ASPHALT KINGDOM	**Quality System Manual** **Section 4.1** **Subject General Requirements** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 General Requirements	

1.0 General Policy

1.1 Ark Alloy, LLC is committed to establishing, implementing and maintaining a quality management system, and continually improving its effectiveness, in accordance with the requirements of ISO 9001:2000 and becoming ISO certified.

2.0 Responsibility and Authority

2.1 The Quality Manager has the overall responsibility to establish, implement, and maintain the quality system. All employees of Ark Alloy, LLC have the responsibility to conduct all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority to meet specified requirements.

3.0 Policies

3.1 Quality System Processes

3.1.1 Processes needed for the quality system are identified in the Quality System Manual, Quality System Procedures, and the Process Flow Chart. The Quality System Procedures along with the Process Flow Chart are used to determine the sequence and interaction of these processes.

3.1.2 Quality system documentation also defines criteria and methods needed to ensure that the operation and control of quality system processes are effective. This includes assignment of responsibilities and allocation of resources for the process, instructions on how to carry out and/or operate the process, definition of methods for monitoring, measuring, and analyzing the processes and actions necessary to achieve planned results and continually improve the processes.

3.2 Resources and Information

3.2.1 The Quality Manager is responsible for determining resource and information requirements necessary to support the operation and monitoring of quality system processes, and for communicating

these requirements to management. The Quality Manager in conjunction with management is responsible for ensuring the availability of necessary resources and information needed to effectively implement these processes.

3.3 Monitoring and Measurement

3.3.1 The performance of quality system processes is periodically monitored thru internal audits. This is to ensure their effectiveness and identify opportunities for improvement.

3.3.2 The performance of product realization is monitored thru metrics by measuring characteristics resulting from processes, customer inputs and required inspections.

3.4 Conformance and Continual Improvement

3.4.1 Quality management system processes are regularly measured and reviewed by top management to identify any possible failures or breakdowns of the system, and also to identify opportunities for improvement. Actions necessary to address actual or potential problems and to improve the quality system are implemented thru corrective and preventive actions.

3.5 Sub-contracted Processes

3.5.1 Some production processes are outsourced; for example spot welding, plating and polishing. These are common, standard processes. Ark Alloy, LLC evaluates and selects process vendors in the same way we handle other vendors. Evaluation of process vendors may include examination of sample parts, a personal visit to the vendor, and/or completing a vendor survey.

4.0 Related and Support Documentation

Quality System Manual
Quality System Procedures

5.0 Revision History

Date	Revision level	Description of Revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section** 4.2 **Subject** Documentation and Records **Revision** B **Issue date** 6/27/17
Reference ISO 9001:2000 Element 4.2 Documentation Requirements	

1.0 General Policy

1.1 The scope of Ark Alloy, LLC quality system documentation is written in anticipation of becoming certified to the ISO 9001:2000 Quality Management System standards. The creation and revision of quality documents and their distribution is controlled thru an electronic document control system. New documents and revisions are reviewed and approved prior to issue and are identified with respect to their revision level. Appropriate documents are available at locations where they are used. Obsolete documents are identified as such to prevent their unintended use.

1.2 Quality records are identified thru a master list of records and are indexed for easy retrieval. Records are stored in a suitable environment to minimize deterioration. Quality records are retained for the period defined in the Master List of records.

2.0 Responsibility and Authority

2.1 The Quality Manager has the overall responsibility for controlling documents and records. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of the quality policy, quality system documentation and customer requirements. Each employee has been granted appropriate authority to meet specified requirements.

3.0 Policies

3.1 General

The quality system documentation for Ark Alloy, LLC consists of the following types of documents:

a. Documented statements of a quality policy and quality objectives.
b. Quality system manual
c. Quality system procedures
d. Forms
e. Quality records to demonstrate the effective implementation of the standard.

3.2 Quality Manual

3.2.1 Ark Alloy, LLC has established and maintains a quality system manual that includes the following:

a. The scope of the quality management system, and details of and justification for any exclusion.
b. Reference to documented procedures established for the quality system which clearly show the relationship between the requirements of the standard and documented procedures and;
c. A process flow chart that clearly identifies the description and interaction between the processes of the quality management system.

3.3 Control of Documents

3.3.1 Documents required by the quality management system are controlled in accordance with procedure QSP 4.2.1 Document and Data Control. This procedure defines the following controls:

a. Approval of documents for adequacy prior to issue;
b. Review, update and re-approval of documents as necessary;
c. Ensure that changes and the current revision status of documents are identified;
d. Ensure that relevant versions of applicable documents are available at points of use;
e. Ensure documents are legible and readily retrievable;
f. Ensure that documents of external origin are identified and their distribution controlled, and;
g. Prevent the unintended use of obsolete documents thru suitable identification when they are retained for any purpose.

3.4 Control of Records

3.4.1 A documented procedure has been established to define the controls needed for the identification, storage, protection, retrieval,

retention times and disposition of records. This includes methods for controlling records that are created by and/or retained by suppliers.

3.4.2 Quality records are established and maintained to provide objective evidence that:

a. Materials and processes meet specified requirements;
b. Pulled product conforms to required specifications, and;
c. The quality system is operated in accordance with documented procedures and that it is effective.

3.4.3 Records are established by personnel performing the task, operation or activity, the results of which need to be recorded. Records are dated and identify the person or event to which they pertain.

3.4.4 Records are indexed and grouped to facilitate their retrieval. Cabinets, binders, computer disks and other storage media containing records are clearly labeled with identification of their content.

3.4.5 Paper records are stored in clean, dry areas. Electronic records are backed up to prevent unintended loss. Quality records and documents may not be stored in private desk drawers, unauthorized computer drives, or other obscure locations that are not generally known.

3.4.6 Retention periods for quality records are determined on the basis of the event to which the record pertains, and on regulatory and contractual requirements as applicable.

4.0 Related and Support Documentation

Master List of Records
QSP 4.2 1 Document and Data Control Procedure
QSP 4.2.2 Control of Quality Records Procedure

5.0 Revision History

Date	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

1.0 Purpose

1.1 To establish a procedure for the creation, approval, control and revision of quality system documentation.

2.0 Scope

2.1 This procedure applies to the quality system manual, quality system procedures, work instructions and quality system forms.

3.0 Responsibility and Authority

3.1 The Quality Manager or his designees are responsible for ensuring this procedure is followed, and are authorized to control all quality system documentation. The Quality Manager may designate and authorize qualified, trained personnel to carry out this procedure, as needed.

4.0 Procedure

4.1 Initiation of Documents

4.1.1 All employees are encouraged to propose new documents, procedures, forms. Employees are also encouraged to propose changes where needed.

4.2 Approval

5.2.1 Prior to release, documents are reviewed for adequacy, correctness, and conformity to quality policies. A document is considered to be formally issued when it is authorized and approved by the Quality Manager or the Vice President. Only authorized and approved documents are entered and viewable in the Quality System folder on the company server. The Quality Manager and Vice President are the only people with the electronic password needed to add or change documents in the quality system.

4.3 Format

4.3.1 The quality manual, procedures, and forms are maintained in an electronic format on the company server. Electronic documents are clearly labeled and organized in such a manner so they are easy to retrieve.

4.3.2 Work instructions are maintained in an electronic format on the company server.

4.4 Identification and Revisions

5.4.1 Changes to documents are reviewed and approved by the same function that approved the initial document. All controlled documents are identified with a unique title and/or code, and with reepect to their revision level by a letter code. Initial release is code "A", the next release is "B", and so on.

4.5 Protection and Control

4.5.1 Electronic documents are stored on the company server, and are stored as "read only", with a password required to make any changes. The password is known only to the Quality Manager and the Vice President, to protect documents against unauthorized changes.

4.5.2 Documents other than work instructions are labeled "Uncontrolled if printed". Printed copies of quality system documents, other than work instructions, are not controlled, and are not stored within the premises of Royall Manufacturing. Quality system documents may be printed for marketing purposes or reference.

