DESC CUSTOMER DIRECTED SURVEILLANCE REQUIREMENTS

GENERAL

1.0 DEFINITIONS.

Assure – To inform confidently, with a view to removing doubt. To cause to feel sure. Example: *The QAR **shall witness** manual gauging to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.*

Ensure – To make certain or sure of. Example: *The QAR **shall ensure** each vessel cargo tank is entered and personally **inspected**.*

Inspect – To examine in detail for flaws. Example: *The QAR **shall** go down into and thoroughly **inspect** each gas free cargo tank for suitability to load.*

Mandatory – Required by mandate (an authoritative instruction or command). Example: *The **inspection** of vessel cargo tanks, when required, is **mandatory**.*

Shall – A directive or requirement. Example: *The QAR **shall witness** shipping tank sampling.*

Verify – To prove the truth of by presenting evidence or testimony. To determine or test the truth or accuracy of, as by comparison, investigation, or reference. Example: ***Verify** additive injection system is working properly.*

Witness – To be present at or have personal knowledge of. Example: *The QAR **shall witness** (physically watch) the contractor perform testing of a petroleum product.*

2.0 GENERAL CONTRACT ADMINISTRATION.

2.1 DCMA QARs shall send written acceptance of contract delegation to the designated DESC Contract Administrator (CA) that identifies key DCMA personnel:

- Name of QAR assigned the contract including the address, phone number, and email address.
- If applicable, Name of Safety Specialist including the address, phone number, and email address.

2.2 Surveillance Techniques. The surveillance techniques contained in this document are the established norm for DESC. DESC will notify DCMA if these characteristics change and require revision. DESC may also contact the DCMA Contract Management Office to arrange for a Quality Systems Management Review.

2.3 Official Contract File (Maintained at DESC). When problems occur with a contractor, written surveillance/trip reports, risk assessments, corrective action reports (including verbal), and any other pertinent information **shall** be forwarded to the DESC Contracting Officer within 10 days after **inspections** were performed or upon the QARs return from an extended QA trip.

2.4 Contractor's Quality Control Plan. Ensure an approved contractor's Quality Control Plan, in English, is in place prior to the first delivery.

2.5 Pre-award Survey (PAS). A Bulk Facility Pre-award Survey Guide is provided to assist DCMA QARs with gathering PAS data for use in conjunction with the solicitation requirements.

PART 1 - INTOPLANE CONTRACTS

1.0 INTRODUCTION. DCMA surveillance at DESC intoplane contract locations provides a pre-acceptance validation of a contractor's capability to perform. Aircraft crews accepting fuel rely on this qualification procedure when landing at contract locations. Initial intoplane contract sites **shall** be visited in advance of contract start date but after award date. A thorough post award orientation **shall** be conducted during this initial visit. DESC assistance is available under the Teaming (Matrix Support) Agreement if needed. The responsible QAR **shall ensure** an approved contractor Quality Control Plan, in English, is in place prior to the first sale to US Government aircraft. Visit intervals thereafter **shall** be based on the risk assessment model, Mandatory Risk Analysis and Rating Guide For Intoplane Contracts.

2.0 SITE VISIT INTERVALS. Under no circumstances will visits intervals be more than one-year apart. Visit intervals **shall** fall in line with the following instructions and should be scheduled in conjunction with contract sampling requirements. More importantly, the risk assessment program and the visit intervals must be consistent across the expanse of the DESC/DCMA Intoplane Surveillance Program. The QAR **shall** utilize these Risk and Visit Interval Drivers gathered from contractor past performance and QAR experience to be used with the ATA 103, JIG, and NFPA 407 checklists. These drivers will be helpful when assigning consistent risk ratings. The QAR will use these drivers in conjunction with the Risk Analysis and Rating Guide. **Mandatory** visit intervals are listed below:

High Risk	1-4 Month Intervals
Medium Risk	5-8 Month Intervals
Low Risk	9-12 Month Intervals

3.0 QUALITY OF PRODUCT OR OPERATIONAL DIFFICULTIES. When an intoplane contract location is experiencing quality of product or serious operationally difficulties, the QAR **shall** advise the Contracting Officer, in writing, of any and all quality deficiencies in a timely fashion. Return visits may be required on short notice and at lesser intervals to investigate or determine whether necessary contractor corrective action has been taken. Responsible inspection office~~s~~ Quality Assurance Representatives **shall witness** the re-sampling process after quarterly sample failures and if the location was placed on QC hold for an unacceptable amount of contract requirement deficiencies, a visit **shall** be required to evaluate corrective action before making a recommendation, in writing, to DESC to reinstate a contractor.

4.0 RISK ASSESSMENTS. All DCMA fuels inspection teams must administer risk assessment in a consistent manner. Inconsistency in the area of risk assessment will detract from the overall program. Recommend round table discussion between DCMA subordinate fuels offices and the Division Fuels Team Leaders before finalizing risk assessment ratings. Further, written surveillance/trip reports, risk assessment ratings, corrective action reports (including verbal CARs etc.), and any other pertinent information/contractor correspondence shall be forwarded to the DESC Contracting Officer within 10 days after inspections were performed or the QAR returns from an extended QA trip. Failure to utilize the attached Risk Assessment Tools shall be grounds for mandatory six-month or less surveillance visit intervals.

5.0 Reports from QARs reflecting the results of **mandatory** surveillance visits to Intoplane sites are becoming more important. They provide basis for quality of contractor performance evaluation and determination. This information is more amplified when evaluating future offers for Intoplane services. All cognizant QARs **shall** submit comprehensive reports, corrective actions and any other significant documentation to the Contracting Officer within 10 days after return to his/her office after visits to Intoplane contract locations.

PART 2 - BULK AND POST, CAMPS & STATIONS CONTRACTS

1.0 INTRODUCTION.

1.1. This Defense Energy Support Center (DESC) customer directed surveillance for petroleum quality is applicable to the Bulk Fuel Program and Post, Camps, and Stations (PC&S) Program contracts origin/destination where quality is delegated to the Defense Contract Management Agency (DCMA).

1.2. Petroleum products are dynamic not static before, during, and after procurement - Every movement of product increases the risk of product contamination and deterioration. A lot doesn't sit on the shelf until it is used. Initial off-specification product, if not detected, can increase exponentially once procured; movement through the system can cause other product to become off-specification. Product is moved through marine vessel, pipeline, tank truck, and tank car. In Free On Board (F.O.B.) origin shipments from a refinery, two contractors to DoD are involved, the product supplier and the contracted transporter.

1.3. The Quality Assurance Representative (QAR) represents DESC at the refinery not only in the areas of quality assurance but also in production management and transportation. In production management the QAR keeps DESC advised of any problems in meeting the schedule. This permits DESC to manage all orders and deliveries in an orderly and timely manner in support of customer operations. In transportation the QAR is instrumental in ensuring conveyances are suitable to load and validating delays and their causes. Delays to transportation may result in demurrage and having the QAR present to facilitate the loadings is instrumental in precluding costs to either party or to Department of Defense (DoD). When delays are unavoidable the QAR is the Government representative providing identification as to the cause of the delay and the responsible party.

2.0 PETROLEUM QUALITY SUMMARY.

2.1 The petroleum commodity is multifaceted and lends itself to both mechanical and human error more often than petroleum QARs would like to see. It also has a short constantly changing production cycle that is repeated multiple times a year. At the end of each production cycle for an F.O.B. Origin marine shipment from a Refinery, the Government purchases a product that is generally in excess of $10,000,000, on average. A batch of bulk petroleum product failing to meet DoD requirements has far reaching consequences of great magnitude, not only because of dollar value but because it can bring an entire theater of military operations to a stand still.

2.2 DCMA provides quality assurance for DESC over the procurement of military specification products and commercial specification products with Military specific additional requirements. DESC's requirements for the Bulk and PC&S programs for quality assurance (QA) oversight are similar to large purchase oversight of petroleum made in the commercial

market place. The petroleum industry will have independent **inspection** companies to perform the functions. DESC and the war fighter rely on DCMA to provide this oversight.

3.0 CUSTOMER DIRECTED SURVEILLANCE

3.1 Loading and Shipping

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.1.1 The inspection of loading and shipping tanker and barge is mandatory.

3.1.2 Tanker and Barge. Movements of petroleum products by tanker and barge require the presence of the QAR during loading to ascertain and **assure** quality and quantity of product, identify production problems that effect the delivery schedule, identifying transportation problems that would delay product movement, and investigating and reporting these problems to the appropriate DESC personnel.

3.1.2.1 Where shipment is made by Government-owned, operated, or chartered equipment (*FOB Origin Acceptance*), **the QAR shall** determine and **assure** both the quality and quantity of product lifted. On destination acceptance deliveries (*FOB Destination Acceptance*), the QAR at the loading point **shall** determine and **assure** the quality of product loaded.

3.1.2.2 The quality determination **shall** include a preloading **inspection** of the vessel, as and when required in accordance with the Policy for Vessel's Carrying DESC Cargoes (Currently DESC-BQ-98-01), by the QAR to determine its suitability for loading, as well as observing cargo sampling and **assuring** specification conformance of the product loaded. On destination acceptance deliveries, if the QAR considers the vessel unsuitable to load and the contractor elects to load, the QAR's observations **shall** be furnished to the destination quality office and DESC Contracting Officer before vessel arrival at destination.

3.1.2.3 DD Form 250-1 for tanker and barge destination acceptance deliveries (quality only **inspection**) **shall** be prepared in the same manner as for origin acceptance shipments except that the quantity figures **shall** be obtained from the contractor and indicated in block 25 as "estimated." Block 28 **shall** be annotated "**Inspected** for Quality Only." Preparation and distribution of documents **shall** be in accordance with DoD FAR Supplement, Appendix I.

3.1.3 Normally, the QAR can provide the necessary quality or quantity assurance by **witnessing** key functions during the initial and final stages of the loading; however, it must be recognized that peculiarities of a particular movement may necessitate additional on-the-spot Government **inspection**.

3.1.4 The QAR **shall inspect** tankers and barges promptly on arrival, when required, in order to avoid demurrage. Vessel cargo tanks **shall** be **inspected** as soon as possible after conclusion of deballasting operations or at anchorage for Inert Gas System (IGS) vessels, even if the cargo is not available. **Inspection** at anchorage may be necessary due to product supplier requirements or as a means to inert the vessel's cargo tanks without unnecessarily tying up the product suppliers dock.

3.1.5 Notification Concerning Tanker and Barge Lifting. Military Sealift Command (MSC)/DESC furnishes advance information to the responsible quality offices of impending lifting of petroleum products in tankers and barges. Notifications of any changes in the original lifting

schedule are furnished as such changes occur. However, **QARs shall** maintain liaison with the refinery, terminal, and the vessel's agent or barging company to determine more definitive Estimated Time of Arrivals (ETA). Any unusual delays encountered in connection with loading of the vessel after its arrival at the facility and all vessel rejections **shall** be promptly reported in accordance with Problem(s) Reporting Procedure.

3.1.6 Cleaning/Gas Freeing, **Inspecting**, and Quantity Variations. The QAR **shall** use the memorandum, Policy for Vessel's Carrying DESC Cargoes (Currently DESC-BQ-98-01), between MSC and DESC to determine **inspection** and quantity variations on petroleum cargoes moved by MSC for DESC.

3.1.7 The QAR **shall** be present during final loading operations.

3.1.8 The QAR **shall** use the Tanker/Barge Loading Checklist for loading and shipping of marine vessels. *The customer directed surveillance for this mode of transportation is **mandatory** whether the contract is for Bulk Petroleum or PC&S program. If the product moves via tanker or barge then this requirement applies to that movement.*

3.1.9 Pipeline. Both commercial and Government-owned product pipeline systems are employed in the movement of petroleum products by, or for, the Government. The risks inherent in the pipeline transportation of petroleum products are sufficiently great to require that each and every pipeline tender be controlled before, during, and after transmission to make certain that products conform to the required quality. The QAR **shall** perform **inspection** over pipeline movements to maintain and **assure** quality and quantity of product tenders owned by or destined for the Government. The nature and extent of **inspection** performed is contingent upon the complexity of the pipeline system, applicable tariffs, contracts, and operating agreements. The Pipeline Shipment Checklist **shall** provide guidance for pipeline movements.

3.1.10 Tank Car and Truck

(Product Audit Checklist)

3.1.10.1 The QAR **shall assure** that the contractor examines tank cars and tank trucks prior to loading to determine suitability for receiving and transporting product.

3.1.10.2 The QAR **shall inspect** the conveyance, in the case of lubricating oil shipments.

3.2 Vessel Inspection (QAR Process)

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.2.1. The inspection of vessel cargo tanks, when required, is mandatory.

3.2.2. Tankers and barges **shall** be **inspected** promptly on arrival, when required, in order to avoid demurrage. Vessel cargo tanks **shall** be **inspected** as soon as possible after conclusion of deballasting operations or upon arrival at anchorage for IGS vessels, even if the cargo is not available. **Inspection** at anchorage may be necessary due to product supplier requirements or as a means to inert the vessel's cargo tanks without unnecessarily tying up the product suppliers dock. If the vessel is not properly **inspected** the product being loaded into cargo tanks may become contaminated from previous cargo, water, or another product if more than one cargo is being loaded causing the product to be OFF-specification and causing delays while resolving quality issues during and after loading.

3.2.3. The QAR **shall** use the Tanker/Barge Loading checklist.

3.2.4. The QAR **shall inspect** vessels prior to the first DoD product loaded on time chartered vessels, on vessels that have not maintained segregated ballast conditions, or on vessels that have been in dry dock or had repairs done to their cargo system, or as required by DESC or MSC see Policy for Vessel's Carrying DESC Cargoes (Currently DESC-BQ-98-01). MSC will provide notification to the QAR prior to loading regarding vessels which have been in dry dock or had repairs done to their cargo system.

3.2.5. The QAR **shall** board the Vessel promptly after gangway is down or, in the case of IGS tanker requiring tank **inspection**, arrange to **inspect** vessel while at anchorage so that it may inert prior to docking. **Inspection** at anchorage may be necessary due to product supplier requirements or as a means to inert the vessel's cargo tanks without unnecessarily tying up the product suppliers dock.

3.2.6. The QAR **shall** use the memorandum, Policy for Vessel's Carrying DESC Cargoes (Currently DESC-BQ-98-01), between MSC and DESC to determine cleaning/gas freeing, **inspecting**, and quantity variations on petroleum cargoes moved by MSC for DESC. Exceptions to these requirements will be coordinated with DESC-BQ prior to the proposed cargo loading.

3.2.7. The QAR **shall ensure** all tanks are gas-free on arrival and the vessel operator issues a "gas-free certificate" that indicates the cargo tanks are safe for entry, unless a coordinated DESC-BQ/MSC **inspection** waiver is received. If not, reject vessel.

3.2.8. The QAR **shall** go down into and thoroughly **inspect** each gas free cargo tank for suitability to load.

3.2.9. The QAR **shall ensure** all tanks are **inspected** for suitability to load at the first loading port, when a vessel is scheduled for multiple ports loading.

3.3 Sampling

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.3.1 Sampling shipping tanks and vessel "First-Ins" and composite for marine vessel movement is mandatory.

3.3.2 Samples are representative quantities of economical and convenient size from batch, blend, level or lot of material, taken for examination and test to determine the uniformity of the average quality of the material. Lengthy, painstaking, and costly laboratory analysis may be rendered valueless by improper sampling procedures. Since acceptance of material depends upon the results of specification tests conducted on samples, it is of paramount importance that sampling be skillfully accomplished to **ensure** that the samples truly represent the product sampled.

3.3.3 Shipping Tank(s) (for all methods of movement).

3.3.3.1 The QAR **shall witness** tank sampling for new batches of product to **assure** sampling procedures is in accordance with American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS), Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.

3.3.4 Vessel Cargo Tanks

3.3.4.1 The QAR **shall witness** "First-In" and after loading, vessel composite sampling to **assure** sampling procedures is in accordance with American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS), Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.

3.4 Testing

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.4.1 Witnessing verification testing of shipping tanks for all methods of movement is mandatory.

