed.
- b. The job order will be released or scheduled and the job paperwork will be generated.
- c. The designated Production Superintendent and/or Specialist are responsible for verifying the order for accuracy and that materials and supplies to be issued are correct.
- d. The Storeroom will prepare materials and supplies needed for the order.

- e. Proper prints, drawing, formulas, specifications, etc. will be ensured to be available for production implementation/scheduling.

4. Production Control

- a. The job ticket must follow through all phases of the operation.
- b. Product inspections must be performed and approved before moving to the next operation. Inspectors will complete daily inspection reports.
- c. Material control will be recorded through production material pick slips, operation listing, and job tickets.
- d. The Superintendent and/or Specialist are responsible for spot-checking all items in production to include the status of production and adherence to product specifications. The Superintendent and/or Specialist will post raw material and any component parts into the SyteLine system to maintain current inventory records.
- e. The Industry Manager will post the daily production of the product into the SyteLine system. The Product Manager should run reports routinely to verify schedules and adherence to due dates.

5. Shipping

- a. The product will be packaged properly using designated boxes or cartons and the appropriate label will be attached to the outside of the box or carton.
- b. Products should be staged together according to the order that it is being shipped by.
- c. The product should be loaded according to the driver's instructions, ensuring that the load is secured. Confirm ordered items and totals against the transfer packing slip and advance ship notice.
- d. Ship the loaded orders and generate packing lists and advance ship notices (Note - Bills of lading are generated for any special order being shipped from the shop that is not within the system.)
- e. Invoices are generated by the Central Office Accounts Receivable Section.
- f. Closed orders will be changed to history status after one year and purged from the database after three years.

6. Receiving

- a. Items to be received will be compared to the purchase order receiving list or transfer order to ensure that it meets specifications, requirements and amounts.
- b. While unloading, items will be counted and thoroughly inspected for damage and proper specifications independently and recorded on a receiving list.
- c. Material that does not meet the above criteria shall be refused. Refused shipments will be noted on the driver's bill of lading. If a partial shipment is accepted, list it on the receiving list.
- d. Contact the vendor within two working days on damaged or improper specification items for disposition, (i.e., credit and replacement). If the vendor fails to commit to resolve the problem within five working days, a complaint to vendor shall be issued. If the vendor fails to deliver on his commitment, another complaint to vendor shall be issued.
- e. Receiving reports will be posted within one working day.
- f. Note on the purchase order the date received, quantity, and receiving report number. Post this to the inventory and properly file the reports.

7. Storeroom/Warehouse

- a. All storerooms and warehouses shall be kept neat and clean. Aisles and storage locations should be clearly marked.
- b. Raw materials and finished goods are to be stored in a manner that will protect them from damage or deterioration. Use pallets and storage racks when necessary.
- c. Material handing shall be conducted in a manner that will provide maximum protection to the material and/or product.
- d. All raw materials and finished goods will be identified as to the date received or made and shall be rotated so that the oldest items are used first.

8. Inventory Management

- a. OPI MRP shops will follow procedures as outlined in Appendix A, Syteline Product Inventory, and Appendix B, Product Inventor, in order to maintain perpetual inventory control and to establish minimum / maximum inventory levels.
- b. A physical inventory will be conducted covering raw materials, work-in-process, and finished goods during the year end inventory. This inventory will be

completed by the shop staff and verified by an observer team from OPI Central Office.

B. NON- MATERIAL RESOURCE PLANNING OPERATIONS

1. Order Entry

- a. Orders are received in the shops or at the sales center either by hard copy, or web orders and sent to the specific shop.
- b. All orders will be reviewed for accuracy, special packaging, and delivery times.
- c. A shop order number will be assigned and logged into the order book.
- d. The shop order will be placed into an open order book (if applicable).

2. Planning

- a. Review the unallocated finished goods inventory.
- b. Determine the material requirements by calculating the quantity of materials times the size of order.
- c. Check the inventory levels for quantity of material on hand.
- d. Check the inventory reorder status in comparison to the minimum/maximum levels.
- e. Order the material/supplies as required.
- f. Review production capacities to determine if the specified delivery date can be achieved.
- g. Determine any special production requirements (i.e., tools, equipment, personnel and special material).