4.5.3 In order to protect electronic records from fire, theft, or other damage, the company server is backed up on a weekly basis, or more often. The backup disk is stored in a fireproof box, or removed altogether and taken home with a member of top management.

4.5.4 The Quality Manager maintains a master list of all controlled documents. This master list is in electronic form and is kept on the company server.

5.0 Related and Support Documentation

QSM 4.2 Documentation and Records
Master List of Documents

6.0 Revision History

Date:	Revision level:	Description of Revision:
1/1/07	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.1** **Subject Management Commitment** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.12 Management Commitment	

1.0 General Policy

1.1 At Ark Alloy, LLC, management commitment is demonstrated by communicating to the organization the importance of meeting requirements, establishing the quality policy and quality objectives, conducting management reviews of the quality system and ensuring the availability of necessary resources.

2.0 Responsibility and Authority

2.1 The President is ultimately responsible for establishing, implementing, maintaining and improving the quality system. The employees of Ark Alloy, LLC. have the responsibility to carry out all the quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Management

3.1.1 For the purpose of administering the quality management system, top management is defined to include the President and the Quality Manager.

3.2 Customer Requirements

3.2.1 Top management is committed to communicating the importance of meeting customer requirements, as well as any statutory and regulatory requirements that may apply. The Quality Manager is responsible for implementing this commitment by promoting awareness of customer requirements throughout the organization.

3.3 Quality Policy and Quality Objectives

3.3.1 Top management defines the purpose and objectives for the quality management system. They are documented and communicated in the form of the quality policy and quality objectives. Processes for

establishing the quality policy and quality objectives are defined in section 5.3 Quality Policy, and section 5.4, Quality System Planning, of this manual.

3.4 Management Review

3.4.1 The President reviews the quality management system twice per year with other members of top management to ensure its continuing suitability, adequacy, and effectiveness. The management review evaluates current status and performance of the quality system and initiates actions for further improvement of the system.

3.5 Resources

3.5.1 Management is committed to providing the resources necessary for establishing, implementing and improving the quality management system. The process used for identifying resource requirements and allocation of resources for specific activities and projects is defined in section 6.1 of this manual.

4.0 Related and Support Documentation

None

5.0 Revision History

Date	Revision level	Description of Revision
1/1/15	A	Initial release
6/2717	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.2** **Subject Customer Focus** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.2 Customer Focus	

1.0 General Policy

1.1 The principle objective of the quality management system is to focus our organization on the customer and, in particular, on customer satisfaction. The key to achieving high customer satisfaction is a good understanding of customer requirements and consistently fulfilling these requirements.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for ensuring that customer requirements are determined, and for ensuring that the customer requirements are met with the aim of enhancing customer satisfaction. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Determining Customer Requirements

3.1.1 Customer requirements are broadly understood to include all aspects of the product that can influence customer satisfaction. When relevant this may also include customer needs and expectations.

3.1.2 Customer requirements are determined thru the contract review process in accordance with procedure QSP 7.1.1 Contract Review.

3.2 Customer Needs and Expectation

3.2.1 When appropriate, customer needs and expectations are determined and incorporated into product requirements. Members of the Sales and R&D departments are responsible for collecting and analyzing information about customer needs and expectations. The purpose is to gain understanding of which product features and

characteristics are most important to the customer, and meeting those needs.

3.3 Fulfillment of Customer Requirements

3.3.1 The quality management system is designed and implemented to ensure that customer requirements can be consistently fulfilled. Quality system processes that most directly contribute to achieving this objective are those related to the control of product realization. These processes are controlled, measured and analyzed with respect to established metrics.

4.0 Related and Support Documentation

None

5.0 Revision History

Date	Revision level	Description of Revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.3** **Subject Quality Policy** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.2 Quality Policy	

1.0 General Policy

1.1 Top management has established a quality policy appropriate to Ark Alloy, LLC that includes our commitment to comply with requirements and continually improve the effectiveness of the quality management system. This policy provides the framework for establishing and reviewing quality objectives. The policy is communicated and understood within the organization, and is reviewed at least twice per year to ensure the continued suitability.

2.0 Responsibility and Authority

2.1 Top management shall be responsible for establishing and implementing the quality policy. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Authority

The quality policy is established by top management and approved by the President. The President is responsible for approving any changes to the policy.

3.2 Role of the Policy

3.2.1 The main role of the quality policy is to communicate the company's commitments and goals with regard to quality, and to define principal objectives for the quality management system.

3.2.2 The quality policy provides a framework for establishing specific quality objectives, and provides direction for the continual improvement effort. The use of the quality policy in setting quality objectives is addressed in section 5.4 of this manual.

3.3 Communication

3.3.1 The quality policy is posted on the company computer network, accessible to all employees. The role of the policy is communicated thru training provided to all employees.

3.4 Review

3.4.1 The quality policy is reviewed at least twice per year within the framework of management reviews of the quality system. This is to ensure its continual relevance and suitability.

4.0 Related and Support Documentation

None

5.0 Revision History

Date	Revision level	Description of Revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.4** **Subject Quality System Planning** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.2 Planning	

1.0 General Policy

1.1 Quality objectives are established to support and implement the quality policy and continual improvement. Quality planning includes identification and determination of quality system processes (including any exclusion), priorities for continual improvement, and resources needed to achieve quality objectives and to maintain and improve the quality system. The process flow chart is periodically reviewed and updated as necessary to maintain the integrity of the quality system during organizational and other changes.

2.0 Responsibility and Authority

2.1 Top management is responsible for establishing quality objectives and ensuring they are measurable. Top management is also responsible for ensuring planning activities are carried out to meet specified requirements and the integrity of the quality system is maintained when changes are planned and implemented. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Quality Objectives

3.1.1 Quality objectives are established throughout the organization to implement the quality policy, to meet requirements for product and processes, and to improve the quality system and performance.

3.1.2 Quality objectives are classified into the following categories:

a. Policy Objectives: These are principal, strategic objectives that apply to the entire organization.

b. Quality Performance Objectives: These objectives set specific, measurable targets for improving operational performance to ensure process conformity and customer satisfaction. They apply to departments and functions having direct responsibility for activities that require improvement. Performance objectives are established by

top management and monitored within the framework of management reviews.

3.1.3 The Quality Manager reviews the metrics to identify where goals are and are not being met, and communicates to top management thru management review. Performance metrics are posted on the company network for employee review and information. Where shortfalls are identified, the President or Quality Manager may revise objectives, issue corrective action requests, or take other appropriate action to address the issues.

3.2 Quality System Planning

3.2.1 Quality system requirements and processes are planned to ensure that the system is appropriate for its intended purpose, and that it is effective and efficient. The purpose of the quality system is:

a. To achieve the quality policy
b. To ensure and demonstrate our ability to consistently provide product that meets customer requirements;
c. To ensure a high level of customer satisfaction;
d. To facilitate continual improvement, and;
e. To comply with requirements of the ISO 9001:2000 quality standard.

3.2.2 The output of quality system planning is documented in this quality manual, in quality system procedures and in other referenced documents. These documents identify and define all elements and processes of the quality system.

3.3 Product Realization and Verification Planning

3.3.1 Planning of product realization and verification processes is addressed in section 7.1 of this manual.

3.4 Continual Improvement Planning

3.4.1 Improvements to the quality system are planned within the framework of management reviews. The output of this planning is

expressed in the form of quality system objectives and the performance metrics.

4.0 Related and Support Documentation

None

5.0 Revision History

Date	Revision level	Description of revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.5** **Subject Organization and Communication** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.5 Responsibility, Authority and Communication	

1.0 General Policy

1.1 Functions and their relationships within the company are defined and documented. The President has appointed the Quality Manager as the management representative responsible for establishing and maintaining the quality system. The management representative is given the freedom to resolve matters pertaining to quality. Issues regarding the quality system are communicated internally thru internal memos, the bulletin board, the training and awareness program, and management reviews.