3.4.2 Witnessing and validating each test method a minimum of once per contract year is mandatory.

3.4.3 It is the contractor's responsibility to offer on-specification product to the Government in accordance with terms of the contract. Contractors realize that producing product that skirts the minimum or maximum specification limits can make more money. In the process of walking the minimum or maximum tightrope contractors are more likely to step over the edge. In today's petroleum market contractors are more frequently attempting this balancing act, it is imperative that the QAR **assures** testing compliance of the product offered to the Government.

3.4.4 Shipping Tank(s)

3.4.4.1 The QAR **shall assure** full specification test report provided by the contractor meets contractual requirements.

3.4.4.2 The QAR **shall witness** sufficient verification testing to substantiate the contractor's full specification test results and **assure** test procedures are in conformance with contract/specification requirements. If off-specification, report information in accordance with Problem(s) Reporting Procedures.

3.4.5 Test Procedures

3.4.5.1 ASTM changes procedures in approximately 20% of test methods annually. It is imperative to validate changes to each test method are made by the contractor, to **ensure** the contractor has the correct method, and is capable of performing to the latest test method. Failure to make changes can cause variations to test results. Variations especially where test results are close to the limit may result in Government surveillance testing to indicate a failure.

3.4.5.2 The QAR **shall witness** and validate each test method a minimum of once per contract year.

3.5 Calibration

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.5.1 Witnessing meter proving at least twice per contract year is mandatory.

3.5.2 Meters

3.5.2.1 Quantity measurements rely on accurate measures of several variables as well as the product direct or indirect quantity measurement. Inaccuracies in any measure or variable will result in an inaccurate quantity measurement. Improper care and maintenance result in an increased likelihood of putting meters out of calibration. An improperly performed calibration may cause the Government to pay for product that it did not receive. An improperly performed calibration may cause the Contractor to provide more product than he is paid for causing them to lose money and increase production for the next cargo to make up for the perceived shortfall.

3.5.2.2 The QAR **shall assure** all meters are calibrated in accordance with a program for meters used to determine quantity complying with the API MPMS, Chapters 4, 5, and 6, or equivalent foreign standards and ISO 10012-1, "Quality Assurance Requirements for Measuring Equipment, Part 1 or equivalent foreign regulation as appropriate.

3.5.2.3 The QAR **shall**, at a minimum, **witness** meter proving (calibration) at least twice per contract year.

3.6 Quantity Measurement

(Product Audit Checklist)
(Government Process Flow Chart)
(Risk Rating)

3.6.1 For manual gauging, witnessing opening and closing gauges on the shipping tank is mandatory.

3.6.2 Where manual gauging is employed, an improperly performed gauge may cause the Government to pay for product that it did not receive or may cause the contractor to provide more product than he is paid for causing them to lose money and price increase to cover the perceived losses. Once movement in or out of a tank has superceded manual gauges, that gauge can no longer be revalidated. Every shipment is validated by the receiver (sometimes another contractor like a pipeline company or marine vessel) when signing for product. Discrepancies greater than allowed tolerances must be investigated. This causes marine movement delays, which affect inventory positions. Transportation time is lost and increases DESC's costs. DoD personnel resources are used to investigate these discrepancies, which further wastes valuable resources. Manual gauging causes more discrepancies than properly calibrated meters.

3.6.3 Water Removal. The QAR **shall assure** free water is drained prior to quantity measurement.

3.6.4 Shipping Tank (If manual gauging)

3.6.4.1 The QAR **shall assure** free water is drained prior to gauging.

3.6.4.2 The QAR **shall ensure** lines from tank to the custody transfer point are pressured and full prior to gauging, unless the Quality Control Plan (QCP) requires otherwise.

3.6.4.3 The QAR **shall assure** strapping tables are certified prior to gauging.

3.6.4.4 The QAR **shall witness** opening and closing gauges on shipping tanks to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.

3.6.4.5 The QAR **shall witness** taking of temperatures to **assure** procedures are in accordance with API MPMS Chapter 7, Temperature Determination.

3.7 Problem Reporting Procedures

3.7.1 Reporting production problems are not available for reduced surveillance and are mandatory.

3.7.1.1 Production. The QAR is the eyes and ears for DESC. It is imperative for the QAR to notify the appropriate DESC contracting officer anytime there is or is likely to be a production problem that would affect the delivery schedule. Such notification will allow DESC to order the fuel from some other location in order to meet our customer's needs or to highlight the delay to the supplier's upper management. Due to the fact that storage is expensive, DESC has reduced the worldwide inventory levels based on DoD guidance.

3.7.1.2 **The QAR Shall** report production problems as outlined in Problem(s) Reporting Procedure.

3.7.2 Reporting transportation problems are not available for reduced surveillance and are mandatory.

3.7.2.1 Transportation. The QAR must keep DESC aware of any transportation problems that would affect the delivery schedule. Any time there is or is likely to be a transportation problem the QAR **shall** notify the appropriate DESC contracting officer of such a problem. Again, this will allow DESC to coordinate another mode of transport in order to meet our customer's needs.

3.7.2.2 The QAR **Shall** report transportation problems as outlined in Problem(s) Reporting Procedure.

3.7.3 Reporting quality problems are not available for reduced surveillance and are mandatory.

3.7.3.1 Quality. The QAR must keep DESC aware of any quality problem as soon as they happen. Any time there is a quality problem the QAR must notify the appropriate DESC contracting officer and DESC-BQ of such a problem. This will allow DESC to consider waiver requests and coordinate obtaining product from another supplier if required in order to meet our customer's needs.

3.7.3.2 **The QAR shall** report quality problems as outlined in Problem(s) Reporting Procedure.

3.8 Reduced Surveillance/Alternate Release Procedures. Based on accumulated quality data, QARs **shall** route appropriate requests for reduction of **mandatory inspections** through channels to DESC-BQ. Prior to placing any contractor on Alternative Release Procedures (ARP) the QAR **shall** submit a request, in writing, to the appropriate DESC contracting officer. The QAR's written request for ARP **shall** provide justification and include supporting data.

3.9 Solution Preparation and Standardization. Accurate test results rely on the accuracy of the test equipment, solutions used, and calculations used to perform the test. Inaccuracies in any of these variables will result in an inaccurate test result. An improperly performed solution preparation and/or standardization may cause the Government to pay for product that tested on-specification but is actually off-specification. It may cause the contractor to find product off-specification that is actually on-specification causing them to lose money by reworking product that is on-specification. It may cause delays in shipment due to investigating the failing test results.

3.9.1 The QAR **shall verify** preparation and standardization of solutions used for testing products identified for delivery against contract.

4.0 RISK MANAGEMENT PROCESS AND PROCEDURES. There is a minimum set of requirements that must be performed to meet the uniqueness of petroleum. In addition to utilizing the Supplier Quality Assurance Chapter of the One Book, modifications are required to meet the needs of the petroleum commodity. Perform risk analysis for each bulk shipment, in some cases PC&S contracts require risk analysis if transport is barge or tanker, to include specific identification of risk associated with each mode of delivery.

4.1 Risk Planning. A basic set of critical processes are inherent in any petroleum contract. A list of key and critical processes including process flowcharts is provided in Key and Critical Processes. *This list includes both contractor and QAR owned processes.*

4.2 Risk Assessment. Risk ratings for those critical processes identified for **mandatory inspection** is provided in Risk Ratings and is to be used on the DCMA Risk Management Plan (RAMP). *It should be kept in mind that QAR owned processes, while DESC considers them* ***mandatory****,* ***should not be entered into the RAMP****.*

4.3 Risk Handling. The QAR may establish a risk-handling plan that is commensurate with the level of risk for those processes not considered **mandatory**. The QAR **shall** comply with paragraph 3.8, Reduced Surveillance/Alternate Release Procedures for any reduction in **mandatory inspections** requirements. The Product Audit Checklists contains requirements for auditing the most complex critical risk areas. Audit checklists for Pipeline Shipments and Tank Car/Tank Truck loading **shall** used with only the sampling, testing and gauging areas as **mandatory**.

4.4 Risk Monitoring. Based upon risk management documentation, the QAR may adjust surveillance frequency/intensity on petroleum contracts except for those critical risk areas identified as **mandatory**. The QAR **shall** comply with paragraph 3.8, Reduced Surveillance/Alternate Release Procedures for any request for reduction in **mandatory inspection** requirements. Prior to placing any contractor on Alternative Release Procedures the QAR **shall** submit a request, in writing, to the appropriate DESC contracting officer. The QAR's written request for ARP **shall** provide justification and include supporting data.

4.5 Risk Documentation and Reporting. The documentation requirements of the Supplier Quality Assurance chapter require some additions for petroleum contracts. Due to the short lead time and short production schedule for petroleum any production, transportation, or quality (performance, schedule, cost) failure that would affect timely delivery requires immediate notification to the DESC Contracting Officer, Transportation Manager, and Quality Operations Division. Requirements for notification are provided in Problem(s) Reporting Procedure.

RISK AND VISIT INTERVAL DRIVERS

CUSTOMER DIRECTED MANDATORY REQUIREMENTS

ADDITIONS TO THE ATA 103, JIG, AND NFPA 407 CHECKLISTS

The following items **shall** be considered when performing intoplane delivery point surveillance at all DESC contracted intoplane locations. Contract deficiencies or non-conformances at these locations **shall** drive risk assessment level and contractor engagement interval determinations. Reported levels will be Low, Moderate, or High risk. Engagement intervals may vary from visits every month to intervals of one-year Quality Assurance Representative engagement or visit intervals **shall** always be driven by the bottom line risk rating. Listed below are some of the drivers that will increase risk levels and mandate more frequent **inspection** visits.

1. Facility design and equipment operating procedures as annotated in manuals and other directives that conform to acceptable industry design and operational standards in respect to product receipt, storage, aircraft refueling operations, safety, security, and environmental parameters. Age and condition of faculties and equipment are a distinct part of risk evaluation. Examples of facility design deficiencies that will drive increased surveillance requirements are listed below:

    a. Antiquated or contractor fabricated or unapproved industry design facility components such as storage tanks, distribution, and sampling systems would drive risk to a higher level. Older fuels servicing vehicles that are not equipped with-state-of-the-art pumping and sampling devices, hose or hydrant connectors, deadman controls, interlock systems or those with gasoline engines will probably demand a higher risk level.

    b. Facilities having outdated manuals and procedures, documentation shortcomings, a less than adequate training, ineffective operator certification and documentation programs will be cause for higher risk ratings.

    c. Uncoated facility and equipment product tanks will increased risk.

    d. Older facilities with galvanized, copper or manganese metals present would be cause for concern and increased risk ratings. Fuel systems allowing fuel contact with yellow metals will not be used as they can skew thermal stability properties.

2. Integrity of contracted products, for example JP8, JAA, or JA1 (and others) must meet all parameters of ASTM D 1655 as well as all contract clauses. If these conditions exist the risk rating will be higher.

a. An example here might be confusion on the contractors part as to what the exact specification for the contracted product really is. Another good example is an faulty awareness of the proper injection procedures. Another example is whether or not the contractor is familiar with the test parameters associated with contract requirements and the Thermal Stability analysis.

3. Facility managers and supervisors are qualified in aviation petroleum management and operations and have significant experience and familiarity to aircraft refueling operations to effectively fulfill DESC Intoplane contract requirements. Unqualified employees drive risk ratings higher.

   a. If a contractor hires new inexperienced operators such as high school or college students to do intoplane servicing and the QAR finds a deficient training program, the risk will increase. Management or supervisory personnel without considerable experience in the area of aviation fuels, receipt, distribution, and aircraft refueling would drive the risk level upward and would require increased surveillance.

4. The overall facility work force possesses adequate aircraft refueling facility and operational knowledge, experience and tenure to adequately fulfill the DESC Intoplane contract requirements.

   a. Examples would be similar to those listed in item 3 above.

5. The contractor's management, supervisory, and operational work force is adequately trained and has documentation to substantiate this training relating to industry aircraft refueling, facility and operational safety, health, fire, security, emergency procedures and environmental requirements. Inadequate records and documentation would increase risk ratings.

6. Inadequate records and documentation to include follow-up procedures for corrective action would drive the risk factor higher.

   a. Lack of records and documentation relating to facility and equipment periodic and preventive maintenance would raise the risk level to a higher level.

   b. A contractor without a written **inspection** system (QCP), in English, would increase the level.

7. Facility and equipment maintenance plan.

   a. A contractor without a plan to complete scheduled maintenance would heighten the risk for surveillance.

8. Product quality requirements relating to aircraft refueling operations.

   a. Failure to maintain sampling and testing records is a good example that would raise risk levels.

b. The unavailability of adequate or antiquated sampling and testing equipment is another symptom that would increase risk.

9. Commonly recognized industry standards relating to aviation product transportation (receipt), storage, distribution and aircraft refueling.

   a. Unavailability of standards such as ATA 103 or the Joint Intoplane Guidelines (JIG) would be a good example that would lead one to increase surveillance based on risk.

   b. If the contractor is not aware of or does not have a laboratory certification of on-hand product it might be cause for higher risk and increased surveillance.

10. An absence of written site-specific procedures, and industry related guidelines and manuals would be cause for increased risk ratings.

The key to an effective Risk Assessment Program is consistency throughout a QA organization. DCMA and all Fuels Quality Assurance offices must develop common programs and more importantly, must execute them equitably.

Contractors levied a "high-risk" rating must receive increased surveillance. As the risk is lowered and the QAR's confidence increases, reduced surveillance may be a consideration but, fuels teams will fully justify, to the contracting officer, and substantiate the reduction with documented statistics in the form of a business case. Conversely, high-risk contract ratings must be fully supported. The practice of assigning a contractor site a "high risk" rating, not on findings, but because the QAR feels all intoplane contracts are inherently high-risk alone is no longer acceptable. Once the business case is prepared it **shall** be submitted to DESC-PH and for evaluation and approval/disapproval. **Mandatory** surveillance will continue until reduced surveillance is approved by DESC.