3. Scheduling

- a. Review current production schedules to determine if the order can be combined with current orders and if an increased production capacity is required.
- b. Prioritize the products to be produced.
- c. Determine the time needed to produce the quantity of the order.
- d. Break the daily production schedules out into weekly and bi-weekly goals. In some cases production can be scheduled longer, however if production is

scheduled too far in advance and a special project is needed, production schedules or jobs may need to be recalculated.

- e. The Product Manager will review the production requirements and notify sales of what the current lead times are in order to calculate the due date. In the event the product cannot be scheduled to meet the required delivery date, sales staff will provide the customer with the adjusted delivery date.

4. Production Implementation

- a. The shop order will be issued to the production floor, including the flow slip, cut sheet, and job ticket.
- b. The designated Production Superintendent and/or Specialist are responsible for verifying the order for accuracy and that materials and supplies to be issued are correct.
- c. The storeroom will prepare materials and supplies needed for the order.
- d. The proper prints, drawings, formulas, specifications, etc. will be ensured to be available for production implementation.

5. Production Control

- a. The product order and attachments must follow through all phases of the operation.
- b. Product inspections must be performed and approved before moving to the next operation. Inspectors will complete daily inspection reports.
- c. Material control will be maintained through production flow slips and move tickets.
- d. The Superintendent and/or Specialist are responsible for spot-checking all items in production to include status of the production and adherence to product specifications. The Industries Manager must be advised of any problems.
- e. The status of the daily production of the product will be recorded and compared to the production schedule. The Product Managers will monitor production and check to see if the product cannot be produced to meet the required delivery date.
- f. All finished goods will be maintained on an inventory record.
- g. At the completion of a production run, all pertinent information (e.g. production time and cost per unit including replacement parts) will be analyzed to determine if the production time was met, exceeded, or fell short of the scheduled time. Causes should be identified and corrective action taken, if necessary.

6. Shipping

- a. Properly package the product using designated boxes or cartons and attach the appropriate label to the outside of the box or carton.
- b. Stage products together according to the order that it is being shipped by.
- c. Once the required quantities are accumulated, complete DRC 6183 Order Ready for Shipment Form and fax it to the OPI warehouse. Include any special instructions, (i.e., extra pads, special truck and/or trailer).
- d. Prepare the bill of lading when the item is staged. Include special instructions where applicable and ensure that the quantity is accurate.
- e. Load the product according to driver's instructions ensuring that the load is secured. Confirm the items and totals against the bill of lading.
- f. After the driver has initialed the bill of lading and the order ready for shipment, retain a copy of each for the shop files.
- g. Invoices are to be prepared within one day of an order being shipped. Information from the bill of lading and the shop order will be used in preparing the invoice.
- h. Closed orders are to be filed and maintained as support documentation and should include all pertinent information about the order. This will allow for quick reference when needed.

7. Receiving

- a. Compare the items to be received against the purchase order and credit card orders to ensure that it meets the ordered requirements and amounts.
- b. While unloading, all items will be counted and thoroughly inspected for damage and proper specifications independent of the packing slip.
- c. Material that does not meet the above criteria shall be refused. Refused shipments will be noted on the driver's bill of lading. If a partial shipment is accepted, list it on the receiving report.
- d. Contact the vendor within two working days on damaged or improper specification items for disposition (i.e., credit and replacement). If the vendor fails to commit to resolve the problem within five working days, a complaint to vendor shall be issued. If the vendor fails to deliver on his commitment, another complaint to vendor shall be issued.

- e. Receiving reports will be prepared within one working day and sent to OPI Central Office. Any discrepancies in shipment (i.e., shortages or damaged) items shall be noted.
- f. Note on the purchase order the date received, quantity, and receiving report number. Post this to the inventory and properly file the reports.