2.0 Responsibility and Authority

2.1 The President is responsible for appointing a management representative and for giving him/her the authority to implement and maintain the quality system. The President is also responsible for ensuring responsibilities are defined and understood, and ensuring customer requirements and performance of the quality system is communicated throughout the organization. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Responsibility

3.1.1 Responsibility and authority of personnel within the company is defined within the quality system documentation and the job descriptions. Training is conducted for personnel to ensure that their responsibilities are understood as it pertains to the effectiveness of the quality system.

3.2 Management Representative

3.2.1 The President has appointed the Quality Manager as the management representative to the quality system and has given him the responsibility and authority to:

a. Ensure that the quality management system is implemented, maintained and continually improved;

b. Report to the President on the performance of the quality system, including needs for improvement;
c. Promote awareness of customer requirements throughout the organization, and;
d. Resolve matters pertaining to quality.

3.3 Internal Communication

3.3.1 Internal communication on the effectiveness of the quality system is achieved thru management review, the bulletin board, internal memos, and other internal communication as needed.

3.3.2 The information is communicated through manuals, procedures, flow charts, computer software programs, training and quality records.

3.3.3 Management review meetings have a special role in ensuring proper communication between management and the organization. The meetings provide the framework for the organization to report on the status of quality related issues and activities, and for management to formulate policies and directives to change and/or improve the quality system.

3.3.4 The Quality Manager has the overall responsibility for ensuring that current reports and records on the performance of the quality system are posted on the company computer network for all employees to access.

4.0 Related and Support Documentation

QSP 6.1.1 Training Procedure

5.0 Revision History

Date	Revision level	Description of revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 5.6** **Subject Management Review** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 5.6 Management Review	

1.0 General Policy

1.1 Management conducts periodic reviews of the quality system. The reviews evaluate the suitability and effectiveness of the quality system, identify opportunities for improvement, and consider the need for changes to the quality policy and quality objectives. Results of the review are documented.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for conducting management reviews of the quality system. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 General

3.1.1 The purpose of management review is to:

a. Evaluate the suitability, adequacy and effectiveness of the quality system;
b. Consider changes to the quality management system and to the quality policy and quality objectives, and;
c. Identify opportunities for improvement of the quality system, processes, and product.

3.1.2 Management reviews are chaired by the Quality Manager and are attended by other members of top management.

3.1.3 Management reviews are a minimum of twice per year. More frequent reviews may be scheduled in periods when organizational or product changes require increased attention and input from top management.

3.2 Review Input

3.2.1 Input into management reviews consists of information and data related to quality performance of the company. The agenda for management reviews will include, as applicable, the following:

a. Results of internal audits
b. Customer feedback and complaints
c. Process and product conformance data
d. Status of corrective and preventive actions
e. Changes that could affect the quality system
f. Follow up actions from previous management reviews
g. Recommendations for improvement
h. Review of the Quality Policy and Quality Objectives

3.3 Review Output

3.3.1 Management reviews are concluded with actions related to improvement of the quality management system, and improvement of processes to increase customer satisfaction. The review also identifies resource needs to implement these actions.

3.3.2 Results of management reviews are documented in minutes of the review meeting. The minutes include improvement actions, responsibility for actions, and allocation of resources for implementation of the actions.

4.0 Related and Support Documentation

Management review agenda form

5.0 Revision History

Date	Revision level	Description of revision
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 6.1** **Subject Provision of Resources** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 6.1 Provision of Resources	

1.0 General Policy

1.1 Management is committed to providing adequate resources for the implementation and improvement of the quality system, and for addressing customer satisfaction.

2.0 Responsibility and Authority

2.1 The President is responsible for providing adequate resources to ensure the quality system is effectively implemented. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 General

3.1.1 Resources required for implementation and improvement of the quality system, and for increasing customer satisfaction may include personnel, suppliers, documentation, equipment, infrastructure, work environment, and financial resources.

3.2 Determination of Resource Requirements

3.2.1 The President and other top management personnel are responsible for determining resource requirements for the implementation and improvement of the quality system, and for addressing customer satisfaction.

3.2.2 The principal forum for determining and communicating resource requirements is management review of the quality system.

3.3 Provision of Resources

3.3.1 Allocation of resources for particular activities is integrated with the process of defining and initiating the activity. It may

take the form of personnel assignments, allocation of space or equipment, training, procurement decisions and budgets.

3.3.2 Allocation of resources may be documented in the quality system manual, procedures, computer software systems, minutes of management review, memoranda or any other form.

3.3.3 Management review of the quality system is the principal forum for allocation of resources for the quality system. Actions initiated as a result of these reviews are documented within the minutes of management review.

4.0 Related and Support Documentation

Minutes of Management Review

5.0 Revision History

Date:	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

1.0 Purpose

To establish a documented procedure for the training of all Ark Alloy, LLC. personnel.

2.0 Scope

This procedure applies to all Ark Alloy, LLC. personnel.

3.0 Responsibility and Authority

The Quality Manager is responsible for ensuring this procedure is followed, and has been given authority to carry out all necessary tasks and maintain applicable records. The Quality Manager may designate and authorize qualified personnel to carry out this procedure, as needed.

4.0 Procedure

4.1 Training matrix

A training matrix is used to designate what type of training is needed for each job description at Ark Alloy, LLC.

4.2 Initial training

All newly hired employees receive initial training in several areas, as designated by the training matrix. Initial training may be conducted in a classroom setting or on the job.

4.3 Recurrent training

Employees may receive additional training when their job description changes, when new tasks are assigned, as part of Corrective or Preventive Action requests, or as otherwise deemed necessary by their supervisor or other top management. Additional training may be conducted in a classroom or on the job.

4.4 Records

All training, whether classroom or on-the-job, is recorded using the Training Record form. Records are maintained by the Quality Manager.

5.0 Related and Support Documentation

Training Record form

6.0 Revision History

Date	Revision level	Description of Revision
1/1/07	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 6.2** **Subject Competence, Awareness, And Training** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 6.2 Competence, Awareness and Training	

1.0 General Policy

1.1 Ark Alloy, LLC identifies personnel training needs, provides required training, and evaluates the effectiveness of the training provided. Personnel assigned to perform specific tasks, operations and processes are qualified on the basis of appropriate education, experience or training. Employees are made aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives. Records of personnel qualifications and training are maintained.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for ensuring personnel are trained in the use of the quality system and for ensuring that required training is conducted and documented. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation, and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Identification of Training Needs and Awareness Programs

3.1.1 The Quality Manager has identified training needs and qualification requirements using the Training Matrix.

3.1.2 In addition, training needs are often identified in response to corrective and preventive action requests, as inadequate training may cause nonconformities.

3.2 Awareness and Training Programs

3.2.1 Ark Alloy, LLC provides the following training and awareness programs, as appropriate:

a. Quality System Awareness Training: Explains the products we provide and how the quality system contributes to the overall objectives of the company.

Also provides awareness of applicable procedures relevant to a particular task.

b. Job Training: Trains personnel on the various tasks associated with each job description.

3.3 Effectiveness of Training

3.3.1 Effectiveness of training may be evaluated using the following approaches:

a. Performance evaluation of personnel;
b. Consideration of competency and training when investigating causes of quality system failures and product or process nonconformities.

3.4 Training Records

3.4.1 Training records are maintained by the Quality Manager. The Human Resources Manager maintains the as-hired qualification records, such as diplomas, degrees, and certificates of qualification, training, and work experience.

4.0 Related and Support Documentation

QSP 6.1.1 Training Procedure
Training records

5.0 Revision History

Date:	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 6.3** **Subject Infrastructure and Work Environment** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 6.3 Infrastructure and Work Environment	

1.0 General Policy

1.1 Suitable infrastructure, facilities and work environment are provided as required to achieve product conformity. This includes planning, provision of resources, workspaces, equipment and supporting services such as transport and communication.

2.0 Responsibility and Authority

2.1 Top management is responsible for ensuring that an infrastructure and suitable work environment is in place to achieve product conformity. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Infrastructure and Facilities

3.1.1 Planning of new and/or modified infrastructure and facilities is conducted in conjunction with management reviews, product or process changes, or capacity and/or work force changes. Facilities may also be expanded or modified to improve productivity and/or quality, or to improve the work environment.