Part 1 – Contract Requirements & MIL-STD-1548D	YES	NO
1. Approved contract exceptions have been fully implemented and are IAW with contract. (Clause B15.01, VIII)		
2. The contractor is familiar with contract clause E5 and E17 to include the Governments right to **inspect**, responsibilities to furnish facilities and assistance, rejection criteria, removal of rejected supplies, the Government's authority to **verify** quality and equitable price reduction relating to replacement of services and product. (E5 & E17 Clauses)		
3. An approved **inspection** system in the form of an approved Quality Control Plan (QCP), in English, is in place and functional. Is reviewed and updated as necessary. (E5 & E17 Clauses)		
4. Is certified evidence of quality adequate to **ensure** the proper specification product is supplied and delivered under this contract? (E5, E17 & F56.01 Clauses)		
5. Contractor is familiar with sample can availability, can preparation, sampling of product, and packaging and shipment of samples. (E17 Clause)(ASTM D 4306)		
6. Contractor is familiar with procedures available to him or her regarding contract deviations and waivers relating to product and services and the meaning of "extraordinary situation" as it relates to the contract. (E17 & E35.02 Clauses)		
7. Is the contractor familiar with the responsibilities of the inspection office? (E17 & E22 Clause)		
8. Is the contractor familiar with the processing of Air Card issues, imprinter operation, and the proper execution of invoicing procedures? Are there difficulties in getting paid for product and services? (Clause F56.01)		
9. Is the contractor aware of required product specifications (ASTM D 1655) and how they differ from requirements unique to product supplied under this contract? (C2 & C16.08 Clauses for AvFuel)(C-16.15 Clause for AvGas)		
10. Are all additive contract requirements met if applicable? (B15.01, C16.08 & C16.64 Clauses)		
11. Records are correct, up to date, complete and readily available to Government **inspectors** (QARs). (E5 Clause)		
B. MIL STD 1548D		
1. Contractor is familiar with and satisfying the requirements associated with the Type I Standard Practice (ATA Specification 103) (para. 1 - 1.2)		
2. Specified specifications, standards, and handbooks are being utilized by the contractor. (para. 2.2, 2.2.1, 2.3 (ATA 103 only)		

Part 1 – Contract Requirements & MIL-STD-1548D	YES	NO
3. Defueled product from US Government aircraft is not being used to refuel other US Government aircraft. (para. 4.1.1)		
4. Defueling and reservicing requirements listed in Table 1 and paragraphs 4.1.1.1, 4.1.2 are being adequately met.		
5. Contracted product AvFuel Thermal Stability test temperature requirements of 260 degrees Centigrade are being complied with. (para. 5.1.1.1)		
6. The additive blending guidance listed in paragraphs 5.1.1.2 a-d is complied with.		
7. Proper notification regarding hydrant system modifications, changes or construction work is complied with. (para. 5.1.2)		
8. Bonding/Grounding wires are being tested for continuity and ohmic resistance in accordance with paragraph 5.2.2.1 a & b)		
9. Storage tanks are **inspected** and cleaned IAW paragraph 5.2.2.2 and ATA 103.		
10. Filtration requirements listed in paragraph 5.2.4.1 being met in it's entirety.		
11. Sample submissions are forwarded to the laboratories listed in paragraph 6.5, Table II (others when contract waivers approved by contracting officers)		

Part 2 – Receiving, Storage & Hydrant Operations

A. Receiving, Storage & Hydrant Operations	YES	NO
1. Aviation Jet Fuel to be serviced to US Government aircraft **shall** conform to ASTM D 1655, "Standard Specification for Aviation Turbine Fuels" (ASTM D 910 for AvGas "Standard Specification for Aviation Gasoline") (latest revisions) (Para. 2-2.1 through 3)		
2. On hand jet fuel (and AvGas) is clear and bright, free of undissolved water, sediment, and suspended matter. The odor is normal. (Para. 2-2.1)		
3. Product colors are normal (Para. 2-2.1)		
4. Product meets specification parameters (Para. 2-2.2 through 3)		
5. All required testing during receipts was performed satisfactorily and in accordance with associated test procedures. (para. 2-3.1) Appropriate action is taken when product does not meet specifications. (para. 2-3.2)		
6. Receiving process was monitored at all times by trained and qualified contractor personnel. (para. 2-3.2)		
7. Fuel storage facilities meet all required design and equipment criteria. (para. 2-4.1 through 2)		
8. Filtration equipment meets specified requirements. (para. 2-4.3)		
9. Physically segregated systems are available for each product of aviation products. (para. 2-4.4)		
10. These systems have emergency fuel shutoffs permanently installed. Deadman control devices are also installed at all truck loading facilities. Static bonding cables and clips are installed and all these systems are working properly. (para. 2-4.4 through 6)		
11. Static bonding cables are properly installed at all refueling unit fill stands. (para. 2-4.7)		
12. Bottom loading nozzles at refueling unit fill stands are facilitated with 60 mesh or finer screens. (para. 2-4.8		
13. Fire extinguishers with attached **inspection** tags are located in accordance with local requirements. (para. 2-4.9)		
14. All fuel loading hoses meet API 1529 or BSI 3158, Type C standards and are compatible with jet fuel and local conditions. (para. 2-4.10) Certificates for all hoses are on record.		
15. "NO SMOKING"," FLAMMABLE" (NFPA 407) and product identification signs must be prominently displayed throughout the storage area (API 1542). (para. 2-4.11 & 12)		
16. Are underground tanks and piping cathodically protected? (para. 2-4.13)		

Part 2 – Receiving, Storage & Hydrant Operations	YES	NO
17. Fuel facility checks are performed properly and on time and they are documented properly and organized in an orderly system. (para. 2-5) (see form 103-02) See periodic checks below: (para. 2-5.1 & 2, 3-1 through 3.9, 4.1 through 4.6, 5.1 through 5.3 and 6.1 through 6.8)		
18. DAILY		
a. General condition of yard (daily)		
b. Security, Fire, & Safety Deficiencies (daily)		
c. Fuel Leaks (daily) Storage Tank & Filter Sumps (daily)		
d. Filter Differential Pressures (daily)		
e. Hoses, Swivels, Nozzles, Static Reels, Cables, Clamps (daily)		
f. Fire Extinguishers (daily)		
19. MONTHLY		
a. Filtration Test (monthly)		
b. Bonding Cable Continuity (monthly)		
c. Nozzle Screens (monthly)		
d. Signs & Placards (monthly)		
e. Floating Suctions (monthly) (see C2 Clause of the contract)		
f. Fire Extinguishers (monthly)		
20. QUARTERLY		
a. Emergency Shutdown System (quarterly)		
b. Water Defense Systems (quarterly)		
c. Tank High Level Controls (quarterly)		
21. ANNUAL		
a. Storage Tank Interiors (annually)		
b. Pressure gauges (annually)		
c. Filter Elements (annually)		
d. Filter Separator Heaters if applicable (annually)		
e. Storage Tank Vents (annually)		
f. Cathodic Protection (annually)		
g. Facility Condition (Safety) (annually)		
h. Line Strainers (annually)		

Part 2 – Receiving, Storage & Hydrant Operations	YES	NO
i. Fuel facility documentation is annotated properly and on schedule. (para. 2-5.2)		
B. Hydrant System Checks (These requirements are in addition to the checks listed in A, 17 a-d above and when a hydrant system is utilized)		
1. DAILY		
a. Pit Leaks and Cleanliness		
b. Hydrant Valve Condition		
c. Hydrant Pit Covers		
d. Emergency Fuel Shutdown Stations		
2. MONTHLY		
a. Hydrant Valve Assembly		
b. Isolation Valve Assembly		
c. Low Point Drains		
d. Emergency Shutdown		
3. SEMI-ANNUAL		
a. High Point Vents		
b. Surge Absorbers		
c. Pipeline Casings		
4. ANNUAL		
a. Cathodic Protection		
b. Instrumentation and Electrical Controls		

Part 3 – Aircraft Fueling Equipment Requirements and Checks

	YES	NO
A. Aircraft Fueling Equipment Requirements		
1. Are there visible fuel leaks? (para. 2-7.1)		
2. Tires, wheels, wheel studs/nuts are maintained in good condition at all times. (para. 2-7.1)		
3. Electrical equipment including lenses, wiring, lights is maintained in a safe and operational condition at all times. (para. 2-7.1)		
4. Vehicle windows must be free of cracks etc. (para. 2-7.1)		
5. All aircraft refueling equipment must have a filter separator or a full-flow monitor that meet specification API 1581, Group II, Class C, latest edition. They must be equipped with a water defense system, differential pressure indicating device, air elimination provisions, manual sump drains, upstream and downstream membrane sampling connections, and pressure relief devices. (para. 2-7.2)		
6. The equipment has separate and independent pressure and secondary control devices to protect the aircraft under constant flow and from pressure surge during aircraft valve closure. The secondary control is intended protect the aircraft if the primary system malfunctions. (para. 2-7.3)		
7. All equipment must have a deadman control system that will completely stop fuel flow within 5 percent of the fuel flow rate at the time of release. (para. 2-7.4)		
8. Contractor's fueling equipment must be equipped with an emergency fuel shutoff system . (in addition to the deadman system) (para. 2-7.5)		
9. Refueling trucks **shall** have minimum, two 20-pound dry chemical fire extinguishers securely mounted and easily accessible. Hydrant trucks must have one of the same design. The extinguishers must have a current **inspection**, sealed, with records attached. (para. 2-7.6)		
10. Mobile equipment must have a safety interlock system . (para. 2-7.7)		
11. Hoses and couplings meet the requirements of API 1529, Grade 2, Type C, latest edition. (para. 2-7.8)		
12. Manual isolation valves are installed upstream of hoses when there are two hoses on one unit. (para. 2-7.9)		
13. Hydrant couplers and refueling nozzles are equipped with dust covers. (para. 2-7.10)		
14. Aircraft fueling nozzles are equipped with 100 mesh strainers. (para. 2-7.11)		

Part 3 – Aircraft Fueling Equipment Requirements and Checks	YES	NO
15. Fueling equipment must have installed pressure gauges in full view of the operator and they must have an accuracy of + or - 2% of full scale. (para. 2-7.12)		
16. Fueling equipment meters are calibrated annually and will maintain accuracy of 1/10 of one percent and repeatability of 1/20 of one percent oat flow rates ranging from 100 gpm to the maximum rated flow of the fueling equipment. Calibrators/adjustors must be sealed. (para. 2-7.13)		
17. Contractor's refueling equipment has a bonding system that measures less than 10 ohms total resistance. (para. 2-7.14)		
18. Refueling equipment has required signs, placards, and labels to include product identification, FLAMMABLE, NO SMOKING, EMERGENCY FUEL SHUTOFF, fire extinguishers location, pressure and differential pressure identification, filter and tank drain identification, filter element change dates, and the pumping system engagement procedures. (para. 2-7.15)		
19. Contractors refueling tank trucks tanks are constructed of stainless steel, aluminum or internally coated (epoxy, light colored) carbon steel. (para. 2-7.16)		
20. These refueling trucks dome covers have forward mounted hinge and latches that will close and latch with forward motion. They also have installed watertight fuel resistant seals and gaskets. (para. 2-7.16)		
21. The refueling trucks have water drains at the lowest point in each compartment and it is equipped with spring-loaded valves located inside the tank shell. They will have bottom-loading capability and be equipped with a high-level shutoff system with a pre-check verification device. A recirculation system is recommended. (para. 2-7.16)		
B. Aircraft Fueling Equipment checks. The following periodic checks must be performed by qualified individuals, at the specified frequencies, on all aircraft fueling equipment and it must be properly documented on the appropriate forms and maintained in a well-organized system. See periodic checks below: (para. 2-7.3.1 through 2-7. 6.4)		
1. DAILY CHECKS		
a. The condition of the contractors refueling equipment is free of safety defects, fuel leaks, and the appearance is satisfactory. (para. 2-8.3.1)		
b. Filter sumps are drained and tested as required. (para. 2-8.3.2)		
c. Filter differential pressure is observed and recorded. (para. 2-8.3.3)		
d. Deadman control is operating properly. (para. 2-8.3.4)		

Part 3 – Aircraft Fueling Equipment Requirements and Checks	YES	NO
e. Brake (Safety) Interlock systems are operating properly. (para. 2-8.3.5)		
f. Nozzle pressure is checked and recorded and does not exceed 40psi. (para. 2-8.3.6)		
g. Hoses, nozzles, and swivels were checked for damage, leakage, and excessive wear. (para. 2-8.3.7)		
h. Static reels, bonding cables clamps and connections are free of defects, excessive wear and loose connections. (para. 2-8.3.8)		
i. Lift platforms on hydrant equipment are in good condition and repair and operate properly. (para. 2-8.3.9)		
j. Proper fire extinguishers are available, easily accessible, are in proper repair and the equipment has the proper amount of extinguishers required. (para. 2-8.3.10)		
k. Air tanks were drained. (para. 2-8.3.12)		
l. Tank truck sumps were drained and tested properly. (para. 2-8.3.14)		
m. Tank truck refueler bottom loaders were pre-checked prior to refilling. (para. 2-8.3.15)		
2. MONTHLY CHECKS		
a. Contractor is performing the color membrane (Millipore) and water test downstream of each filter separator and monitor vessel in accordance with proper test methods. (para. 2-8.4.1)		
b. Electrical continuity and ohmic checks are performed properly. (para. 2-8.4.2)		
c. Nozzle screens are examined for particles or other solids and an investigation is initiated if required. Screens are constructed of 100-mesh material. Damaged screens are immediately replaced. (para. 2-8.4.3)		
d. Refueling equipment hoses are stretched to full length at full operating pressure and checked for abrasions, cuts, soft spots, carcass separation, worn covers, blisters, exposed reinforcement, cracks, twists and sharp bends or other damage. Couplings are checked at both ends for cracks and signs of slippage or leakage. (para. 2-8.4.4)		
e. Refueling equipment is clearly marked with applicable signs, placards and labels. (para. 2-8.4.5)		
f. Meter calibration is current and seals are properly attached. (para. 2-8.4..6)		

Part 3 – Aircraft Fueling Equipment Requirements and Checks	YES	NO
g. Fire extinguishers are available, and properly charged and sealed. **Inspection** tags are attached. (para. 2-8.4.7)		
h. Emergency fuel shutdown systems are operating properly. (para. 2-8.4..8)		
i. Lift platforms are operating properly, dependably and safely. (para. 2-8.4.9)		
j. Refueling truck tank interiors are **inspected** as required. (para. 2-8.4.10)		
k. Refueling truck dome covers, hinges, latches, seals, and gaskets are **inspected** and replaced as necessary. (para. 2-8.4.11)		
3. QUARTERLY CHECKS		
a. Contractor is performing comprehensive, overall refueling unit **inspection**. (para. 2-8.5.1)		
b. All primary and secondary pressure control equipment is checked and adjusted. (para. 2-8.5.2)		
c. Meter accuracy is checked and adjusters/calibrators are sealed. (para. 2-8.5.3)		
d. Water defense systems on all filter separators are checked for proper operation. (para. 2-8.5.4)		
4. ANNUAL CHECKS		
a. Filter elements are changed unless life is extended. Full flow monitor elements every two years. Visual **inspection** of element vessels are **inspected** and cleaned as necessary. (para. 2-8.6.1)		
b. Accuracy of pressure gauges are verified and adjusted as necessary. (para. 2-8.6.2)		
c. Accuracy of fueling equipment meters are verified and adjusted/calibrated as necessary. (para. 2-8.6.2)		
d. Water defense systems are tested and repairs are made as necessary. (para. 2-8.6.3)		

Joint Inspection Guidelines (JIG)

Part 1 – Contract Requirements	YES	NO
1. Approved contract exceptions have been fully implemented and are IAW with contract. (Clause B15.01, VIII)		
2. The contractor is familiar with contract clause E5 and E17 to include the Governments right to **inspect**, responsibilities to furnish facilities and assistance, rejection criteria, removal of rejected supplies, the Government's authority to **verify** quality and equitable price reduction relating to replacement of services and product. (E5 & E17 Clauses)		
3. An approved **inspection** system in the form of an approved Quality Control Plan (QCP) is in place and functional. Is reviewed and updated as necessary. (E5 & E17 Clauses)		
4. Is certified evidence of quality adequate to **ensure** specification product is supplied and delivered under this contract? (E5, E17 & F56.01 Clauses)		
5. Contractor is familiar with sample can availability, sampling of product, and packaging and shipment of samples. (E17 Clause)		
6. Contractor is familiar with procedures available to him or her regarding contract deviations and waivers relating to product and services and the meaning of "extraordinary situation" as it relates to the contract. (E17 & E35.02 Clauses)		
7. Is the contractor familiar with the responsibilities of the **inspection** office? (E17 & E22 Clause)		
8. Is the contractor familiar with the processing of Air Card issues, imprinter operation, and the proper execution of invoicing procedures? Are there difficulties in getting paid for product and services? (Clause F56.01)		
9. Is the contractor aware of required product specifications (ASTM D 1655) and how they differ from requirements unique to product supplied under this contract? (C2 & C16.08 Clauses for AvFuel)(C-16.15 Clause for AvGas)		
10. Are all additive contract requirements met? (B15.01, C16.08 & C16.64 Clauses)		
11. Records are kept up to date, complete and readily available to Government **inspectors** (QARs). (E5 Clause)		

Joint Inspection Guidelines (JIG)

Part 2 – MIL-STD-1548 Requirements

	YES	NO
1. Contractor is familiar with and satisfying the requirements associated with the Type II Standard Practice (Joint Into-Plane Fueling Services (JIG)) (para. 1 - 1.2)		
2. Specified specifications, standards, and handbooks are being utilized by the contractor. (para. 2.2, 2.2.1, 2.3 (IATA, JIG only)		
3. Defueled product from US Government aircraft is not being used to refuel other US Government aircraft. (para. 4.1.1)		
4. Defueling and reservicing requirements listed in Table 1 and paragraphs 4.1.1.1, 4.1.2 are being adequately met.		
5. Contracted product AvFuel Thermal Stability test temperature requirements of 260 degrees Centigrade are being complied with. (para. 5.1.1.1)		
6. The additive blending guidance listed in paragraphs 5.1.1.2 a-d is complied with.		
7. Proper notification regarding hydrant system modifications, changes or construction work is complied with. (para. 5.1.2)		
8. Bonding/Grounding wires are being tested continuity and ohmic resistance in accordance with paragraph 5.2.2.1 a & b)		
9. Storage tanks are **inspected** and cleaned IAW paragraph 5.2.2.2 and ATA 103.		
10. Filtration requirements listed in paragraph 5.2.4.1 being met in it's entirety.		
11. Sample submissions are forwarded to the laboratories listed in paragraph 6.5, Table III (others when contract waivers approved by contracting officers) for OCONUS operations.		