8. Storeroom/ Warehouse

- a. All storerooms and warehouses shall be kept neat and clean. Aisles should be clearly marked.
- b. Raw materials and finished goods are to be stored in a manner that will protect them from damage or deterioration. Utilize pallets and storage racks when necessary.
- c. Material handing shall be conducted in a manner that will provide maximum protection to the material and or product.
- d. All raw materials and finished goods will be identified as to the date received or made and shall be rotated so that the oldest items are used first.

9. Inventory Management

- a. OPI Non-MRP shops will follow procedures as outlined in Appendix C, Inventory Procedures, in order to maintain perpetual inventory control and to establish minimum / maximum inventory levels.
- b. A physical inventory will be conducted covering raw materials, work-in-process, and finished goods during the year end inventory. This inventory will be completed by the shop staff and verified by an observer team from OPI Central Office.

APPENDIX A
SYTELINE™ PRODUCT INVENTORY

Raw materials coming to the shops and warehouse that are by purchase orders, payment cards and transfers will be received in Syteline within 24 hours of receipt. Raw material will be valued at standard cost and entered in Syteline. Reorder points are time phased and in lot quantities based upon forecasted and/or actual demand.

Raw materials are stored on-site for use in products. All material records are maintained in the inventory control module. All materials issued out are issued to jobs or production schedules in the shop floor control module. Throughout the fiscal year, cycle counts are taken on a preprogrammed periodic basis to maintain 95%+ inventory accuracy. Monthly reports can be run by Central Office cost operations at any time.

Materials considered work-in-process (WIP) are controlled and maintained on the shop floor by the shop supervisor in the shop floor control module. Value is added for labor/overhead as materials and labor are reported to the system. WIP is valued at the aggregate cost of the material(s), labor, and overhead in process at any one location.

Materials are moved to finished goods status and either maintained at a designated area of the shop floor or transferred to OPI Central Distribution Center.

Finished goods are delivered out to customers using the customer order module and subsequently invoiced by accounts receivable.

Central Distribution Center picks up the finished goods inventories from most of the institutions' shops.

From the packing slip and order transfer receiving report, the finished goods are transferred to the Central Office database.

Finished goods are relieved from inventory when a customer order is shipped from any database.

Adjustments are made and approved as necessary.

A month-end inventory valuation report is generated to verify the finished goods inventory on hand.

Finished goods inventory is valued at standard cost as contained in each database.

Obsolete, no longer needed, used or excess inventory should be addressed on a regular basis for disposition to another shop or sale to a scrap dealer. Obsolete materials, parts, etc. are all items older than one year and have no further manufacturing need or use. If any material is determined to be of no further use, future or otherwise, obtain approval in writing from your product manager and dispose of accordingly.

If the material is subject to State Salvage procedures, then proper action should be taken to move the material from the shop floor to State Salvage or to get State Salvage's approval to dispose of on-site.

All inventory reports, (i.e. Raw Material, Work-in-Process and Finished Goods) are available to any authorized person at any time for verification and reconciliation to the General Ledger.

Annual year-end inventory is taken the last week of June in any given year. This includes full shutdown of manufacturing operations and full stoppage of materials flow from vendors, as well as within OPI as a whole.

Inventory is counted in accordance with the database requirements. Results are immediately available to all authorized persons. Reconciliation takes place the month after inventory has been taken. Adjustments are completed upon posting of the approved count.

APPENDIX B
PRODUCT INVENTORY

Raw materials coming to the shops and warehouse are by purchase orders and received with a receiving report and a bill of lading. Raw material is valued at the standard cost. Minimum/maximum calculations are used to determine order quantities.

Raw materials are stored on-site for use on products. All materials are maintained through a stockroom control record or bin card. All materials issued out are issued against a stock control record. Throughout the fiscal year, monthly inventories are taken at the end of the month for perpetual control verification of stock(s) on hand. Monthly reports are submitted to Central Office cost operations.

Materials considered work-in-process (WIP) are controlled and maintained on the shop floor by the shop supervisor. There is no value added for labor in that OPI does not have a true standard cost/materials system in place at this time. WIP is valued at the aggregate cost of the material(s) in process at any one location. Materials are moved to finished goods status and are either maintained at a designated area of the shop floor or sent to OPI Central Distribution Center for storage.