3.1.2 The President is responsible for identifying the need and requirements for new and/or modification of existing infrastructure and facilities.

3.2 Supporting Services

3.2.1 External contractors may perform maintenance of the building and facilities as needed. This may include maintenance of electrical, lighting, heating and air conditioning systems, landscaping and cleaning.

3.3 Work Environment

3.3.1 The President is responsible for ensuring a suitable working environment for personnel.

3.3.2 Top management is responsible for identifying those operations where extreme environmental conditions could impact quality performance or personnel and result in nonconformities.

4.0 Related and Support Documentation

None

5.0 Revision History

Date:	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 7.1** **Subject Planning of Product Realization** **Revision B** **Issue date 6/27/27**
Reference ISO 9001:2000 Element 7.1 Planning of Product Realization	

1.0 General Policy

1.1 Planning of product realization processes includes determination of quality objectives for products, development of required processes and process documentation, and establishment of verification programs. The plan also defines requirements for records necessary to demonstrate process and product conformity.

2.0 Responsibility and Authority

2.1 The Quality Manager, along with top management, is responsible for planning and developing the processes needed for product realization. The employees of Ark Alloy, LLC have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Planning of Product Realization

3.1.1 Ark Alloy, LLC has planned and developed a process for product realization in the form of a Process Flow Chart. This plan is consistent with all other requirements of the quality management system.

3.2 Quality Objectives

3.2.1 Quality objectives for product conformance have been established in the performance metrics. The performance metrics define the parameters for product and process performance.

3.2.2 Top management has established quality objectives that are posted on the company's computer network for all employees to access.

4.0 Related and Support Documentation

QSP 4.2.1 Control of Documents Procedure
QSP 4.2.2 Control of Quality Records Procedure
Process Flow Chart

5.0 Revision History

Date:	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

1.0 Purpose

To establish a procedure for processing sales orders in a manner that is consistent, and ensures accuracy and customer satisfaction.

2.0 Scope

This procedure is applicable to all sales orders processed by Ark Alloy, LLC., and to all personnel who are authorized to perform the sales function.

3.0 Responsibility and Authority

The Vice President is responsible for ensuring this procedure is followed, and is authorized to take any action necessary to ensure compliance. All Ark Alloy, LLC. employees authorized to perform the sales and shipping functions are responsible for following this procedure.

Salespeople are responsible for expediting their customer orders until shipped, including keeping track of backorders and lead times, to maximize customer satisfaction.

4.0 Procedure

4.1 All customer transactions are processed using business management software. Product information, stock status, pricing, etc is stored in the company network. Sales orders and invoices are generated in the business management software.

4.2 Orders received in writing (fax, e-mail, internet, mail)

Orders received in writing are reviewed by the responsible salesperson prior to order entry, to ensure Royall Manufacturing can meet the customer's requirements. If there is a discrepancy, the customer is notified immediately. Written orders are entered into the software program.

4.3 Timeliness

4.4.1 Ark Alloy, LLC recognizes that fast delivery is an essential part of customer satisfaction. Sales orders are entered on the same day the order is received, no later than 24 hours after receipt of the order. Ark Alloy, LLC. manufactures both stock items and custom fabricated parts. Custom fabricated parts are given a lead time by engineering and confirmed to the customer for there approval on the lead time. If Ark Alloy, LLC. deviates from this in the future the customer is notified by sales of the revised schedule and the reason for the delay. Ark Alloy realizes the importance of on time delivery to our customer's satisfaction. Shipping personnel handling a sales order are to notify the responsible salesperson immediately if any ordered items are found to be out of stock, and advise salesperson of approximate lead time. Shipping must notify Sales, and Sales must notify the customer of any backordered items, including approximate lead time, no later than 24 hours after receipt of the order.

If Shipping is unable to ship a sales order for any other reason (credit card denied, for example) Shipping must notify Sales, and Sales must notify the customer, no later than 24 hours after receipt of the order.

4.4 Backordered items

4.5.1 All stock items are kept on the original sales order for immediate processing and shipment. The customer is contacted to see if he/she wants to put the out-of-stock items on backorder for future delivery. If the customer does not wish the items to be put on backorder, the out-of-stock items are cancelled and no further action is taken.

If the customer wishes the out-of-stock items to be kept on backorder, the salesperson enters those items onto a new sales order. The new sales order is kept on file by the salesperson until the parts are available for shipment.

Sales are notified by receiving personnel when out-of-stock items are received.

4.5 Order changes

4.5.1 Order changes are received and reviewed by the same functions that are responsible for the review of the initial order. Ark Alloy, LLC's goal is to ship at least 90 percent of customer orders within 2 days of order promise date, and an order can not be changed once it has been shipped.

Order changes are communicated by the salesperson to all functions within the company that may be affected by the change order.

4.5.2 Order changes are noted by a suffix of –A, -B, -C, etc added to the sales order number, both in the computer and on the printed sales order. The responsible salesperson must have the original printed order in hand prior to making any changes to a sales order, to ensure the original order is not shipped by mistake. The original or earlier version of the printed order is destroyed by the salesperson to prevent order ambiguity.

5.0 Related and Support Documentation

QSP 7.1.2 Customer Returns Procedure

6.0 Revision History

Date	Revision level	Description of revision
1/1/07	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 7.2** **Subject Customer Related Processes** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 7.2 Customer Related Processes	

1.0 General Policy

1.1 Product requirements are determined to include customer requirements, statutory or regulatory requirements (if applicable), and other necessary requirements that may not be specified by the customer. Customer RFQ's are reviewed to ensure contract requirements are defined and can be met, and to resolve any incomplete or conflicting requirements. Verbal orders are confirmed before acceptance. Order amendments and changes are likewise reviewed and are communicated to all relevant functions. Order reviews are recorded.

1.2 Arrangements for communication with customers relating to product information, customer feedback and complaints are defined and implemented. Where appropriate, operational procedures and instructions for these activities are established and implemented.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for ensuring customer related processes and contract requirements are reviewed and communicated to applicable personnel. The employees of Ark Alloy, LLC. have the responsibility to carry out all quality activities in support of its quality policy, quality system documentation, and customer requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Determination and Review of Product Requirements

3.1.1 Ark Alloy, LLC. sells off-the-shelf catalog products with specifications and features published on the company website and catalog. Custom parts are manufactured to customer specification and design

3.1.2 Customer requirements are typically received by telephone, fax, e-mail or in person.

3.1.3 Upon receipt of the customer request, sales personnel review the requirements, including but not limited to the following:

a. Requirements stated by the customer;
b. Requirements not stated by the customer but necessary for specified or intended use, where known;
c. Statutory and regulatory requirements, if applicable;
d. Additional requirements as determined by Ark Alloy, LLC.
e. Whether or not Ark Alloy, LLC. has the ability to meet the customer's requirements.

3.1.4 Customer requests received in person or via telephone, fax, or e-mail are responded to in the same manner.

When a customer order is received, it is verified by the salesperson. Ark Alloy, LLC does a limited amount of retail business, and verbal orders are frequent. In the event of receiving a verbal order, the salesperson repeats the complete order back to the customer prior to processing the order. The following items are confirmed with the customer:

- Quantity of each product
- Description of each product
- Price of each product
- Method of payment (terms)
- Estimated ship date

3.2 Amendments

3.2.1 Order changes are received and reviewed by the same functions that are responsible for the review of the initial order. Additions can be made to ship orders, but if the customer wants to change a shipped order, he/she must return the first order and a new sales order will be created and shipped.

Order changes are communicated by the salesperson to all functions within the company that may be affected by the change order.

3.2.2 Order changes are noted by a suffix of –A, -B, -C, etc added to the sales order number, both in the computer and on the printed sales order. The responsible salesperson must have the original printed order in hand prior to making any changes to a sales order, to ensure the original order is not shipped by mistake. The original or earlier version of the printed order is destroyed by the salesperson to prevent order ambiguity.