Joint Inspection Guidelines (JIG)

Part 3 – Product Requirements

	YES	NO
1. The Aviation Turbine Fuel **shall** conform to the requirements of ASTM D 1655, Standard Specification for Aviation Turbine Fuels.		
2. When FSII is required by contract line item, did the fuel **shall** contain from 0.07 to 0.20 percent by volume FSII.		
3. Does the contractor obtain, package and ship samples of the Jet fuel to an approved testing laboratory at the beginning of the contract period and every 90 days thereafter?		
4. Did the contractor perform the required sampling in the presence of the government quality assurance representative at least once every 180 days?		
5. Are samples taken in a properly prepared epoxy coated can suitable for thermal stability testing?		
6. Is the sample can filled with the same grade of fuel to be sampled approximately 24 hours prior to sampling?		
7. Immediately prior to sampling, was the sample can emptied and rinsed twice with the fuel to be sampled?		
8. Was the sample taken downstream of the filter separator?		
9. Was the sample can immediately sealed after sample was obtained?		
10. Did the contractor prepare a DD Form 1222? Was it submitted to the testing laboratory with the sample?		
11. Was the sample tested for flash point, freezing point, FSII content, if required; and thermal stability?		
12. Did the sample pass all the test requirements?		
13. Are there any Corrective Action Requests against this process outstanding from previous audits?		

Joint Inspection Guidelines (JIG)

Part 4 – Safety Requirements

	YES	NO
1. Does the contractor have a Health, Safety and Environmental Policy?		
2. Is the policy available and being enforced?		
3. Are fire drills, attended by all personnel, take place approximately once a year on the type of fires which may be encountered on the job, using fire extinguishers and equipment located at the facility?		
4. Are personnel given the opportunity of operating and discharging fire extinguishers during training?		
5. Are emergency situations which can occur during operations such as fuel spillage, fire and injuries to personnel simulated to provide practice in the most effective measures necessary to deal with them?		
6. Are appropriate standing orders relating to fire safety displayed?		
7. Are fire drills and names of personnel taking part recorded?		
8. Are personnel familiar with the location of fire alarm systems and procedures for calling the fire service and other emergency services?		
9. Are facilities for first aid treatment available? Are arrangements made to **ensure** that appropriate medical aid and ambulance service can be obtained at short notice?		
10. Are adequate washing facilities provided?		
11. Is detailed reporting, investigation and emergency response procedures included in the company Operations Manual?		
12. Are forms for reporting accidents available?		
13. Where required, is adequate protection equipment provided		
14. Has procedures been prepared to cover all possible emergencies?		
15. Is training carried out to **ensure** that all personnel are familiar with the procedures and proficient in their assigned duties?		
16. Are regular emergency drills conducted so every employee can become proficient in his/her assigned duties?		
17. Are there any Corrective Action Requests against this process from outstanding from previous audits?		

Part 5 – Facilities & Equipment Requirements

	YES	NO
A. Fueling Equipment - Design Requirements:		
1. Are fueling equipment designed for use with petroleum products and constructed to acceptable safety standards?		
2. Are all new fueling vehicles diesel powered?		
3. Do the fueling vehicles carry only one grade of product?		
4. Is the grade identification displayed prominently?		
5. Is all piping and accessories made of aluminum alloy, stainless steel or mild steel protected internally by hot tinning or by lining with agreed epoxy material?		
6. Are fueling vehicles fitted with filter monitors or filter separators?		
7. When hydrant dispensers are equipped with filter separators, do they have a fitting system to detect free water in the sump?		
8. Are all hoses of one continuous length, smooth bore synthetic rubber construction complying with the requirements of the latest issues of API 1529 or BS3158?		
9. Are hose end strainer of not coarser than 60 mesh fitted to pressure fueling couplings and overwing fueling nozzles?		
10. On all new vehicles, is there a 50 mm diameter interlock status warning light (amber color) which lights whenever an interlock protected component is removed from its normal stored position?		
11. On all new vehicles, on the dashboard, is there an emergency override status warning red light which lights whenever the override mechanism is moved from its normal operating position?		
12. Do overwing (trigger) fueling nozzles have hold open ratchets? (they should not have)		
13. Are overwing fuel nozzles marked with the fuel grade and color coded black for Jet A-1.		
14. Are the Jet A-1 nozzles have a spout with a major axis of at least 67 mm?		
15. Are hydrant dispensers and refuelers fitted with pressure control systems to protect aircraft from excessive flow and surge?		
16. Do refuelers and trailers carry at least two 9 kg. Dry chemical type fire extinguishers?		
17. Are bonding reel and cable electronically bonded to the vehicle chassis? Does the reels and cables meet continuity and resistance requirements?		

Part 5 – Facilities & Equipment Requirements	YES	NO
18. Are emergency engine stop controls, when applied remain in stop position provided and are they clearly labeled?		
19. Are all pressure fueling vehicles fitted with deadman controls?		
20. Is the fueling system arranged so that all fuel which passes through the delivery meter delivered to the aircraft and designed so it cannot be diverted elsewhere?		
21. Is all fueling equipment fitted with a product meter capable of metering to the required accuracy?		
22. Are the refueler tanks constructed of mild steel, internally coated with epoxy material or aluminum alloy or stainless steel?		
23. Does the tank drain to a low point sump, provided with a drain line and valve?		
24. Is the refueler tank vented by a suitable system?		
25. Are fueling vehicles bottom loaded through a self sealing connection?		
26. Are all main product piping on the refueler equipped with a low point drain plug located so as to enable complete draining of all product?		
27. Is the main outlet from the refueler tank fitted with an internal foot valve capable of being shut quickly in an emergency?		
B. Filtration Equipment - Routine Maintenance Checks:		
1. Do the filter and strainer vessels have a drain connection at the lowest point of each?		
2. Is the main sump drain line fitted with a sample valve to facilitate regular checks?		
3. Are filters equipped with direct reading differential pressure gauges?		
4. Are all filters fitted with air eliminators and a pressure relief valve?		
5. Do the filters have dates of **inspection** and element changes stenciled on the body and carry a plate showing the correct designation of the elements installed?		
6. Is a visual check made on one liter sample drawn from the filter drains with filter under pressure performed daily, at the start of each shift?		
7. Is the differential pressure observed periodically during each pumping operation to **ensure** that the maximum limit is not exceeded?		
8. Is the differential pressure , when pumping at the highest flow rate, noted and recorded on a graph once a week?		

Part 5 – Facilities & Equipment Requirements	YES	NO
9. When Micro-filters (MF) are used, are the elements changed when the differential pressure reaches the manufacturer's recommended maximum? If the flow rates fall to unacceptably low levels? If filter membrane tests are carried out and abnormal results obtained? If unusual sediment is found downstream of the filter? If the sudden drop in differential pressure occurs without any obvious cause? After 2 years?		
10. When F/S Coalescer Elements (First Stage) are used, are the elements changed when the differential pressure reaches the manufacturer's recommend maximum? If filter membrane tests are carried out and abnormal results are obtained? If there is a sudden drop in pressure differential without any obvious cause? If unusual sediment or traces of free water are found downstream of filter? After 2 years?		
11. When FS Separator Elements (Second Stage) is used, are the paper separator elements changed whenever the coalescer elements on the same unit are changed? Are the Teflon-coated and synthetic elements changed when **inspected** and tested annually in accordance with the manufacturer's recommendations or when coalescer elements are changed? If washing in accordance with the manufacturer's instructions fails to restore them?		
12. Are records of all drainings kept?		
13. Are records of weekly pressure differential readings documented?		
14. Are records of filter membrane showing number and type of elements installed, differential pressure before and after change, throughput since previous change, reason for change and any relevant details kept?		
15. Are all fine mesh strainers used for product quality purposed drained, opened, and cleaned at least every month?		
16. Are differential gauges tested every six months? For piston type gauges, a check for zero reading and for free movement throughout the full piston travel is adequate.		
17. Are records of all differential gauge checks maintained?		
18. Are all defective gauges replaced?		

Joint Inspection Guidelines (JIG)

Part 6 – Personnel Requirements

	YES	NO
1. Are records of training maintained for every employee?		
2. Are servicing personnel trained in all aspects of the Into-plane refueling operation?		
3. Are servicing personnel trained on how to use fire extinguishers and on the procedures to be used in the event of fire?		
4. Did the fuel servicing operator remain at the fuel servicing equipment during the entire refueling operation?		
5. Did the fuel servicing operator continuously observe the equipment and the aircraft for any fuel leakage?		
6. Did the fuel servicing operator hold the deadman control throughout the entire servicing operation? (deadman controls must not be tied or jammed in the open position).		
7. Are existing personnel called upon to undertake new tasks trained before undertaking the new task without supervision?		
8. Do the training records indicate the following:		
a. Which task training has been given		
b. Date of such training		
c. The signature of the trainer		
d. A "yes/no" assessment of whether the trainee demonstrated satisfactory understanding of the training		
e. Signature of trainee		
9. Are follow up observation (with refresher training, if found necessary) undertaken by the supervisory or training staff?		
10. Are the dates and results of these follow up observations recorded on the operator's training record?		
11. Is fire and emergency training carried out in cooperation with the airport or local fire service?		

Part 7 – Operational Requirements

	YES	NO
A. Maintenance and Testing of Fueling Equipment		
1. Are fueling equipment maintained in sound condition at all times in order to **ensure** a reliable, safe fueling service?		
2. Is maintenance work scheduled so that all units receive thorough attention in accordance with the equipment manufacturer's instructions?		
3. Is a logbook kept for each item of equipment to record details of work carried out?		
4. In order to **ensure** that refueling vehicles operated satisfactorily, are routine chassis and engine serviceability checks carried out and recorded?		
5. Is functional testing of interlocks carried out weekly and recorded?		
6. Are all electrical bonding wires including clips and reels, checked daily for firm attachment to the vehicle and general condition?		
7. Are all electrical bonding wires checked weekly for electrical continuity between the bonding wire clip and vehicle chassis?		
8. Does the filtration equipment meets the requirements for testing, **inspection** and maintenance?		
9. Is the correct operation and performance of pressure/surge control equipment checked every quarter?		
10. Is the correct operation and performance of deadman control systems checked monthly?		
11. Whenever hose length or bore is altered, is the venturi settings on venturi actuated pressure control valves adjusted?		
12. When first received, is each hose given a permanent identification? Is a "Hose **Inspection** Test Record" started?		
13. Is the maximum shelf life of the hose 2 years from date of manufacture? Is the maximum overall life limited to ten years from date of manufacture?		
14. Are new hoses flushed with 10,000 liters of product to be used, and pressure tested in accordance with the six monthly test procedure prior to commissioning?		
15. For damaged hoses that were shortened by removal of the damaged end section, are the hoses subjected to the six monthly test procedure and venturi-readjustment after rectification?		
16. Do meters used for inventory control or for measuring product transfers perform in service with a maximum tolerance of plus/minus 0.20 % at flow rates between 20-100% of the rated flow?		
17. Are meters in service calibrated every six months?		
18. Are new meters and meters that have been repaired or overhauled calibrated before being brought into service? Are piston type differential gauges (Haar or Gammon)		
19. Are meter history records retained for at least three years?		

Part 7 – Operational Requirements

	YES	NO
20. Are direct reading gages checked every six months against a master gauge or dead weight tester? Are the master gauges recalibrated every three years or more frequently if specified by the manufacturer?		
21. Are bourdon type differential gauges calibrated every six months?		
22. Are piston type differential gauges (Haar or Gammon) Checked for free movement throughout the full piston travel and visually for correct zeroing every six months? Checked for free movement throughout the full piston travel and visually for correct zeroing every six months?		
23. Are the date and results of all pressure gauge checks recorded?		
24. Hydrant dispenser Inlet couplings checked for wear, using appropriate wear gauge every fueling operation? Are records of repairs and adjustments maintained?		
25. Are overwing nozzles checked for general condition and leaks every fueling operation? Are records maintained?		
26. Are refueler tanks visually checked from the hatch quarterly? Are they drained and **inspected** internally every year? Are records maintained?		
27. Are the wire mesh strainers fitted to pressure couplings (underwing nozzles) and overwing nozzles **inspected** monthly?		
28. Are new or transferred equipment and equipment after major repair or overhaul thoroughly checked, flushed and tested in order to **ensure** that it is in proper operating condition prior to commissioning?		
29. Are hydrometers and thermometers used for density quality control checks meet requirements of the relevant ASTM/IP standards?		
30. Are there any Corrective Action Requests against this process outstanding from previous audits?		
B. Fuel Quality Control Requirements:		
1. Are refuelers drained of water and sediment daily at the start of the morning shift?		
2. Are refuelers drained of water and sediment after every filling operation?		
3. Are refuelers drained of water and sediment after defueling?		
4. Are refuelers drained of water and sediment after heavy rain?		
5. Are refuelers drained of water and sediment after vehicle washing or maintenance of tank or filter?		
6. Is draining carried out by drawing a minimum 1-liter sample at full flush from the low point of vehicle tanks, filter separators and microfilter sumps and where applicable, the inlet side of filter monitors, into clean, clear glass jars, stainless steel buckets or white enamel buckets until line content is removed and samples are clear and bright?		
7. If water is found, did the flushing continue until a final clear sample is obtained?		
8. If water is found in three repeat samples, is the fuel rejected and an investigation carried out?		

Part 7 – Operational Requirements	YES	NO
9. Is a final 1-liter sample from the vehicle tank low points drawn into a glass jar and visually checked with a chemical detector?		
10. For Hydrant Dispensers, is the water and sediment drained daily at the start of the morning shift, minimum 1-liter samples being flushed from filter separator and micro filter sumps?		
11. For Hydrant Dispensers, is a final jet fuel sample drawn and checked with a chemical detector?		
12. Are all tests recorded daily?		
13. Are adequate stock of approved sample containers maintained at the airport facility?		
14. Is filter membrane color rating and gravimetric determination taken at the specified frequency?		
C. Fueling Operations:		
1. Is the fueling operations carried out by competent personnel, thoroughly trained in aircraft fueling procedures, operation of fueling equipment, and action to be taken in the event of an emergency?		
2. Are personnel familiar with the location and operation of emergency stop controls and switches on fueling equipment and on the apron?		
3. Are vehicles driven at speed limits imposed by the Airport Authorities?		
4. During fueling, are vehicles positioned that free exit is always possible in a forward direction, without reversing?		
5. If the vehicle has to be reversed (except for truck and trailer combinations which must not be reversed into position), is a guide man stationed at the rear of the unit to direct the maneuver?		
6. Is the vehicle positioned at a safe and convenient distance from the fueling points of the aircraft to permit minimum hose length?		
7. Is the vehicle positioned at a safe and convenient distance from the fueling points of the aircraft to permit maximum visual and manual control?		
8. Is the vehicle positioned at a safe and convenient distance from the fueling points of the aircraft to permit speedy connection and disconnection of fueling hoses?		
9. Is the vehicle positioned at a safe and convenient distance from the fueling points of the aircraft to permit avoidance of aircraft vent pipe safety zones (usually 3 meter radius), APU exhaust efflux or other danger areas?		
D. Bonding and Grounding:		
1. Is the aircraft, fueling vehicles, and overwing nozzles electrically bonded together throughout the fueling operation to **ensure** that no difference in electrical potential exists between the units?		
2. Is bonding completed before any hoses are connected or tank filler caps are opened?		