Finished goods are moved out to a customer by way of order and subsequent invoice to customer.

Central Distribution Center picks up the Finished Goods Inventories from most of the institutions' shops.

From the bill of lading and receiving report, the Finished Goods Inventory is entered into the Syteline™ computerized inventory system.

Finished Goods are relieved from inventory based on the completing of a pick's slip and the proper invoicing of customers.

Adjustments are made and approved as necessary.

A month-end inventory valuation report is generated to verify the Finished Goods Inventory on hand.

Finished Goods Inventory is valued by the cost sheets, which are the raw materials costs plus a burden rate.

Obsolete, no longer needed, used or excess inventory should be addressed on a regular basis for disposition to another shop or sale to a scrap dealer. Obsolete materials, parts, etc. are all items older than one year and have no further manufacturing need or use. If any material is determined to be of no further use, future or otherwise, obtain approval in writing from your product manager and dispose of accordingly.

If the material is subject to State Salvage procedures, then proper action should be taken to move the material from the shop floor to State Salvage or to get State Salvage's approval to dispose of on-site.

All inventory reports (i.e. Raw Material, Work-in-Process, and Finished Goods) are sent to OPI's Chief Fiscal Officer for verification and reconciliation to the General Ledger.

Annual year-end inventory is taken the last week of June in any given year. This includes full shutdown of manufacturing operations and full stoppage of materials flow from vendors, as well as within OPI as a whole.

Inventory is counted and reports on inventory sheets are sent back to OPI's Chief Fiscal Officer. Reconciliation takes place the month after inventory has been taken. Any adjustments needed are completed to the opening inventory numbers for the new fiscal year.

APPENDIX C
INVENTORY CARD PROCEDURES
(For Non-Syteline Operations Only)

The policy of OPI is that an inventory system shall be maintained on all raw materials, purchased parts, and factory supplies. Exceptions to this policy shall be submitted in writing, coordinated and approved with the appropriate Product Manager and Production Manager. Audits will be conducted for compliance with these procedures. There are two basic reasons for having an inventory control system. One is to ensure that the right materials in the right quantities are available when needed. The other is to ensure that only the minimum amount of money is tied up in materials. The foundation for the OPI system is the Enterprise Resource Planning (“ERP”) system called Syteline.

A. DEFINITIONS

Raw Materials - Materials that will be machined, cut, formed or converted within the shop and other materials that will become part of the finished goods. Examples are sheet metal to be sheared, formed or welded; wood products to be sawed, routed, drilled or shaped; chemicals to be mixed, converted or processed; and welding rod and wire, paints, stains, inks, and thread.

Purchased Parts -- Items bought from a vendor or business that can be used as is without further processing. Examples are screws, bolts, T-nuts, drawer pulls, glides, tracks, zippers, buttons, and containers.

Factory Supplies -- Items that are used, consumed or change their form during the manufacturing process, but do not become a part of the finished goods. Examples are sandpaper, solvents, lubricants, needles, saw blades, grinding wheels, files, and rasps.

Lead Time -- The time between the date an order is placed and the date the material is received. Usually expressed in calendar days.

Max/Min -- Maximum and minimum are inventory levels used to ensure effective customer support while not over investing in inventory. Maximum is the most you should ever have at any one time on hand and/or on order. Minimum is the level you should have on hand and/or on order to ensure continuous operation. When the minimum is reached, it is time to reorder.

B. PROCEDURES

The following numbered procedures are keyed to the numbers on the example inventory cards for non-Syteline shops. You should refer to example inventory card number 1, labeled “Raw Material” as you review the following procedures:

- 1) Item Name and Description: Include the noun, other descriptive words or numbers, sizes, colors and codes.
- 2) Item Number: Enter any item number that is appropriate for your operation. At the option of the Industries Manager or Shop Superintendent, a term contract number may also be entered here.
- 3) Inventory Location: Include building designation, building section, storage location, location

level and bin number.