4.0 Related and Support Documentation

QSP 7.1.1 Contract Review
QSP 8.2.1 Measurement of Customer Satisfaction

5.0 Revision History

Date:	Revision level	Description of Revision
1/1/15	A	Initial Release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 7.3** **Subject Design and Development** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 7.3 Design and Development	

1.0 General Policy

1.1 Ark Alloy, LLC controls the design and development of products. The company determines the stages required, the review, verification and validation appropriate to each stage, and the responsibilities and authorities for design and development.

2.0 Responsibility and Authority

2.1 The President has responsibility and authority for research, design and development of new products, and may delegate tasks to qualified personnel as needed.

3.0 Policies

3.1 Planning

Design and development is planned using an established plan format to bring a new product from concept thru design, development, testing, and thru to marketing. While all stages of the design plan may not apply to all types of products, the same basic format is used for design of all new products.

3.2 Responsibility

Each new product is assigned to a Project Manager to guide and monitor the process. The Project Manager is responsible for planning and carrying out all stages of the design and development process, and may delegate tasks to qualified personnel as needed.

3.3 Inputs

Inputs to design planning include:

- Functional and performance requirements
- Statutory and regulatory requirements, if applicable
- Styling and aesthetic requirements
- Information derived from similar products, if applicable
- Any other essential requirements

Inputs to design are reviewed for adequacy, completeness, clarity, and to ensure they are without conflict.

3.4 Outputs

Outputs from the design and development process are provided in a form that enables verification against design inputs and are approved prior to release. Design outputs shall:

- Meet input requirements
- Provide appropriate information for purchasing, production, packaging, marketing, and all other relevant processes
- Contain product characteristics and criteria for the safe and proper use of the product

3.5 Review

At appropriate stages of the design and development process, reviews are performed:

- To evaluate the results up to that point, and
- To identify any problems and propose corrections

Records of design planning and review are maintained.

3.6 Verification and validation

Verification and validation are performed to ensure that design and development outputs meet input requirements. Verification and validation may take the form of measurement and/or testing. Records are design verification and validations are maintained.

3.7 Design changes

Design changes are identified and recorded. Changes are reviewed, verified and validated as needed and approved prior to implementation. If applicable, the review of changes includes

evaluation of the effect of the changes on related parts and on product already delivered. Results of review of changes and any necessary actions are recorded.

4.0 Related and Support Documentation

QSP 7.3.1 Design and Development Procedure
New Product Plan form

5.0 Revision History

Date:	Revision Level:	Description of revisions:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 General Policy

1.1 Ark Alloy, LLC evaluates its suppliers and purchases only from those that can satisfy quality requirements. Quality performance of suppliers is monitored and evaluated. Purchasing documents clearly and completely describe ordered products, including quality requirements. Purchasing documents are reviewed and approved prior to release. Purchased products are verified before they are used or shipped.

2.0 Responsibility and Authority

2.1 Purchasing personnel are responsible for ensuring purchasing information is complete and for approving purchasing documents. The Quality Manager is responsible for evaluating and monitoring the performance of suppliers. The Buyer is responsible for ensuring purchased product conforms to specified requirements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Supplier Evaluation

3.1.1 All new suppliers whose product or service has an impact on the quality of product or service provided by Ark Alloy, LLC are evaluated with regard to their quality and process capability. The criteria for selection of suppliers are defined in a documented procedure. Suppliers that meet the criteria will be approved and added to the Approved Supplier List.

Products and/or services may be purchased only from suppliers who are listed on the Approved Supplier List.

3.2 Supplier Quality Performance Monitoring

3.2.1 Quality performance of suppliers is monitored by delivery time and number of product rejects. Suppliers demonstrating inadequate performance may be asked to implement corrective action. If the requested corrective action is not implemented and there is no improvement in performance, the supplier will be removed from the Approved Supplier List.

3.3 Records

3.3.1 Records of supplier evaluations and performance are maintained in accordance with procedure QSP 4.2.2 Control of Quality Records.

3.4 Purchasing Information

3.4.1 Purchasing documents are reviewed for adequacy and approved by purchasing personnel prior to release. Purchasing documents clearly describe the product to be purchased, including, where appropriate, the following:

a. Quantity required
b. Product part number and description
c. Material requirements
d. Quality requirements
    a. Code specs , MTR (mtrl test report) or Certifications
e. Pricing
f. Delivery requirements

3.5 Verification of Purchased Product

3.5.1 Ark Alloy, LLC has established and implemented a receiving inspection procedure to ensure that purchased product meets specified requirements.

3.5.2 Received product is not used or processed until the required verifications have been performed.

3.5.3 Ark Alloy, LLC may, from time to time, verify product at the supplier premises prior to shipment.

4.0 Related and Support Documentation

QSP 4.2.2 Control of Quality Records
QSP 7.4.1 Supplier Evaluation
QSP 7.4.2 Purchasing Procedure
QSP 7.4.3 Receiving Inspection

5.0 Revision History

Date:	Revision Level:	Description of revisions:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 Purpose

1.1 To establish a procedure for purchasing, including evaluating and selecting suppliers of goods and services used by Ark Alloy, LLC..

2.0 Scope

2.1 This procedure applies to suppliers of goods and services sold by Ark Alloy, LLC., or used in the production of goods sold. It does not apply to suppliers of non-product-related goods and services, such as cleaning services or building maintenance.

This procedure applies to all employees who perform the purchasing function.

3.0 Responsibility and Authority

3.1 The President has responsibility and authority to ensure this procedure is followed. He may delegate tasks to qualified personnel as needed. All employees who perform the purchasing function are responsible for knowing and following this procedure.

4.0 Procedure

4.1 Evaluating and selecting suppliers

All new suppliers are evaluated prior to purchasing anything from them. The buyer completes a Supplier Approval Survey, either during a visit to the vendor or over the telephone. The vendor must be approved by the President, President, or Engineering Manager prior to a purchase order being issued.

All suppliers used prior to 1/1/15 are "grandfathered" into the quality system, and are considered approved.

4.2 Vendor Evaluation Criteria

See Vendor Approval Survey. Criteria used for evaluating suppliers includes:

- Years in business
- Number of employees
- Type of business
- Review of sample parts
- Review of pricing
- Review of delivery capability
- Review of payment terms
- Review references from other businesses

4.3 Periodic Re-evaluation of Vendors

Ark Alloy, LLC. maintains a Vendor Tracking Log which is accessible to all personnel who buy and receive goods and services. Whenever a vendor's performance falls below requirements for quality and/or delivery, that failure is noted in the Vendor Tracking Log.

Vendor tracking information is reviewed during Management Review meetings to monitor vendor performance.

The President or President may remove a vendor from the "approved" list if the vendor's performance is deemed unacceptable.

4.4 Issuing Purchase Orders (PO's)

Only those employees who have been trained in this procedure may purchase goods and services from outside vendors.

Purchase orders are issued using the business management program. No verbal or unwritten purchase orders are used.

Purchase orders contain the following information, at a minimum:

a. Purchase order number
b. Vendor name, address, phone number
c. Date issued
d. Payment terms
e. Shipping method
f. Quantity of items ordered
g. Part numbers of items ordered (if applicable)
h. Description of items ordered
i. Pricing of items ordered
j. Delivery requirements
k. Signature of buyer

Hard copy PO's are always sent to vendors. PO's may be sent to vendors via fax, mail, e-mail, or delivered in person. Buyers may advise a vendor of a PO by telephone in addition to the written PO being sent.

5.0 Related and Support Documentation

Vendor Approval Survey
Approved Vendor List
Vendor Tracking Log

6.0 Revision History

Date:	Revision level:	Description of Revision:
1/1/07	A	Initial release
6/27/17	B	Updated Version

1.0 Purpose

1.1 To establish a procedure to ensure that purchased products or services meet specified requirements.

2.0 Scope

2.1 This procedure applies to all products and services that are for resale, or that are incorporated into products sold by Ark Alloy, LLC. It is not applicable to tools, shop materials, cleaning supplies, and other items used internally.