Part 7 – Operational Requirements

	YES	NO
3. Is bonding maintained until all hoses have been finally disconnected or tank filler cap replaced?		
4. Grounding of aircraft is not recommended. However, when authorities require grounding, and earthing points exist for this purpose, is the fueling equipment and the aircraft grounded by means of a "Y" grounding cable and not through the vehicle?		
5. When overwing fueling, is care taken to **ensure** correct procedure for bonding and entering nozzle in the tank filler?		
E. Fueling Procedures:		
1. Is fueling permitted during severe local electrical storms?		
2. Is a "No Smoking" sign or symbol displayed near the aircraft and the fueling vehicle throughout the fueling operation?		
3. Are fueling requirements ascertained?		
4. Are fire extinguishers readily available?		
5. Are hoses run out of selected routes which will prevent them from being run over by aircraft-servicing vehicles?		
6. Is kinking and twisting of hoses avoided?		
7. Are pressure couplings and overwing nozzles not dragged over the ground?		
8. When not in use, are hoses fitted with dust caps?		
9. During fueling, is the vehicle checked for leaks? Is the filter differential pressure normal?		
10. During fueling, did the operator position himself at a point where he has a clear view of the vehicle control panels and aircraft fueling points?		
11. Are deadman controls always used and are never wedged or blocked open?		
12. During fueling operations, is there any aircraft maintenance conducted which may provide a source of ignition for fuels vapor?		

Part 8 – Records and Documentation

Are the following required records and quality checks available?	YES	NO
The results of all significant checks and testing must be recorded on documents which are readily available, kept up-to-date and retained for a minimum of one year.		
1. Daily water drain record?		
2. Filter membrane test results including membranes?		
3. Fuel sample records?		
4. Filtration equipment-differential pressure record and graphs?		
5. Change of fuel grade - selective settings check record?		
6. Maintenance Log Book to record work carried out on each item of equipment?		
7. Mobile equipment serviceability checks?		
8. Maintenance of deadman controls and hose stowage/brake interlocks?		
9. Pressure/surge control equipment checks?		
10. Hose **inspection**/test record?		
11. Meter test records?		
12. Pressure and vacuum gauge test record?		
13. Coupling **inspection** and repair record?		
14. Nozzle **inspection** and cleaning record?		
15. Refueler tank **inspection** and cleaning record?		
16. Filtration equipment - **inspection** and maintenance records?		
17. Hose-end strainers **inspection**/replacement records?		
18. Fire extinguisher check record?		
19. Are detailed records of accidents/incidents maintained for at least 5 years?		
20. Are all records signed by the person who carried out the checks?		
21. Are records of daily checks retained for at least 3 months?		
22. Are records of weekly and monthly checks retained for at least one year?		
23. Are records of all less frequent routine checks, all filter membrane test results, and log books on all non-routine matters retained for at least 3 years?		
24. Are there any Corrective Action Requests against this process outstanding from previous audits?		

Part 1. Design and Construction of Intoplane Facilities and Equipment

	NO	YES
1. Are there kinks and short loops in hose storage compartments? Are hoses Type C (Conductive)? (para. 2-1)		
2. Is bonding equipment installed and available on fuel servicing equipment? Are the bonding cables constructed of conductive, durable, and flexible material? Are bonding connections electrically firm and are jacks, plugs, and clamps and connecting points clean, and attached to unpainted metal surfaces? (para. 2-1)		
3. Are No Smoking signs posted at entrances to fueling areas? (para. 2-1)		
4. When servicing, aircraft radar equipment in aircraft is not operated within 300 feet of any fueling operation? Is aircraft installed weather-mapping radar operated during aircraft fuel servicing? Is airfield radar located so that the beam will not be directed toward any fuels storage facility or equipment or any aircraft refueling operation within 100 feet? (para. 2-1)		
5. Are portable fire extinguishers available in facility and servicing areas? Does mobile refuelers have two fire extinguishers installed in a location easy to get to in case of fire? (para. 2-1)		
6. Are deadman controls installed and operational on all sources of fuel flow? (para. 2-1)		
7. Are all fueling systems designed to minimize pressure surges? (para. 2-1)		
8. Are coupled lengths of fuel servicing hoses tested IAW API Bulletin 1529? Are test certificates available? Are couplings marked with serial numbers? Are coupling ferrules marked to indicate possible slippage? Is hydrostatic testing done properly? (para. 2-2)		
9. Are all system and equipment materials safe for use in the service intended and compatible with fuels applications utilized in facilities and equipment i.e., no manganese, yellow metals, galvanized etc.? (para. 2-3)		
10. Are all vehicle metallic components and vehicle chassis electrically bonded? Is the requirement for continuity in facilities and equipment satisfied? Are cables and clips or plugs attached to overwing nozzles? Are cables and clips and/or plugs equipped on all servicing equipment? (para. 2-3)		
11. Are vehicle fuel tanks designed constructed and located in a manner to preclude hazardous arrangements and do they vent away from ignition sources? (para. 2-3)		
12. Does the contractor utilize any gravity feed equipment associated with aircraft fuels servicing? (para. 2-3)		
13. Are engine exhaust systems designed, installed, and constructed to minimize hazards and are exhaust components secured properly? Are exhaust systems shielded from hazardous substances and is exhaust discharged appropriately? (para. 2-3)		
14. Is equipment and facility wiring adequately sized, protected from physical damage, and installed properly? (para. 2-3)		

Part 1. Design and Construction of Intoplane Facilities and Equipment

	NO	YES
15. Are spark plugs and exposed terminal connections insulated to prevent sparking? Are motors, alternators, generators and associated control equipment installed on equipment and facilities properly? (para. 2-3)		
16. Are refueling equipment cabinets equipped with metal grated flooring? (para. 2-3)		
17. Are fire extinguishers protected from the elements such as snow and ice, accessible, storage locations marked accordingly and of the right number and size required? (para. 2-3)		
18. Are "No Smoking" signs posted in the cab of all refuelers? Are ashtrays and lighters removed or rendered inoperable? (para. 2-3)		
19. Are refuelers over 90 inches long equipped with baffles? Are they vented properly? (para. 2-3)		
20. Are refuelers equipped with dome covers with a forward mounted hinge and self latching catches and are they fitted with watertight fuel-resistant seals or gaskets? (para. 2-3)		
21. Are facilities and equipment equipped with "Emergency Shutoff Controls" and identified properly with the method of operation also identified? (para. 2-3)		
22. Are proper Deadman Controls installed throughout the distribution system and on equipment utilized to service aircraft? (para. 2-3)		
23. Is fuel servicing vehicles equipped with an integral system or device that prevents the vehicle from being moved unless all fueling nozzles and hydrant couplers are properly stowed and mechanical lifts are lowered to their stowed positions. (para. 2-3)		
24. Are all aircraft servicing vehicles properly equipped with product identification signs? (para. 2-3)		
25. When top loading is used, are refuelers equipped with appropriately designed drop tubes that extend to the bottom of the cargo tank? If this method of loading is used does the contractors facilities have a deadman control affixed whereby the operator can extend the cable to the top of the vehicle? (para. 2-3)		
26. When bottom loading is utilized, does the facilities have the proper hoses and is the connection between the tank truck and the arm or hose equipped with a dry break coupler? (para. 2-3)		
27. Are fueling systems equipped with Cathodic protection identified and marked properly? (para. 2-4)		

Part 2. Operations of Fuels
Facilities and Equipment

	NO	YES
1. Are contractor personnel trained and qualified in the safe and effective use of the equipment they use? Are they familiar and trained in the use of emergency controls and in the procedures to be followed in an emergency during fueling operations? (para. 3-1)		
2. When valves or electrical devices are used for isolation during maintenance or modification or fuels system, is it tagged or locked? (para. 3-1)		
3. Is all fuel servicing equipment maintained in compliance with NFPA 407 regarding safe operating conditions i.e., fuels nozzles are not dragged, fueling operations are shut down and the supervisor notified when spills occur, airport fire crews are notified when necessary, and only one tank vehicle is connected to the same aircraft manifold? (para. 3-2)		
4. Are emergency fuel shutoff access locations kept clear and are they operationally checked every 3 months? Are records maintained on these checks? (para. 3-3)		
5. Are electrical bonds made prior to connection to the aircraft fueling connection? Are they maintained until all fueling connections are removed? Are nozzle bonds utilized properly? (para. 3-4)		
6. Where hydrant servicers are used, the hydrant coupler is always connected to the hydrant system prior to bonding the fuel equipment to the aircraft? (para. 3-4)		
7. Is aircraft fuel servicing performed while onboard engines or combustion heaters are operating? (para. 3-5)		
8. Does the contractor allow equipment other than that performing aircraft fuel servicing within 50 feet of aircraft and does he allow fuel servicing equipment to park within 10 feet of aircraft fuel vent openings? (para. 3-6)		
9. Are all overwing fuel servicing precautions observed? (para. 3-6)		
10. Does the contractor allow battery chargers, ground-power generators to be connected or power tools to be used around aircraft fuel servicing operations? (para. 3-7)		
11. Is photographic or non hermetically sealed communication equipment utilized within 10 feet of aircraft fueling operations and equipment? (para. 3-7)		
12. Does the contractor personnel allow open flames within 50 feet of fueling facilities, equipment and/or operations? (para. 3-8)		
13. Does contractor personnel carry lighters or matches on their person while engaged in fuel servicing operations or does he allow them on or in fueling equipment? (para. 3-8)		
14. Are fuels servicing operations suspended where there are lightening flashes in the immediate vicinity of the airport? Are written procedures established at the airport? (para. 3-9)		
15. Does the contractor fuel aircraft with vents or openings positioned any closer to buildings than 25 feet or 50 feet from any combustion source? (para. 3-10)		

Part 2. Operations of Fuels
Facilities and Equipment

	NO	YES
16. Does the contractor position fuels servicing equipment during actual servicing with a clear path of egress? (para. 3-12)		
17. Are parking brakes set on fuels servicing vehicles prior to the operator leaving the cab of the vehicle? (para. 3-12)		
18. Are portable fire extinguishers available in the proper numbers and positioned properly on vehicles and facilities? (para. 3-13)		
19. Are operators trained in the use of the extinguishers they must operate in the case of an emergency? (para. 3-13)		
20. Does the contractor perform all Defueling operations properly (if applicable)? (para. 3-14)		
21. Are aircraft fueling hose **inspections** performed properly i.e., before each use, monthly etc.? Is hose maintenance performed properly? (para. 3-16)		
22. Are refueling vehicles and facilities kept in proper repair and cleanliness? (para. 3-17)		
23. Are refueling vehicles and hydrant servicers parked properly in relation to dispersal, clear space between vehicles, leaks or drainings, buildings or parked aircraft? (para. 3-18 & 3-19)		
24. If applicable, is the contractor familiar with and does he or she implement the safety procedures involved with Rapid Refueling of Helicopters effectively? (para. 3-21)		

DEFENSE ENERGY SUPPORT CENTER

END PRODUCT PERFORMANCE

MANDATORY RISK ANALYSIS AND RATING GUIDE FOR

INTOPLANE CONTRACTS

April 13, 2001

Contractor:_____

Contract Number:_____

Facility Location:_____

Date of Assessment:_____

Prepared By (QR):_____ **Signature:**_____

Supervisor:_____ **Signature:**_____

CONFIDENCE LEVEL OF THIS FACILITY: (RATING)	
PHYSICAL SITE VISIT THIS ASSESMENT (MONTHS)	
DATE FORWARDED TO DESC-PH	

INTRODUCTION

DEFENSE ENERGY SUPPORT CENTER
MANDATORY END PRODUCT PERFORMANCE GUIDE
FOR
INTOPLANE CONTRACT FACILITIES

This performance guide is a tool to be used for analyzing contractor Quality and Safety processes and to determine the level of US Government surveillance required based on the assessed performance at into-plane contract facilities. This assessment will be completed utilizing contractual requirements listed in current contract and supporting documents. For further information concerning this program, please contact DESC-BQ (703) 767-8743

END PRODUCT PERFORMANCE RECOMMENDED APPLICABILITY MATRIX

TYPE OF CONTRACT ADMINISTRATION AT CONTRACTOR FACILITY	QUALITY	SAFETY
PRODUCT	X	X
SAFETY	X	X
FACILITIES & EQUIPMENT	X	X
DOCUMENTATION & RECORDS	X	X
PERSONNEL	X	X
OPERATIONAL CONSIDERATION	X	X

END PRODUCT PERFORMANCE
INTO-PLANE CONTRACTS

PART 1. INTRODUCTION

- *..GUIDELINES
- *..APPLICABILITY MATRIX
- *..DEFINITIONS

PART 2. PRODUCT

- * COMPLEXITY
- * SAMPLING
- * TESTING
- * RESUPPLY CAPABILITIES
- * QUALITY CONTROL PLAN

PART 3. SAFETY

- * FIRE DEPARTMENT SUPPORT
- * CONTRACTOR TRAINING
- * SAFETY REQUIREMENTS
- * QUALITY CONTROL PLAN

PART 4. FACILITIES AND EQUIPMENT

- * CONTRACTOR SITE LOCATION
- * FUEL EQUIPMENT
- * REFUELING CAPABILITIES
- * RECORDS AND REPORTS
- * QUALITY CONTROL PLAN

PART 5. DOCUMENTATION AND RECORDS

PART 6 PERSONNEL

PART 7 OPERATIONAL CONSIDERATION & WEIGHTING FACTORS

PART 8 ELEMENT WORKSHEET FOR ASSESSMENT

END PRODUCT PERFORMANCE MANAGEMENT FOR INTO-PLANE CONTRACTS ASSESSMENT DEFINITIONS AND INSTRUCTIONS

The following definitions associated with the end product management program are provided to assist you with the assessment and analysis of each element and characteristic.

RISK MANAGEMENT - The process of identifying and controlling hazards.

RISK ASSESSMENT - The identification and assessment of hazards.

RISK - Chance of hazard or bad consequences.

RISK DECISION - The decision to accept or not accept the risks associated with an action made by the individual responsible for performing that action.

SEVERITY - The expected consequence of an event in terms of degree of injury, property damage, or other risks.

INHERENT - Existing as an essential constituent or characteristic.

ABOVE AVERAGE (Low Risk) CONFIDENCE SCORE - Process comply with all contract requirements. Minor paperwork problems escape the contractors controls.

SATISFACTORY (Moderate Risk) CONFIDENCE SCORE - Process normally comply with contract requirements. Nonconforming/deficiencies occasionally escape contractors controls.

MARGINAL (High Risk) CONFIDENCE SCORE - Process does not comply with contract requirements. Nonconforming/deficiencies consistently escape the contractors controls.

The following instructions are provided to assist you with scoring each element and sub-element and assigning each contract site with a confidence level of performance.

1. Evaluate all element and sub-element processes at contractor facility.
2. Score Inherent, Past, and Future processes with values listed in the Confidence Level Column (1,2, or 3) of each element and sub-element, total the three (3) scores and divide by three (3) to achieve the Contractor Final Confidence Level.
3. To complete Combined Element Worksheet for final assessment of the contractors confidence level enter each sub-element score in the perspective block of the worksheet, total the five (5) element scores, multiply this total by the operational factor, then divide by five (5) to achieve the Overall Rating and Confidence Level of the contractor.
4. The overall rating will provide you with the suggested frequency to perform surveillance at the contractor facility.

NOTE: This Into-Plane guide is for use at into-plane sites only, Hence the Inherent Risk Level at all sites will be "marginal" and is so reflected in the enclosed matrix.

END PRODUCT PERFORMANCE

PART 2.