- 4) Reorder Lead Time: The time between the date an order is placed and the date the material is received. In the case of term contracts, this not only includes the A.R.O., but also the purchase order processing time expressed in calendar days. This can change, so enter it in pencil.
- 5) Unit: Enter the unit of measurement in which the item is issued to the shop workstations (i.e., one each, inches, feet, pounds, and gallons).
- 6) Cost Price: Enter the cost based on the unit of measure that the item is issued to the shop workstation. Use the most recent receipt to determine this cost. This will require a conversion from the unit of purchase price. Make entry in pencil as it may change with each new order.
- 7) Source: List as many sources of supply as you can. Delete and add as you find better sources based on price, quality, service, etc. Order from the one that gives you the best quality at the lowest price.
- 8) Freight In: Not required. May be used as Industries Manager and/or Shop Superintendent desires.
- 9) Selling Price: Not required. May be used as Industries Manager and/or Shop Superintendent desires.
- 10) Min (Minimum): Enter the inventory level (quantity) that when reached requires another order to be placed. Determine this level by adding together all the past issues not to exceed a 12-month period from the quantity column of item #14 (Issued). Convert the time period to days. Use the factor that each month equals 30 days. Then divide the total number of issues by the total number of days. This will give you the average number of issues per day. Now multiply this answer by the number of days in item #4, the reorder lead-time and this will give you your basic minimum. Add in a safety factor by increasing your basic level by 50% and you will have your Min to enter in item #10. Example: (See raw material sample inventory card):

Total quantity issued last 7 months	=	6300	
Total number of days in 7 months	=	210	
Average issue per day (6300 divided by 210)	=	30	
Number of days in reorder lead time	=	60	
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Basic minimum (60 x 30 = 1800)	=	1800	
Basic minimum + safety level (1800 + 50% = 2700)	=	2700	
Min (enter this number in item 10)	=	2700	

You should reorder only if there are known or planned, future requirements or if directed to maintain a stock inventory by OPI Central Office.

- 11) Max (Maximum): Enter the maximum inventory level (quantity) you should have on hand and/or on order at any one time. Determine this level by multiplying your Min by 2. Example:

Min	=	2700
Max factor	=	2

Min times factor = 5400
Max (enter this number in item #11) = 5400

Maximum quantities should be adjusted up or down to the nearest unit of purchase (i.e., truckload lot, hundred weight, hundred count, bolt (textiles), drums, case lots or specific length in feet).

- 12) Ordered: Enter the date the order was placed, the purchase order or general requisition number, the source number, the quantity ordered and the price based on the unit of measure that the item is issued to the shop work stations.
- 13) Received: Enter the date the items were received and the quantity received. In the "REF" column of item #14, enter the original purchase order or general requisition number from item #12. Adjust the balance column, item #15 to reflect the current on hand inventory.
- 14) Issued: Enter the date the action was taken and what the action was (i.e., an issue, an inventory, the purchase order or general requisition number, if appropriate, and the quantity issued). Issues may be posted as they occur or they may be consolidated and posted weekly. Adjust the balance column, item #15 to reflect the current on hand inventory. Note that in example card no. 1 there are 3 issues in item #14 for April. The total of these 3 issues is 960 and is shown in the April block in item #17.
- 15) Balance: Adjust the balance column each time there is an action resulting in an inventory change, i.e., a receipt, issue or physical inventory count.
- 16) Physical Inventory (i.e. annual, semi-annual, monthly, special): Enter physical inventory count as the new balance in item #15, balance column.
- 17) Units: Enter the total number of items issued for the month. This may be the sum of all issues for a specific month or the consolidated figure, as in the example, if the card is posted only once a month.
- 18) Av. Mo. Units (Average Month Units): Enter the average number of units used per month. This can be determined by adding the number of units used for all the months (item #17) and dividing by the total number of months. This will change each month so enter in pencil.
- 19) \$ Value: Not used.
- 20) Av. Mo. \$ Value: Not used.

Note: Each entry made in sections 12, 13 or 14 should be made on a separate line and in chronicle order by date.