Only personnel trained in this procedure may process received shipments and perform receiving inspection.

3.0 Responsibility and Authority

3.1 The President has the responsibility and authority to make sure this procedure is followed. All Ark Alloy, LLC employees who perform the receiving function are responsible to know and follow this procedure.

4.0 Procedure

4.1 Receiving Inspection

Receiving inspection is performed on all incoming shipments, consisting of a visual inspection checking the following:

- Verify part numbers, descriptions, and quantities match purchase order
- Verify vendor paperwork accurately matches shipment
- Parts and packaging are free of damage

Depending on type of product, incoming inspection may also include other quality checks, such as dimensional checks or fitment checks.

Evidence of receiving inspection is provided by the receiver writing "received" or "recd", then initialing and dating the vendor packing list.

4.2 Identification of received material

Products received and accepted by Ark Alloy, LLC. are identified with a part number unique to each product. Only inspected and accepted products are put on the shelves for shipment. Nonconforming product is placed on the 'Hold' shelf

4.3 Processing receipts

Receiving personnel enter the received shipment information into business management software. The received PO is attached to the packing slip and given to the accounting department, where it is kept on file.

5.0 Related and Support Documentation

None

6.0 Revision History

Date:	Revision level:	Description of revision:
01/01/07	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 7.5** **Subject Production and Service Provision** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 7.5 Production and Service Provision	

1.0 General Policy

1.1 Ark Alloy, LLC has established and implemented controls for the delivery of products and services to ensure product conformity and customer satisfaction. A Process Flow Chart has been developed to identify processes within the service provision. We are committed to monitoring our processes and taking action where a process fails to continually improve our products and services.

2.0 Responsibility and Authority

2.1 Top management has the overall responsibility for the products and services provided by Ark Alloy, LLC. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Service Provision

3.1.2 The company plans and carries out production and service provision under controlled conditions that include the following:

a. The description of product characteristics as defined in the computer software system, drawings and specifications as applicable, the company website, catalog, and advertising materials.
b. Work instructions where the absence of such would adversely affect the quality of product or service;
c. The use of suitable equipment such as machine tools, forklift, shelving, and computers;
d. The availability and use of measuring devices;
e. The implementation of receiving inspection and final inspection procedures;
f. The use of Sales Orders that define product release, delivery, and post-delivery activities.

3.2 Identification and traceability

3.2.1 Finished products and components are identified by suitable means throughout the product realization process. Each product or component is identified with a unique part number to avoid misidentification.

3.2.2 In-process products may be identified by a written "traveler" document that stays with the products until they are finished, or until they are identified by other means.

3.2.3 Inventoried products are identified in various ways, such as stickers, tags, or labeled bins.

3.2.4 In our industry there are no customer or regulatory requirements for traceability.

3.3 Customer Property

3.2.1 Ark Alloy, LLC occasionally receives customer-owned units for repair and/or modification. Customer units and parts are identified, protected and safeguarded in accordance with procedure QSP 7.5.1 Customer Property Procedure.

3.3 Preservation of Product

3.3.1 The conformity of product is preserved during internal processing and delivery to the intended destination. This preservation includes identification, handling, packaging, storage and protection. Preservation may also apply to the component parts of a product, as applicable.

4.0 Related and Support Documentation

QSP 7.1.2 Order Processing Procedure
QSP 7.5.1 Customer Property Procedure
QSP 7.5.2 Handling, Storage, Preservation, Packaging Procedure
Process Flow Chart

5.0 Revision History

Date:	Revision Level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 General Policy

1.1 Ark Alloy, LLC determines the monitoring and measurements necessary, and the monitoring and measuring devices needed to provide evidence of product conformity to specified requirements. Monitoring and measuring devices are controlled in such a manner as to ensure measurements are carried out accurately and consistently.

2.0 Responsibility and Authority

2.1 The Quality Manager, together with top management, is responsible for determining what measurements are required, the type and quantity of measuring devices needed, and ensuring that these devices provide accurate measurements. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Micrometers, calipers and similar measuring devices

3.1.1 All micrometers, calipers, and other similar devices used to ensure product conformity will be calibrated, or their accuracy otherwise verified, against nationally or internationally recognized measurement standards. Measuring devices will be calibrated or verified by an independent laboratory certified by ISO/IEC 17025:2000 and/or the American Association for Laboratory Accreditation.

3.1.2 All micrometers, calipers and other similar measuring devices will be calibrated or verified a minimum of once per year.

3.1.3 Calibration status will be recorded on a roster of measuring devices, and also on the device itself, where practical.

3.1.4 Measuring devices are protected from damage and deterioration during handling and storage. Measuring devices will be stored in appropriate storage cases or stored separate from other items, to prevent the device from coming into contact with things that may cause damage or affect accuracy.

3.2 Computer software used for monitoring and measurement

3.2.1 Computer software used for measurement is calibrated each day prior to use, using procedures specified by the manufacturer.

3.3 Re-validating measurements

3.3.1 When measuring devices or software are found not to conform to requirements, the company assesses the validity of previous measuring results. When possible, items previously measured with the discrepant measuring device are re-measured to ensure conformance to specifications.

3.3.1 Appropriate action is taken on the measuring equipment and any product affected, including the possibility of recalling product.

3.3.2 Records of the results of calibration and verification are maintained.

4.0 Related and Support Documentation

QSP 7.6.1 Control of Measuring Devices
Roster of Measuring Devices

5.0 Revision History

Date:	Revision Level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 8.1** **Subject Planning of Monitoring And Measurement** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 8.1 Measurement, Analysis and Improvement	

1.0 General Policy

1.1 Measurement and monitoring activities required to assure product and service conformity, and to achieve improvement are planned and defined. Statistical techniques are used for analyzing measurement data in accordance with established Quality Objectives.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for all monitoring, measurement, analysis and improvement applications used in the quality system. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Planning

3.1.1 Measurement and monitoring activities to assure and verify product conformity are further defined in section 8.2 of this manual and in quality system documentation.

3.1.2 The effectiveness of the quality system is monitored by internal audits and by measuring customer satisfaction. Results of these activities are reported to management and are used to identify opportunities for improvement. Activities related to internal audits and customer satisfaction are further detailed in section 8.2 of this manual.

3.2 Statistical Techniques

3.2.1 Statistical techniques are used in accordance with the Quality Objectives to support process capability performance.

4.0 Related and Support Documentation

QSP 7.4.3 Receiving Inspection Procedure
QSP 8.2.1 Quality Objectives Measurement Procedure
QSP 8.2.2 Internal Audit Procedure
QSP 8.2.3 Final Inspection Procedure

5.0 Revision history

Date:	Revision Level:	Description of revisions:
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 8.2** **Subject Monitoring and Measurement** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 8.2 Monitoring and Measurement	

1.0 General Policy

1.1 Customer satisfaction is the principal objective of the quality system and the level of customer satisfaction is the most important measurement of the effectiveness of the system. Collecting and analyzing customer feedback and complaints, and customer satisfaction is conducted during management review. Customer satisfaction data is used by management to identify opportunities for improvement.

1.2 All activities relevant to the quality system are audited at least once per year to determine the effectiveness of the system. Audits are scheduled on the basis of the status and importance of the activity. Internal auditors are independent of those having direct responsibility for the audited activity. Nonconformities are brought to the attention of responsible managers, and corrective actions are implemented in response to audit findings.

1.3 Quality system processes are monitored to ensure that they achieve planned results as defined in the Quality Objectives. Relevant product characteristics are measured through inspections as specified in the documented procedures.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for monitoring the metrics of customer complaints, returns, and customer satisfaction, and for taking action when the results fall below acceptable levels. The Quality Manager is also responsible for all monitoring, measurement, analysis and improvement applications used in the quality system. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Customer Satisfaction

3.1.1 The Quality Manager collects and measures all data pertaining to the perception of customer satisfaction as it relates to fulfilling customer requirements. Results of this measurement are shared with the President to analyze and improve the performance of this metric.