Element: INTOPLANE SURVEILLANCE **Reference:** DESC Contract
Sub-Element: Product

CONFIDENCE LEVEL	INHERENT PRODUCT/PROCESS CHARACTERISTICS	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
MARGINAL (3)	Product Complexity * Additives required * Product Integrity * Complex sampling procedures * Product variants-numereous Resupply Capabilities * Over 50 mile radius * Ocean going vessel QA Requirements * Technologies-must be developed * Mandatory inspection requirement by US Government QAR (Mandatory 6-month visit interval if this guide is not used)	* Contractor has had numerous deficiencies test results associated with improper sampling and testing procedures * Reliance on US Government inspection to detect nonconforming product * Contractor lacks capability to resupply site with contract product *Has no record of product quality from origin: or, quality control tests performed at facility are not within precision for the test parameter(s) from the origin certificate	* Contractor has no plans to implement the necessary processes to prevent product integrity * No plans to improve past performance * Contractors noncompliance with QA requirements will result in increased surveillance by the US Government
SATISFACTORY (2)	N/A (Into-plane sites are all inherently high risk/marginal)	* Root causes of quality problems being identified through process analysis * Records on product quality available from origin only * Beginning to plan/implement increased quality assurance process improvement concepts	* Improvement plans prepared for incomplete/poorly written procedures and processes * Minimal improvements achieved
ABOVE AVERAGE (1)	N/A (Into-plane sites are all inherently high risk/marginal)	* Low defect rate history * Has well defined/effective QA procedures	* Contractor has developed and will maintain standards * Continuous process/product improvements demonstrated

	INHERENT	PAST	FUTURE
SCORE	3 3	1-2-3	1-2-3

TOTAL SCORE: ____ DIVIDE BY 3 = ____

FINAL CONFIDENCE LEVEL FOR CONTRACT CONFORMANCE ____

END PRODUCT PERFORMANCE

PART 3.

Element: INTOPLANE SURVEILLANCE
Sub-Element: Safety

Reference: DESC Contract and MIL-STD-1548

CONFIDENCE LEVEL	INHERENT PRODUCT/PROCESS CHARACTERISTICS	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
MARGINAL (3)	Extensive Safety requirements * Local fire and accident prevention support * Noncompliance of contractor personnel receiving training in the use of fire extinguishers and procedures to be used in the event of fire * Safety Technologies-must be developed	Contractor has had numerous Safety deficiencies associated with improper procedures * No documentation or mostly inaccurate and incomplete records * Lack of Safety Program cited as causal for mishap * Deficiencies consistently escape contractors controls	* No concern or plans to build a Safety Management Program * No plans to improve past performance * Contractors noncompliance with Safety requirements will result in increased surveillance by the US Government
SATISFACTORY (2)	N/A (Into-plane sites are all inherently high risk/marginal)	Safety Program has been inconsistent with occasional deficiencies escaping the contractors controls	* Limited plans to improve Safety Program * Minimal improvements achieved
ABOVE AVERAGE (1)	N/A (Into-plane sites are all inherently high risk/marginal)	* Safety Program has processes that ensure full compliance with the required procedures and documents as necessary * Low defect rate history	Solid plan to implement a complete, workable and supported Safety Program

	INHERENT	PAST	FUTURE
SCORE	3 3	1-2-3	1-2-3

TOTAL SCORE: ____ DIVIDE BY 3 = ____

FINAL CONFIDENCE LEVEL FOR CONTRACT CONFORMANCE ____

END PRODUCT PERFORMANCE

PART 4.

Element: INTOPLANE SURVEILLANCE
Sub-Element: Facilities and Equipment

Reference: DESC Contract and MIL-STD-1548C

CONFIDENCE LEVEL	INHERENT PRODUCT/PROCESS CHARACTERISTICS	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
MARGINAL (3)	Contractor Site Location * Complex travel to site * Isolated location Fuel Equipment * Limited storage * More than one grade of fuel is stored and issued * Limited refueling capabilities * Unique filtration system Records Quality and Safety	*US Government has had difficulty traveling to the site due to travel restrictions caused by transportation and the environment * Contractor has had numerous deficiencies associated with improper procedures and record keeping * Limited experience with US Government contracts * Reliance on inspection by US Government to detect defects * Deficiencies consistently escape the contractors controls	*No concern or plans to implement the necessary processes to improve past performance * Minimal approach to problem identification and resolution of recurring problems * Contractors noncompliance with contract requirements will result in increased surveillance by the US Government
SATISFACTORY (2)	N/A (Into-plane sites are all inherently high risk/marginal)	* Programs have been inconsistent with occasional deficiencies escaping the contractors controls * Beginning to plan and implement program process improvement concepts	* Limited plans to improve program processes * Contractor occasionally has or will continue to have problems with contract provisions * Minimal improvements achieved
ABOVE AVERAGE (1)	N/A (Into-plane sites are all inherently high risk/marginal)	*Low deficiency rate history * Contractor has well defined/effective procedures * Contractor always meets customer needs	* Contractor has developed and will maintain standards * Continued process improvements demonstrated

	INHERENT	PAST	FUTURE
SCORE	3 3	1-2-3	1-2-3

TOTAL SCORE: ____ DIVIDE BY 3 = ____

FINAL CONFIDENCE LEVEL FOR CONTRACT CONFORMANCE ____

END PRODUCT PERFORMANCE

PART 5

Element: INTOPLANE SERVICING
Sub-Element: Documentation and records

Reference: DESC Contract and MIL-STD-1548

CONFIDENCE LEVEL	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
MARGINAL (3)	* More than three documents relating to operational and safety checks are not maintained in accordance with prescribed requirements * Errors are found affecting compliance to established criteria * Records requiring employee validation of quality and safety checks are not in the required location for use by management and staff for quality oversight purposes	* More than three documents relating to operational and safety checks are not maintained in accordance with prescribed requirements * Errors are found affecting compliance to established criteria * Records requiring employee validation of quality and safety checks are not in the required location for use by management and staff for quality oversight purposes
SATISFACTORY (2)	* Records are available and properly recorded	* Records are available and properly recorded
ABOVE AVERAGE (1)	* Records are maintained of quality and safety checks and management uses statistical charting methods to analyze performance	* Records are maintained of quality and safety checks and management uses statistical charting methods to analyze performance

	PAST	FUTURE
SCORE	1-2-3 [ ]	1-2-3 [ ]

TOTAL SCORE: [ ] DIVIDE BY 2 = [ ]

FINAL CONFIDENCE LEVEL FOR CONTRACT CONFORMANCE [ ]

END PRODUCT PERFORMANCE

PART 6

Element: INTOPLANE SURVEILLANCE
Sub-Element Personnel

Reference: DESC Contract and MIL-STD-1548

CONFIDENCE LEVEL	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
MARGINAL (3)	Insufficient manning for workload requires limited personnel to work more than standard shift or 40 hours per week * Experience of 50% or more of the personnel is less than three years * Personnel turnover rate greater than 25%/year Training program for personnel consists of OJT only	Insufficient manning for workload requires limited personnel to work more than standard shift or 40 hours per week * Experience of 50% or more of the personnel is less than three years * Personnel turnover rate greater than 25%/year Training program for personnel consists of OJT only
SATISFACTORY (2)	* Experience of 50% or more of the personnel is greater than four years * Personnel turnover rate less than 25%/year * Training program for personnel consists of formal classroom training and OJT	* Experience of 50% or more of the personnel is greater than four years * Personnel turnover rate less than 25%/year * Training program for personnel consists of formal classroom training and OJT
ABOVE AVERAGE (1)	* Experience of 80% or more of the personnel is greater than ten years * Training program includes yearly refresher training	* Experience of 80% or more of the personnel is greater than ten years * Training program includes yearly refresher training

	PAST	FUTURE
SCORE	1-2-3 [ ]	1-2-3 [ ]

TOTAL SCORE: [ ] DIVIDE BY 2 = [ ]

FINAL CONFIDENCE LEVEL FOR CONTRACT CONFORMANCE [ ]

END PRODUCT PERFORMANCE

PART 7A

Element: INTO-PLANE SERVICING
Sub-Element: Operational Considerations
Reference: DESC Contract and MIL-STD-1548

CONFIDENCE LEVEL	INHERENT PRODUCT/PROCESS CHARACTERISTICS	PAST PERFORMANCE ATTRIBUTES	FUTURE PERFORMANCE ATTRIBUTES
HIGH	* Quarterly sample requirements in accordance with contract * Product availability and sustain ability *.Infrastructure * Operational sustainability	* Non-compliance with quarterly sample or contract requirements *Site has been used for CTF/JTF in past year *Greater than 10k USG issued or 10 US A/C serviced in past 30 days *Country Access * No rail or resupply capability *Supply source produces less than 10,000 bbls of kero base stock *Climatic Conditions cause closure of facility more than 30 days a year	* No contract setup for continuous sample delivery * Site has been used for HUMRO/NEO contingencies * Greater than 10k USG issued or US A/C serviced DEA operations due to hostile enviroment * No Country Clearances granted * Supply source non reliable for kero-stock * Climatic Conditions causing operation shutdown
MEDIUM	* Quarterly sample requirements in accordance with contract * Product availability and sustain ability *.Infrastructure * Operational sustainability	* Contractor less than 15 days delinquent in delivery *Site has been used for CTF/JTF in past 3 years *Greater than 5k USG issued or 5 US A/C serviced in past 30 days *Country Access * Is rail or pipeline capability *Supply source produces less than 5,000 bbls of kero base stock *Climatic Conditions cause closure of facility more than 15 days a year	* Contractor setup for continuous sample delivery * Site has been used once for HUMRO/NEO contingencies * Less than 10k USG issued or US A/C serviced for DEA operations due to hostile environment * Country Clearances granted on conditions * Supply source reliable for kero-stock to sustain contingencies * Climatic Conditions causing minimum operation shutdown
LOW	* Quarterly sample requirements in accordance with contract * Product availability and sustain ability *.Infrastructure * Operational sustainability	* Contractor less than 5 days delinquent in delivery *Site has been used for CTF/JTF in past 6 years *Greater than 5k USG issued or 5 US A/C serviced in past 5 days *Easy Country Access * Has rail and pipeline capability *Supply source produces less than 5,000 bbls of kero base stock *Climatic Conditions cause closure of facility less than 15 days a year	Contractor setup for continuous sample delivery on time * Site has not been used once for HUMRO/NEO contingencies * No USG issued or US A/C serviced for DEA operations *No hostile environment * Country Clearances granted * Supply source reliable for kero-stock to sustain any contingencies * No Climatic Conditions

END PRODUCT PERFORMANCE

PART 7B

Element: **INTO-PLANE SURVEILLANCE**
Sub-Element: **Operational Considerations**

Reference: DESC Contract and MIL-STD-1548

	INHERENT		PAST		FUTURE	
Score	3	3	1 2 3		1 2 3	

TOTAL SCORE: [ ] **DIVIDE BY** 3 = [ ]

OPERATIONAL WEIGHTING FACTORS

		FACTORS
ABOVE AVG.	1.0 - 1.75	0.66
SATISFACTORY	1.76 - 2.5	1.00
MARGINAL	2.6 - 3.0	1.33

COMBINED ELEMENT WORKSHEET FOR FINAL ASSESSMENT

PART 8

ELEMENT	FINAL CONFIDENCE LEVEL RATING OF CONTRACT CONFORMANCE PROCESS
	TOTAL SCORE FROM ELEMENTS
PRODUCT	
SAFETY	
FACILITIES & EQUIPMENT	
DOCUMENTATION	
PERSONNEL	
TOTAL SCORE =	

MULTIPLY BY OPERATIONAL RATING FACTOR ☐ DIVIDE BY 5 ☐ OVERALL RATING

CONFIDENCE LEVEL SCORES FOR OVERALL RATING AND SURVEILLANCE SCHEDULE		
ABOVE AVERAGE	1.0 - 1.75	EVERY 12+ MONTHS
SATISFACTORY	1.8 - 2.5	EVERY 6-12 MONTHS
MARGINAL	2.5 - 3.0	EVERY 0 -6 MONTHS

JP-7 / JPTS - Ullaging and sampling cargo tanks or vessels at intermediate load Ports.

Contamination problems. When a partial cargo is to be loaded aboard an arriving vessel, the QAR **shall** be required to sample/ullage all compartments loaded at previous ports. In the case of JP-7/JPTS this procedure can present a contamination problem. As these fuels are easily contaminated, and are usually the first loaded in a multi-product-multi-port lifting, and often last discharged, they require special handling procedures. Normally JP-7/JPTS cargo tanks are not opened, ullaged, or sampled with the following exceptions:

Unaccountable product loss or gain. Ullaging, sampling, and water cutting of JP-7/JPTS compartments should not be conducted at intermediate terminals, unless there is a clear indication of contamination or an abnormal unaccountable quantity loss/gain.
Equipment Cleanliness. If it becomes necessary to **inspect** the compartments, all equipment introduced into the fuel **shall** be cleaned, and repetitions **shall** be minimized. A note **shall** be placed on the DD From 250-1 or accompanying ullage report explaining complete circumstances.

Conflicts Between Contract and Product Audit Checklist. If a conflict is found between this audit checklist and the contract, the contract takes precedence.

	DATE/ TIME	SAT/ UNSAT
1.0 Part 1. Pre-Loading - Shore		
1.1 Coordinate with MSC representative/Loading facility/vessel agent on estimated time of arrival and berth availability. Maintain liaison to **assure** knowledge of vessel arrival and berthing.		
1.2 **Verify** order (DD 1155) has been placed against contract, identify contract/order quality, and quantity is known.		
1.3 **Verify** product(s) quality and quantity requirements of Contract/Request For Proposal, including waiver/deviation against order.		
1.4 **Ensure** additive injection system is working properly.		
1.5 **Ensure** all meters are calibrated. (American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapters 4, 5, and 6 provides the program for meters used to determine quantity.)		
1.6 **Ensure** additives are on-specification and within shelf life.		
1.7 **Assure** laboratory maintains requirements of ISO 10012-1.		
1.8 Each shipping tank, Quality:		
1.8.1 **The QAR shall assure** free water is drained prior to sampling and gauging.		
1.8.2 **The QAR shall assure** product quality in shore tanks and all lines used in loading. In the case of shore tanks, the QAR **shall** obtain samples and **witness** appropriate verification tests of product which was previously sampled and tested by the contractor but not **witnessed** by the QAR or when batch test results are considered out of date as follows:		
1.8.2.1 **The QAR shall assure** full specification test report provided by the contractor meets contractual requirements.		
1.8.2.2 **The QAR shall witness** tank sampling to **assure** sampling procedures is in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.		
1.8.2.3 **The QAR shall witness** verification testing to substantiate the contractor's full specification test results and **assure** test procedures are in conformance with contract and/or specification requirements. If off-specification, report information in accordance with Problem(s) Reporting Procedure.		
1.9 **Assure** retain samples are taken in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products and properly stored for the period required by contract.		
1.10 Where applicable, determine the position of the swing line in the shore tank and set it at a position to prevent the withdrawing of any sediment or water that may have escaped the water draw off operation.		
1.11 **Ensure** product in all shore lines to be used for loading, including loading arms, meets requirements of the contract and/or specification. Identification tests **shall** be **witnessed** and compared with flushing tank results.		
1.12 Each shipping tank, Quantity:		
1.12.1 **Assure** refinery is aware of ordered quantity.		
1.12.2 **The QAR shall**, prior to gauging, **ensure** lines from tank to end of jetty (custody transfer point) are pressured and full, unless QCP requires otherwise.		