3.2 Internal Audits

3.2.1 An audit schedule has been established to identify the activities to be audited and the timeline for the audits to be performed. Selected activities may be audited more frequently depending on their importance and quality performance history.

3.2.2 Only personnel independent of the audited activity are assigned to conduct the audit. Due to the size of Ark Alloy, LLC, an independent auditor may be contracted to perform the internal audit, providing that person can demonstrate qualifications.

3.3 Conducting the Audit

3.3.1 Prior to an audit an audit plan is established to identify the activities to be audited, the dates of the audit and the auditor assigned to conduct the audit. The activities are determined based on the requirements of the audit schedule.

3.3.2 The auditor(s) will utilize a checklist to guide the internal audit. Auditors will seek out objective evidence of conformity indicating whether the audited activities comply with the requirements of the documented quality system and the ISO 9001:2000 standard, and whether the quality system is effective. Objective evidence is collected by reviewing associated documentation of the activity, analyzing records,

observing activities, and interviewing personnel to determine compliance.

3.4 Corrective Action

3.4.1 When nonconforming conditions are identified, they are recorded on a Corrective Action Request form and assigned to the manager responsible for that area. The manager or supervisor takes corrective action to correct the nonconforming condition, and preventive action to prevent recurrence. The auditor performs follow up of the action taken to ensure it has been effectively implemented.

3.4.2 Records of internal audits and associated records are maintained by the Quality Manager and submitted for management review.

3.5 Monitoring and Measurement of Processes

3.5.1 Performance metrics have been established to monitor and measure the following:

a. Product quality
b. Order quality
c. Customer satisfaction

3.5.2 When a quality system process does not conform to specified requirements or a quality objective, a Corrective Action Request form is issued in accordance with procedure QSP 8.5.2 Corrective and Preventive Action.

3.6 Monitoring and Measurement of Product

3.6.1 Ark Alloy, LLC performs the following inspections to measure characteristics, including key characteristics of the product to verify the product requirements are met:

a. Receiving Inspection
b. In-process Inspections

c. Final Inspection

3.6.2 Records of inspection are maintained in accordance with procedure QSP 4.2.2 Control of Quality Records.

3.6.3 Inspection status is determined by location of product. No product is used or shipped until the required inspections have been completed or otherwise verified as conforming to our specified requirements. Every product that is put on the shelf is inspected and acceptable. Products that do not pass inspection are segregated from good products and placed on the "Hold" shelf in accordance with procedure QSP 8.3.1 Control of Nonconforming Product.

4.0 Related and Support Documentation

QSP 4.2.2 Control of Quality Records
QSP 7.4.3 Receiving Inspection
QSP 8.2.2 Internal Audits
QSP 8.2.3 Final Inspection

5.0 Revision history

Date:	Revision Level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 Purpose

1.1 To establish a procedure for the conducting periodic internal audits of the quality system.

2.0 Scope

2.1 This procedure covers all parts of the quality management system, including the quality manual and procedures.

3.0 Responsibility and Authority

3.1 The Quality Manager has responsibility and authority to ensure this procedure is followed. He may delegate tasks to qualified personnel as needed.

4.0 Procedure

4.1 Frequency and schedule

4.1.1 Internal audits are conducted a minimum of once per year, and are completed in advance of management review meetings. Internal audits are one of the inputs to management review meetings.

4.2 Methodology

4.2.1 Prior to an audit an audit plan is established to identify the activities to be audited, the dates of the audit and the auditor(s) assigned. The activities are determined based on the requirements of the audit schedule. The Quality Manager chooses internal auditors that are appropriately trained, qualified, and independent of having responsibility for the audited activity.

4.2.2 Auditors will use a checklist to guide the internal audit. Auditors will seek out objective evidence of conformity indicating whether or not the activities comply with the requirements of the quality system and the ISO 9001:2000

standard, and if the quality system is effective. Objective evidence is collected by reviewing associated documentation and records, observing activities and interviewing personnel to determine compliance.

4.3 Corrective action

4.3.1 Corrective and/or preventive action requests are generated and assigned to the responsible managers when nonconforming conditions are identified during an internal audit. The auditor performs follow-up to ensure the actions taken have been effectively implemented.

4.4 Records

4.4.1 Records of internal audits, corrective and preventive actions, and other associated records are maintained by the Quality Manager and submitted for management review.

5.0 Related and Support Documentation

Internal audit plan
Internal audit checklist

6.0 Revision History

Date:	Revision level:	Description of Revision:
1/1/07	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 8.3** **Subject Control of Nonconforming Product** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 8.3 Control of Nonconforming Product	

1.0 General Policy

1.1 Nonconforming product is identified, documented, evaluated, and prevented from being used or shipped. When appropriate, corrective and preventive actions are implemented to prevent recurrence of nonconformities.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for the control of nonconforming material. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Control of Nonconforming Product

3.1.1 Ark Alloy, LLC ensures that product that does not conform to specified requirements is identified and controlled to prevent its unintended use or shipment. A documented procedure has been established and implemented to define the controls and related responsibilities and authorities for the disposition of nonconforming product.

3.1.2 Nonconforming product is controlled as follows:

a. By taking action to eliminate nonconformities, and;
b. Taking action to preclude the unintended use or shipment of nonconforming products.

3.1.3 Nonconforming product may be reworked or scrapped, depending on the nature of the nonconformity. When it is to be scrapped, the product is immediately destroyed to physically render it unusable. When nonconforming product is reworked, it is re-inspected to confirm conformity to specified requirements.

3.1.4 Records of nonconformities and corrective actions taken are maintained.

3.1.5 If nonconforming product is detected after delivery, the nonconformity is documented and appropriate action taken.

4.0 Related and Support Documentation

QSP 8.3.1 Control of Nonconforming Product
QSP 8.3.2 Return Authorization Procedure
QSP 8.5.1 Corrective and Preventive Action

5.0 Revision history

Date:	Revision Level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 Purpose

1.1 To establish a procedure for the control and disposition of nonconforming products and materials, to prevent unintentional use or shipment.

2.0 Scope

2.1 This procedure applies to all nonconforming products and materials detected within Ark Alloy, LLC, whether obtained from vendors, produced in-house, or in company stock.

This procedure applies to all employees.

3.0 Responsibility and Authority

3.1 The Quality Manager has responsibility and authority to ensure this procedure is followed. He may delegate tasks to qualified personnel as needed. All employees are responsible for knowing and following this procedure.

4.0 Procedure

4.1 Nonconforming product detected at Ark Alloy, LLC.

4.1.1 Nonconforming product can be detected in many ways, by any person, at any time.

4.1.2 When nonconforming material is detected, it is immediately removed from the normal process flow and one of the following people is notified: The President, Quality Manager, or Engineering Manager.

4.1.3 The product or material is removed from the normal process flow by being placed on the designated "hold shelf" or area depending on size of product. Nonconforming material is identified with a HOLD tag, which is filled out and attached to the affected item(s). The HOLD tag contains part number, quantity, description, reason for being on hold, name of the person who detected the problem, and the date.

4.1.4 Disposition of nonconforming products can be determined by any of the above 3 listed people. The Quality Manager will periodically go thru all the items on the hold shelf to dispose of the products. No nonconforming material shall be removed from the hold shelf except by the Quality Manager, the President, and the Engineering Manager.

4.1.5 After parts are properly disposed of, the disposition is noted on the HOLD tag. Completed HOLD tags are given to the Quality Manager and kept on file to assist with measurements of quality objectives.

4.1.6 Depending on the source of the nonconforming materials, it may be necessary to notify the Accounting department of a product's disposal, for example if the part is returned to a vendor for credit.

4.1.7 Also depending on the nature of the nonconformance, it may be necessary to generate a Corrective Action Request, and possibly a notation in the Vendor Tracking Log.

4.2 Nonconforming product detected after delivery or use.

4.2 .1 When nonconforming product is detected after delivery or use, corrective action is taken appropriate to the nonconformance. Appropriate action may be in the form of parts and/or information sent to customers, a recall of the product, or other action deemed necessary by top management to correct the nonconformance and prevent its recurrence.