	DATE/ TIME	SAT/ UNSAT
1.12.3 **The QAR shall** prior to manual gauging; **assure** strapping tables are certified (if using meter, **ensure** the meter is within the requisite calibration period).		
1.12.4 **The QAR shall** when measuring product by meter **ensure** all meters are calibrated in accordance with a program for meters used to determine quantity complying with the API MPMS, Chapters 4, 5, and 6, or equivalent foreign standard and ISO 10012-1, "Quality Assurance Requirements for Measuring Equipment, Part 1, or equivalent local regulation as appropriate.		
1.12.5 **The QAR shall witness** manual gauging to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.		
1.12.6 **The QAR shall witness** taking of temperatures to **assure** procedures are in accordance with API MPMS Chapter 7, Temperature Determination.		
1.12.7 Compute net quantity in accordance with contract requirement and compare with contractor's figure. Investigate discrepancies.		
1.12.8 When floating roof tanks are used, **assure** quantity is sufficient to meet order without stopping in critical zone.		
1.13 **Ensure** all lines from tank to dock are properly isolated and, when appropriate sealed using numbered seals that are recorded.		
2.0 Part 2. Pre-Loading - Vessel Inspection		
2.1 **The QAR shall** board the Vessel promptly after gangway is down or, in the case of IGS tanker requiring tank **inspection**, arrange to **inspect** vessel while at anchorage so that it may inert prior to docking.		
2.2 Discuss and agree upon loading plan with Chief Mate/Master.		
2.3 **Ensure** the vessel is capable of adequate isolation/segregation. If more than one cargo is to be loaded, lack of adequate isolation/segregation **shall** require rejection of vessel to load multi-part cargoes.		
2.4 **The QAR shall** use the memorandum, Policy for Vessel's Carrying DESC Cargoes (Currently DESC-BQ-98-01), between MSC and DESC to determine cleaning/gas freeing, **inspecting**, and quantity variations on petroleum cargoes moved by MSC for DESC. Exceptions to these requirements **shall** be coordinated with DESC-BQ prior to the proposed cargo loading.		
2.5 Validate that vessels present the required certificate stating, "ALL compartments, lines, and pumps to be used are suitable for loading and delivering the intended cargo." This certificate **shall** be made part of the official loading documentation package.		
2.6 **Verify** previous two cargoes and **ensure** tank preparation requirements have been met. **The QARs shall inspect** the entire gas-free IGS tanker for suitability to load at the first loading port. For IGS tankers, this visual examination is final, since for safety reasons QARs at subsequent loading ports cannot be permitted to enter any cargo tanks.		
2.7 Unless a coordinated waiver has been granted by DESC-BQ/MSC, **ensure** vessels not meeting paragraph 2.3 and 2.4 requirements are rejected and reported to DESC-BI/BQ/BZ and MSC, see Problem(s) Reporting Procedure for reporting requirements on problems causing delay(s).		
2.8 If the vessel is coated **ensure** coating is not Coal Tar.		

	DATE/ TIME	SAT/ UNSAT
2.9 When a vessel arrives with product on board:		
2.9.1 **Witness** gauging of all tanks to **assure** procedures are in accordance with API MPMS Chapter 3, Tank Gauging		
2.9.2 **Witnesses** taking of temperatures to **assure** procedures are in accordance API MPMS Chapter 7, Temperature Determination.		
2.9.3 **Ensure** samples are taken in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products for tanks that are not to be used in the loading operation and retained until product(s) is discharged and determined to be on-specification (except for JP-7/JPTS, see header of this checklist for guidance).		
2.9.4 **Ensure** samples are taken in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products, for tanks that are to be topped-off. **Ensure** adequate tests are performed to **assure** fuel is on-specification.		
2.9.5 For partially loaded IGS tankers that are using their inert system, **ensure** empty tanks are checked prior to loading for water/product utilizing bob/rod and water/product paste and not the sonic probe.		
2.10 If a pump room exists, **inspect** the pump room. All lines must be dropped and low point drains opened.		
2.11 **Ensure** no tanks are entered if any tanks are inerted.		
2.12 Prior to entering tanks, **ensure** all applicable valves are open and no product has dropped into the cargo tanks.		
2.13 **The QAR shall ensure** all tanks are gas-free on arrival and the vessel operator issues a "gas-free certificate" that indicates the cargo tanks are safe for entry unless a coordinated DESC-BQ/MSC waiver is received. If not, reject vessel.		
2.14 **The QAR shall** go down into and thoroughly **inspect** each gas free cargo tank for suitability to load. **Inspection** for suitability to load **shall** be performed at the first loading port when a vessel is scheduled for multiple ports loading.		
2.15 **Ensure** delays and rejections are reported in accordance with Problem(s) Reporting Procedure.		
2.16 Check deck manifold connections and **ensure** all applicable valves are closed to provide required isolation/segregation.		
2.17 **Ensure** valves used for product segregation are "lashed" and all applicable valves are sealed with numbered seals and their numbers recorded on the DD250-1.		
3.0 Part 3. Loading		
3.1 At the start of loading, **ensure** a dock header sample is taken and tested in accordance with the contract.		
3.2 When loading aviation turbine fuel or kerosene, loading procedures **shall** be as follows:		
3.2.1 Initial loading **shall** be at a rate not in excess of three feet / one meter per second (about 1,500 barrels per hour through a 12 inch line) through loading lines into the cargo tanks until the discharge outlet has been covered by at least three feet of the product.		

	DATE/ TIME	SAT/ UNSAT
3.2.1.1 If there is evidence of turbulence or splashing in a cargo tank after the specified three feet of product covering the discharge outlet, the reduced loading rate **shall** be continued until turbulence ceases. To determine an approximate rate flow equal to three feet per second, use the formula BPH = D2 * 10.49 where:		
BPH = Barrels per hour D = Diameter of the loading line in inches 10.49 = Distance, time and volume factor		
3.2.1.2 Example: Approximately how many BPH is equal to three feet per second for JP-8 flowing through a 12-inch line: D2 (12x12) = 144x10.49 = 1510.6 BPH or approximately 1,500 BPH.		
3.2.2 Tank cushioning information **shall** be annotated on the DD Form 250-1 to include cushioning loading rate, volume loaded at the reduced rate, normal loading rate, and total calculated time difference between cushioning time and time it would have taken to load at the normal rate.		
NOTE: If calculations are not possible due to unknowns, i.e., pipe sizes, have shore load by gravity until amount specified above is loaded then commence with pumps. The final determination of safe loading rates is a responsibility of the vessel. The QAR does not have the responsibility of physically loading any vessel. This should be kept in mind at all times.		
3.2.3 Ullages, water soundings, temperatures, and samples, including the first-in samples, **shall not** be taken from any cargo tank until at least 30 minutes after flow into the tank has ceased. In the meantime, loading of other tanks may proceed.		
3.3 First-In Sample:		
3.3.1 After start of loading, **ensure** sufficient amount of product, the line-fill approximately 2,000 to 5,000 barrels, is displaced into one or two tanks and request ship's officer to switch to other tanks and continue loading.		
3.3.2 **The QAR shall witness,** after adequate relaxation time, "First-In" tank sampling procedures to **assure** they are in accordance with API MPMS Chapter 8, Section 1.		
3.3.3 **The QAR shall witness** sufficient (contract E1 clause defines test series) **verification** testing to determine if the quality of the product being loaded is satisfactory and in conformance with contract/specification requirements.		
3.3.4 If at any time during loading there is an indication of a quality problem, the loading **shall** be stopped until the cause and extent of the problem has been determined. Such quality problems **shall** be reported to DESC-BQ in accordance with Problem(s) Reporting Procedure.		
3.4 **Ensure** there is an adequate program for line sampling per contract.		
3.5 **Ensure** contractor and vessel personnel are advised of where QAR may be reached at all times in case of loading problems.		
3.6 Monitor loading line sample quality to **ensure** on-specification product is being delivered to the vessel.		
3.7 Any problems **shall** be immediately investigated and appropriate action taken.		
3.8 **The QAR shall** be present during final loading operations.		

	DATE/ TIME	SAT/ UNSAT
4.0 Part 4. Post-Loading - Vessel		
4.1 **Inspect** all empty tanks from the deck to check for leakage.		
4.2 Compute vessel's net figures for all products and compare with vessel representative's figures.		
4.3 **The QAR shall witness** cargo tank sampling to **assure** procedures are in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.		
4.4 **The QAR shall** report any quality problems to DESC-BQ in accordance with Problem(s) Reporting Procedure.		
5.0 Part 5. Post-Loading - Shore		
5.1 **Assure** the line is pressed or **assure** condition of the loading line (best if loading line is in same condition as at the start). Prior to gauging, **ensure** tank valve is closed.		
5.2 **Ensure** all applicable shore valves are properly secure.		
5.3 Each shipping tank:		
5.3.1 Where applicable, check product level to determine whether roof is in the critical zone. If in the critical zone be aware that the shore/ship allowable loss/gain tolerance may be out.		
5.3.2 **The QAR shall witness** manual tank gauging to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.		
5.3.3 **The QAR shall witness** taking of temperatures to **assure** procedures are in accordance with API MPMS Chapter 7, Temperature Determination.		
5.3.4 Calculate net quantity in accordance with contract requirement and compare with contractor's figure. Investigate discrepancies.		
5.4 Compare shore-to-ship net volumes and if outside of allowable gain/loss tolerance, **the QAR shall** perform an investigation in accordance with DoD 4140.25M and document on the DD 250-1 (contract provides allowed shore-to-ship variances).		
5.5 **Witness** sufficient **verification** testing to substantiate the product on the vessel meets specification and **assures** test procedures are in conformance with contract/specification requirements.		
5.6 Release vessel as soon as all **mandatory** requirements are met.		
6.0 Part 6. Documentation, The QAR Shall:		
6.1 **Ensure** the following forms and reports are promptly and correctly completed and where required, distributed in accordance with Applicable directives:		
6.2 Vessel ullage report:		
6.2.1 Pre-Load		
6.2.2 Post-Load		
6.3 MSC 4020. Applicable if QAR is acting on behalf of MSC.		
6.4 DD250-1:		
6.4.1 Contract information		
6.4.2 Quality data		
6.4.3 Quantity data		
6.4.4 Time statement including all delays and responsible parties.		
6.5 PORTS DD250-1 with continuation sheet as applicable.		

GENERAL

Both commercial and Government-owned product pipeline systems are employed in the movement of petroleum products by, or for, the Government. The risks inherent in the pipeline transportation of petroleum products are sufficiently great to require that each and every pipeline tender be controlled before, during, and after transmission to make certain that products conform to the required quality. The QAR should perform **inspection** over pipeline movements to maintain and **assure** quality and quantity of product tenders destined for the Government. The nature and extent of **inspection** performed is contingent upon the complexity of the pipeline system, contracts, and whether the intra-tank farm system is dedicated or multi-product.

MOVEMENTS VIA COMMERCIALLY OWNED SYSTEMS

Pipeline movements are scheduled by time slots, type of product, and sometimes quantity of product to be shipped. The operative word in pipeline scheduling is time slots. In most cases product movement slates are setup up for a minimum of one week at a time. If a company misses their time slot they must request to be placed in the queue for the next slate, another week. It is in the best interest of the contractor and the Government to not miss a time slot for petroleum moved via pipeline. Missed time slots will cause ripples in the supply chain, which affects operational readiness and increases DESC costs as alternate source(s) of supply are arranged.

All contractors experience quality problems at one time or another. As the production of petroleum is a continuous process with constant changes in raw materials any production process variables, at one time or another contractors make off-specification product. Every time petroleum products are moved, the risk of contamination or degradation is possible. Off-specification product affects delivery schedules and transportation assets. Failure to deliver requires readjustment to other schedules and deliveries. The **inspection** over pipeline movements to maintain and **assure** quality and quantity of product tenders avoids additional cost to the Government, prevents operational degradation, and mission failure.

	DATE/ TIME	SAT/ UNSAT
1.0. **Part 1. Prior to Shipment:**		
1.1. **Assure** order (DD 1155) has been placed against contract, identify contract/order quality, and quantity is known.		
1.2. **Verify** product(s) quality and quantity requirements of contract, DD1155, including waivers/deviations.		
1.3. **Ensure** product in any line used for shipment meets requirements of the contract/specification.		
1.4. The QAR **shall witness** sampling to **ensure** procedures are in conformance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.		
1.5. **Witness** testing to **assure** procedures is in accordance with contracts/specification (ASTM, IP, etc.).		
1.6. Each shipping tank, Quality:		
1.6.1. The QAR **shall ensure** free water is drained prior to sampling and gauging.		
1.6.2. **Assure** laboratory meets the requirements of ISO 10012-1.		
1.6.3. The QAR **shall ensure** full specification test report provided by the contractor meets contractual requirements.		
1.6.4. The QAR **shall witness** tank sampling to **assure** sampling procedures are in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products, for samples used for QAR verification testing.		
1.6.5. The QAR **shall witness** verification testing to substantiate the contractor's full specification test results and **assure** test procedures are in conformance with contract/specification requirements. If off-specification, report information in accordance with Problem(s) Reporting Procedure.		
1.6.6. **Assure** retain samples are taken in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products and properly stored IAW contract.		
1.6.7. If swing lines are available in the tanks, **assure** the swing line is set to prevent drawing product from the bottom of the tank.		
1.7. Each shipping tank, Quantity:		
1.7.1. **Assure** the refinery is aware of ordered quantity.		
1.7.2. The QAR **shall** prior to gauging, **ensure** lines from tank to custody transfer point are pressured and full.		
1.7.3. The QAR **shall** prior to manual gauging; **assure** strapping tables are certified (if using meter, **ensure** the meter is within the requisite calibration period).		
1.7.4. The QAR **shall** when measuring product by meter **ensure** all meters are calibrated in accordance with a program for meters used to determine quantity complying with the API MPMS, Chapters 4, 5, and 6, or equivalent foreign standard and ISO 10012-1, "Quality Assurance Requirements for Measuring Equipment, Part 1, or equivalent local regulation as appropriate.		
1.7.5. The QAR **shall witness** manual gauging to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.		

	DATE/ TIME	SAT/ UNSAT
1.7.6. The QAR **shall witness** taking of temperature to **assure** procedures are in accordance with API MPMS Chapter 7, Temperature Determination.		
1.7.7. Compute net quantity IAW contract requirement and compare with contractor's figures. Investigate discrepancies.		
1.7.8. If floating roof tanks are used, **assure** quantity is sufficient to meet order without stopping in critical zone.		
1.8. **Ensure** all lines from tank to custody transfer point are properly isolated and, when appropriate, sealed using numbered seals that are recorded.		
1.9. **Verify** additive injection system is working properly.		
1.10. **Ensure** all meters are calibrated in accordance with the contract.		
1.11. **Ensure** additives are on-specification.		
2.0. Part 2. During Shipment:		
2.1. **Witness** start of shipment, **verify** initial samples at FOB point are taken and are on-specification.		
2.2. **Verify** periodic line samples are taken during shipment and tested IAW contract.		
2.3. **Ensure** surveillance is maintained over pipeline operations at key points in the system during the movement of tenders.		
3.0. Part 3. After Shipment		
3.1. The QAR **shall witness** manual gauging to **assure** procedures are in accordance with API MPMS, Chapter 3, Tank Gauging.		
3.2. The QAR **shall witness** taking of temperature to **assure** procedures are in accordance with API MPMS Chapter 7, Temperature Determination.		
3.3. Calculate net quantity IAW contract requirements and compare with contractor's figures. Investigate discrepancies.		
3.4. **Ensure** the following forms and reports are promptly and correctly completed and, where required, distributed in accordance with applicable directives:		
3.4.1. DD 250		
3.4.2. QAR documentation		

GENERAL

The QAR **shall assure** that the contractor examines tank cars and tank trucks prior to loading to determine suitability for receiving and transporting product. Suitability refers to quality consideration (i.e. tank cleanliness, coating approval, calibration, sealing capability, ability to protect product from contamination, compliance with the product conversion chart of the contract, etc.), and obvious safety violations including fuel leaks, placarding, defective exhaust systems and tank vent valves, overdue hydrostatic testing of hoses, and presence of fire extinguishers. The QAR **shall inspect** the conveyance, in the case of lubricating oil shipments. In the event the QAR determines that the conveyance is not suitable to load (in the case of a destination delivery) and the contractor elects to load and ship, the QAR's observations **shall** be furnished to the consignee prior to the arrival of the conveyance at destination. Qualified personnel must perform all **inspection** and loading of tank trucks for delivery of product under DESC contracts. The Loading Conversion Chart for Tank Cars and Tank Trucks in the contract will be used as a key to proper processing when converting from one product to another.

While tank car and tank truck interiors do not require coating, if present however, fuels will not be stored or transported in containers coated with Coal Tar. It is highly recommended that the contractor include in his Quality Control Procedure (QCP) a record of all rejected tank cars and tank trucks. Such record should include identification, date and time of arrival, reason for rejection, and initials of the person rejecting the truck. Instances where equipment or service provided by tank truck carriers are deficient on a recurring basis should be brought to the attention of the cognizant Defense Energy Region (DER), by the contractor or by the QAR and subsequent actions taken with the carrier. Information furnished should include the identity of the carrier and the equipment involved, the nature of the discrepancy, the dates and locations of occurrence.