5.0 Related and Support Documentation

Hold tags

6.0 Revision History

Date:	Revision level:	Description of Revision:
1/1/07	A	Initial release
6/27/17	B	Updated Version

1.0 General Policy

1.1 Ark Alloy, LLC collects and analyzes data required for evaluating the suitability and effectiveness of the quality system, and for identifying opportunities for continual improvement.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for ensuring that appropriate data is collected, that it is analyzed, and corrective action taken when performance levels drop below the quality objectives, to continually improve the quality system.

3.0 Policies

3.1 Analysis of Data

3.1.1 Data and information recorded is compiled and analyzed within management review to identify trends in the performance and effectiveness of the quality system, and to identify opportunities for improvement.

3.1.2 The Quality Manager is responsible for coordinating these activities, and for reporting on the performance within the context of management review. The Quality Manager takes corrective action when the performance is below the quality objectives, to continually improve the system.

3.1.3 The analysis of data provides information relating to the following:

a. Customer Satisfaction
b. Conformity to Product Requirements
c. Characteristics and trends of processes and products including opportunities for preventive action
d. Suppliers

4.0 Related and Support Documentation

QSP 8.5.1 Corrective and Preventive Action

5.0 Revision history

Date:	Revision Level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

ASPHALT KINGDOM	**Quality System Manual** **Section 8.5** **Subject Continual Improvement** **Revision B** **Issue date 6/27/17**
Reference ISO 9001:2000 Element 8.5 Continual Improvement	

1.0 General Policy

1.1 Ark Alloy, LLC employs a continual improvement philosophy throughout the entire organization. The improvement effort is driven by objectives defined in the quality policy and performance data. Improvement opportunities are identified by analyzing quality performance data and information. Improvement projects are defined and implemented through the system of corrective and preventive actions and management review actions.

1.2 Causes of identified nonconformities are investigated and, where appropriate, corrective actions are implemented to ensure that nonconformities do not recur. Preventive actions are implemented to eliminate the causes of potential nonconformities. Corrective and preventive actions taken are recorded and are followed up to ensure that they have been effectively implemented.

2.0 Responsibility and Authority

2.1 The Quality Manager is responsible for ensuring continuous improvement throughout the quality system. The Quality Manager is responsible for all monitoring, measurement, analysis and improvement applications used in the quality system. Each employee has been granted authority in order to meet specified requirements.

3.0 Policies

3.1 Opportunities for Improvement

3.1.1 Opportunities for improvement are identified by comparing present quality performance to documented quality objectives.

3.1.2 Quality performance is determined by analyzing the performance levels of the quality objectives.

3.1.3 Quality performance is evaluated at management reviews of the quality system. Where quality performance falls short of a defined objective, top management identifies specific improvement actions to reach the objective. When a quality objective is reached, top management may change the objective to raise the desired level of

performance, with the objective to continually improve the quality system.

3.1.4 In addition to top management objectives for improvement, employees are encouraged to contribute ideas for improvement relating to product, processes, systems, productivity, and working environment. These improvement opportunities are evaluated and prioritized by top management and, where appropriate, are implemented through the system of corrective and preventive actions.

3.2 Corrective and Preventive Actions

3.2.1 Corrective actions are used when an actual nonconformity is identified. Preventive actions are requested and implemented when there are trends of decreasing quality capability and/or effectiveness of the quality system that create a risk for potential nonconformity.

3.2.2 The Company recognizes the difference between corrective and preventive actions, and has separate systems for identifying each type of action. Once the need is identified a common system is used to process both types of actions. Forms, logs and other documents and records for processing corrective and preventive actions are the same.

3.3 Corrective Action

3.3.1 The need for corrective action is determined on the basis of identified actual nonconformities, and can be generated by any employee. Corrective action requests are typically triggered by events such as a customer complaint, nonconforming product shipped by a supplier, internal audit findings or poor quality performance.

3.3.2 A documented procedure has been established to define requirements for the following:

a. Reviewing nonconformities and customer complaints
b. Determining and eliminating causes of nonconformity

c. Evaluating the need for action to ensure that nonconformities do not recur
d. Determining and implementing action needed
e. Reviewing corrective action taken for effectiveness

3.4 Preventive Action

3.4.1 The need for preventive action is determined on the basis of information and data gathered regarding performance of processes, nonconformity rates, customer returns and complaints, and quality system audit findings. Appropriate information and data is collected and analyzed to detect unfavorable trends that, if not checked, will increase the risk of nonconformities.

3.4.2 A documented procedure has been established and implemented to define the following requirements:

a. Determining potential nonconformities and their causes
b. Evaluating the need for action to prevent occurrence of nonconformities
c. Determining and implementing action needed
d. Records of results of action taken, and
e. Reviewing preventive action taken

4.0 Related and Support Documentation

QSP 8.5.1 Corrective and Preventive Action Procedure

5.0 Revision history

Date:	Revision level:	Description of revision:
1/1/15	A	Initial release
6/27/17	B	Updated Version

1.0 Purpose

To establish a procedure for initiating, assigning, implementing and recording corrective and preventive actions (CAR's and PAR's) and ensuring that actions taken are effective.

2.0 Scope

This procedure applies to all product and process nonconformances whether they are identified in-house or reported by a customer. Corrective and Preventive actions are applicable to all departments and personnel and may also be directed at suppliers and subcontractors.

3.0 Responsibility and Authority

The Quality Manager has responsibility and authority to ensure this procedure is followed. He may delegate tasks to qualified personnel as needed. All employees are responsible for knowing and following this procedure.

The President and the Quality Manager have authority to sign approval of completed CAR's and PAR's.

4.0 Procedure

4.1 Corrective and preventive actions (CAR's and PAR's) may be initiated when actual or potential nonconformances are discovered, and apply to both products and processes. CAR's and PAR's may be initiated by any employee of Ark Alloy, LLC.

Product nonconformances relate to products sold by Ark Alloy, LLC, both produced in-house and purchased from vendors. Some examples of product nonconformances are:

- Improperly designed products
- Improperly produced products
- Damaged products

Process nonconformance relate to how we do things at Ark Alloy, LLC. Some examples of process nonconformances are:

- An inspector forgetting to sign approval
- An unauthorized person issuing a purchase order
- Training conducted without being recorded
- Failure to hold a management review meeting

CAR's and PAR's may also be initiated for non-quality-related issues at Sample Company, such as safety and cleanliness issues.

4.2 Preventive action requests may be initiated when no actual nonconformance exists, but there is a potential of a problem if no action is taken. Some examples of potential problems include:

- An overloaded shelf that has not yet broken, but looks like it might fail very soon if no action is taken.
- A bracket that has not yet failed, but shows signs of wear that could lead to failure
- A tool or machine shows signs of wear that could lead to defective products being made if no action is taken.

4.3 CAR's and PAR's are initiated using a CAR/PAR form. Blank forms are available on the company computer network, available to all employees. Any employee may start a CAR/PAR form, noting the date and the nonconformance, actual or potential.

4.4 CAR/PAR forms are given to the President or Quality Manager, who will review the request and determine if action is needed.

4.5 If action is deemed necessary, a CAR/PAR number is assigned and recorded on the CAR/PAR list. The CAR/PAR is assigned to the responsible manager, and a due date is noted.

4.6 The responsible manager determines the root cause of the nonconformance, the corrective action needed to correct the problem, and the preventive action needed to make sure it doesn't happen again. The responsible manager completes the appropriate sections of the CAR/PAR form and gives the form to the President or President for approval.

4.7 The President may approve the actions, or may return the CAR/PAR form to the responsible manager with requested changes. Once approved, a follow-up date is noted on the form.

4.8 The President or their designee is responsible for following up to make sure the corrective or preventive action taken has been implemented and is effective.

4.9 Completed CAR/PAR records are kept on file by the Quality Manager.

5.0 Related and Support Documentation

CAR/PAR form
CAR/PAR list

6.0 Revision History

Date:	Revision level:	Description of Revision:
1/1/07	A	Initial release
6/27/17	B	Updated Version