	DATE/ TIME	SAT/ UNSAT
1.0. Part 1. Pre-Loading		
1.1 **Verify** order, destination, and quantity against DD 1155 or DD 1149.		
1.2 **Verify** product quality and quantity requirements of Contract, including waivers/deviations.		
1.3 **Assure** laboratory conforms to requirements of ISO 10012-1.		
1.4 Shipping Tank:		
1.4.1. **Ensure** free water is drained prior to sampling.		
1.4.2. The QAR **Shall**: **Assure** full specification test report provided by the contractor meets contractual requirements.		
1.4.3. The QAR **Shall**: **Witness** tank sampling to **assure** sampling procedures are in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products for samples used for QAR verification testing.		
1.4.4. The QAR **Shall**: **Witness** verification testing to substantiate the contractor's full specification test results and **assure** test procedures are in conformance with contract/specification requirements. If off-specification, report information in accordance with Problem(s) Reporting Procedure.		
1.5 **Ensure** line sample is tested in accordance with contract.		
1.6 **Ensure** 100 mesh screen is in the line (Aviation Fuel).		
1.7 **Ensure** additives are on-specification.		
1.8 **Ensure** additive injection systems are working properly.		
1.9 The QAR **Shall**, when measuring product by meter, **ensure** all meters are calibrated in accordance with a program for meters used to determine quantity complying with the API MPMS, Chapters 4, 5, and 6, or equivalent foreign standard and ISO 10012-1, "Quality Assurance Requirements for Measuring Equipment, Part 1, or equivalent local regulation as appropriate.		
1.10 **Ensure** electrical bonding is accomplished in accordance with contract/QCP.		
1.11 **Ensure** contractor examines conveyances:		
1.11.1. For cleanliness dryness.		
1.11.2. Where vehicle cargo tanks are coated, **ensure** coating meets the requirements of the latest edition of QPL 4556 (MIL-PRF-4556) (If cargo tanks are coated).		
1.11.3. For strapping table and associated measuring instrument/marker.		
1.11.4. For sealing capability.		
1.11.5. To **ensure** vehicle cargo tank preparation requirements of the contract are met.		
1.12 **Ensure** driver is not responsible for **inspection**, sampling, sealing, loading or quantity determination. The driver may be allowed to load the tank truck if so stipulated in the contract, however, the loading operation must be under the surveillance and direction of contractor personnel.		

	DATE/ TIME	SAT/ UNSAT
1.13 **Ensure** trucks are rejected that arrives with product on board that cannot be sampled and tested. Report to DESC all vehicles that have been returned that have Government owned product remaining-on-board (ROB).		
1.14 **Ensure** product contained in the discharge manifold of tank trucks is the same as the ROB.		
1.15 **Ensure** rejected conveyances are reported in accordance with applicable directives.		
1.16 **Ensure** conveyances that are to loaded with lube oils are personally **inspected** by the QAR.		
1.17 **Ensure** vehicle meets safety standards for fuel transport.		
2.0. Part 2. Post-Loading		
2.1. **Witness** sampling to **ensure** conveyances are sampled in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products.		
2.2. **Verify** testing requirements of contract have been met.		
2.3. **Witness** testing to **ensure** procedures are in conformance with the contract/specification.		
2.4. With the exception of turbine fuels/lube oils, **ensure** free water is removed from conveyances prior to release.		
2.5. **Ensure** conveyances loaded with turbine fuel/ lube oils that contain free water are rejected.		
2.6. **Ensure** test results are maintained by the contractor in accordance with the contract/QCP.		
2.7. **Ensure** all conveyance openings are effectively sealed with numbered seals.		
2.8. **Ensure** conveyance retain samples are taken in accordance with API MPMS, Chapter 8, Section 1, (ASTM D 4057) Sampling of Petroleum and Petroleum Products and retains properly stored for the period specified in the contract.		
2.9. **Ensure** quantity (product as well as additive) is determined in accordance with the contract.		
2.10. **Ensure** the following forms and reports are promptly and correctly completed and, where required, distributed in accordance with applicable directives:		
2.10.1. DD 250		
2.10.2. QAR documentation		

* References to computation of net quantities include additives as well as product volumes.

The QAR shall report all incidents to DESC and MSC of any product quality problems that prevent loading of the vessel or shipping a pipeline batch to within the quantity tolerances as permitted by contract clauses, product availability problems that would prevent loading of the vessel or shipping a pipeline batch to within the quantity tolerances permitted by contract clauses and problems that would result in delay of the vessel beyond the authorized lay time or missing a time slot in a pipeline shipment. **The QAR shall** report other production, transportation, or quality problems that would affect performance, schedule or cost. During DESC business hours, Eastern Standard Time, **the QAR shall** immediately advise DESC-BI/BQ/BZ. During DESC non-duty hours, Eastern Standard Time, **the QAR shall** immediately contact the DESC Command and Control Center at (703) 767-8420 or DSN 427-8420.
The QAR **shall** report to DESC-BI/BQ/BZ and MSC on vessel rejection or delays in loading operations as follows:

- Contractor Name
- Location
- Contract Number
- Contract Line Item Number (CLIN)
- Cargo Number
- Product Specification and Grade
- Date of Incident
- Details of the Problem Causing Delay

Quality problems for marine vessels may initially be reported via phone as above but must be followed up in writing within three (3) working days after conclusion of loading via FAX, (703) 767-8366, with an attention line to DESC-BQ or email, descbq@desc.dla.mil. The Memorandum should contain the following information and format:

TO: DESC-BQ

SUBJECT: Quality Incident for *PRODUCT*, *CARGO NUMBER*

1. The following is the QAR summary of *PRODUCT*, *CARGO NUMBER* loaded aboard vessel *NAME*.
a. Pre-load discussion with *VESSEL REP(S)*, and *REFINERY/TERMINAL REP(S)* on *DATE*.
b. Results of vessel **inspection**. (*Describe **inspection***)
c. For all test results state when sample taken, where taken, type sample, whether sampling was **witnessed** by QAR, tests performed on sample, test results, time and date testing initiated, whether testing was **witnessed** by QAR, and a provide a copy of each test report with each report identified as a numbered enclosure. Test data will be broken out as follows:
1.) Pre-loading
2.) Loading
3.) Post-loading
2. Remarks, to include all discussions with DESC-B Bulk Fuels personnel.

1.0 **Loading and Shipping** (Audit Checklist)
- 1.1. Tanker and Barges - **(MANDATORY)** (Audit Checklist)
- 1.2. Pipeline Shipments (Audit Checklist)
- 1.3. Tank Cars, Tank Trucks (Audit Checklist), and Intermodal Containers

2.0 **Vessel Inspection (QAR Process) - (MANDATORY)** (Audit Checklist)

3.0 **Sampling**
- 3.1. Shore Tanks - **(MANDATORY)**
- 3.2. Vessel ("First-Ins" and Composite) - **(MANDATORY)**
- 3.3. Pipeline/Loading Line
- 3.4. Tank Car/Tank Truck

4.0 **Testing**
- 4.1. Shore Tank - **(MANDATORY)**
- 4.2. Test Procedures - Annual **witness** and validation of each test as a minimum **(MANDATORY)**
- 4.3. Pipeline, Loading Line
- 4.4. Vessel Composite
- 4.5. "First-Ins"
- 4.6. Tank Car, Tank Truck, Intermodal Containers

5.0 **Calibration**
- 5.1. Meters - **(MANDATORY)**
- 5.2. Test Equipment

6.0 **Quantity Measurement**
- 6.1. Shore Tank - (If manual gauging **MANDATORY**)
- 6.2. Tanker and Barges
- 6.3. Pipeline
- 6.4. Tank Truck, Tank Car, Intermodal Containers

7.0 **Problem Reporting (QAR Process) - (MANDATORY)**
- 7.1. Production - **(MANDATORY)**
- 7.2. Transportation - **(MANDATORY)**
- 7.3. Quality - **(MANDATORY)**

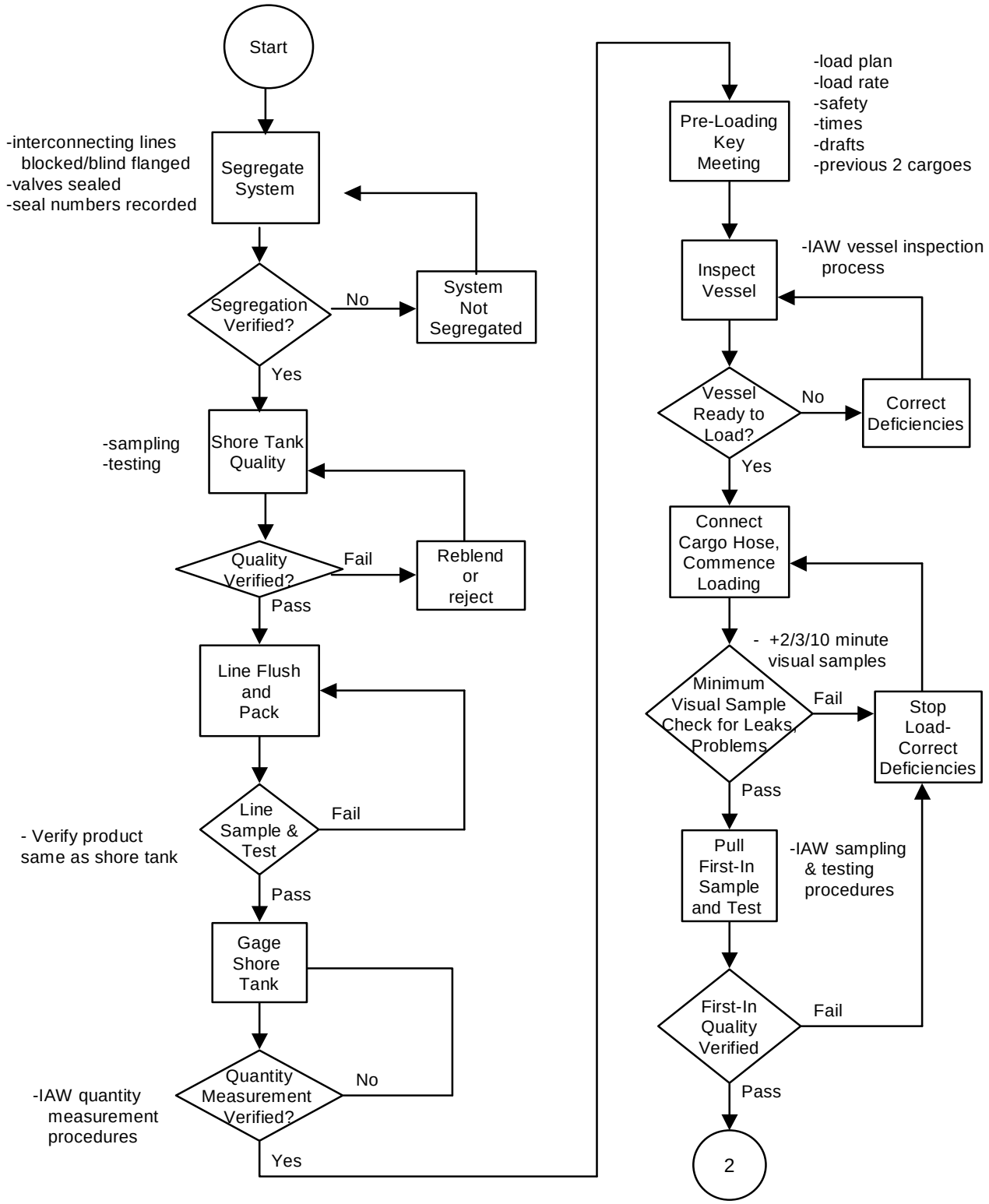
8.0 **Receiving (Additives)**
- 8.1. Additives ordered to contract requirements
- 8.2. Additive quality supported by documentation

9.0 **Blending and Compounding**
- 9.1. Base Stocks
- 9.2. Additives
- 9.3. In-Line Blending of Non-Aviation Petroleum Products
- 9.4. Laboratory Hand-Blend

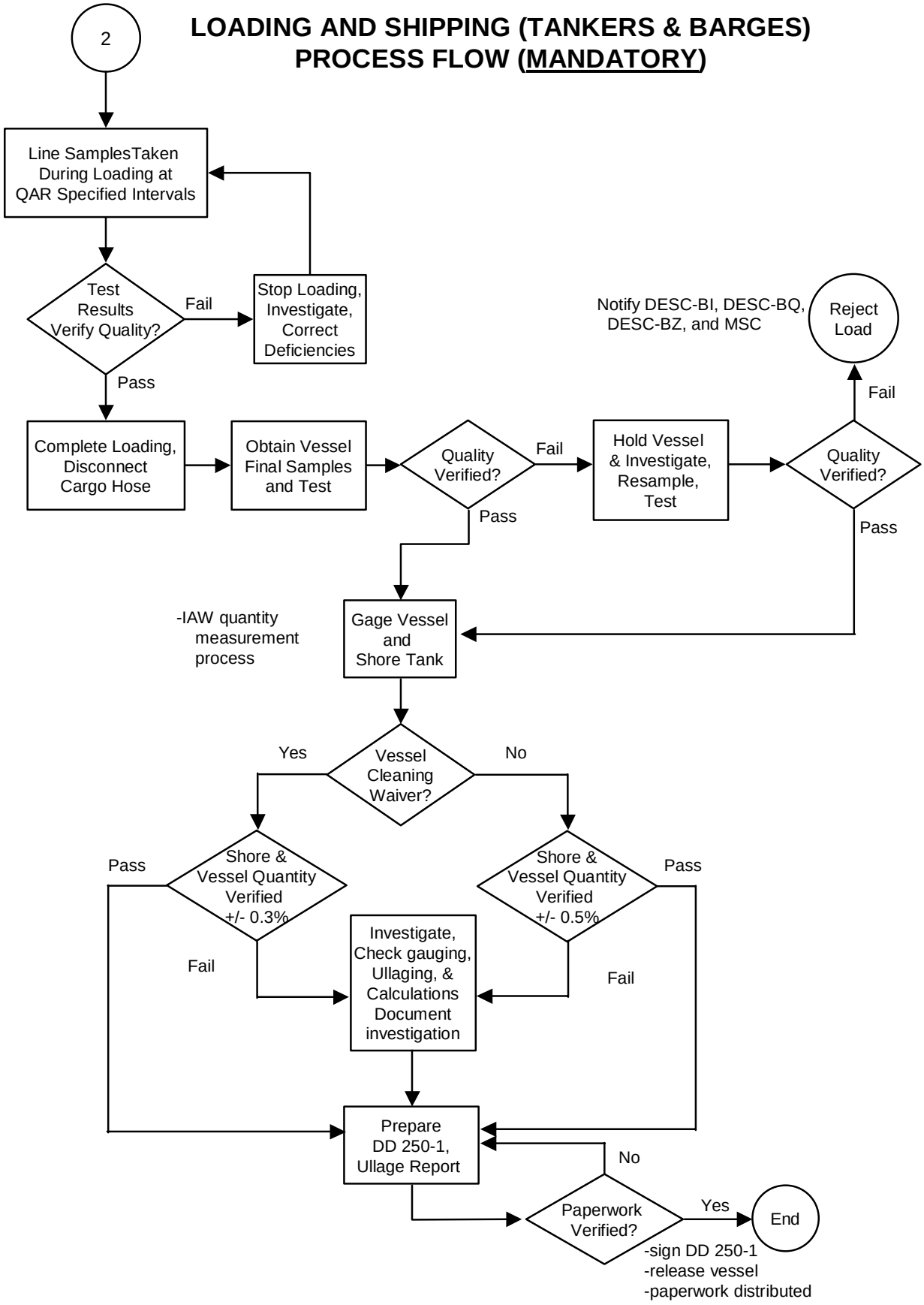
10.0 **Laboratory Solution Preparation and Standardization**
- 10.1. Preparation of Standard Laboratory Solutions
- 10.2. Standardization of Laboratory Solutions

11.0 **Storage and Handling**
- 11.1. Water draining
- 11.2. Tank mixing (Homogeneity)

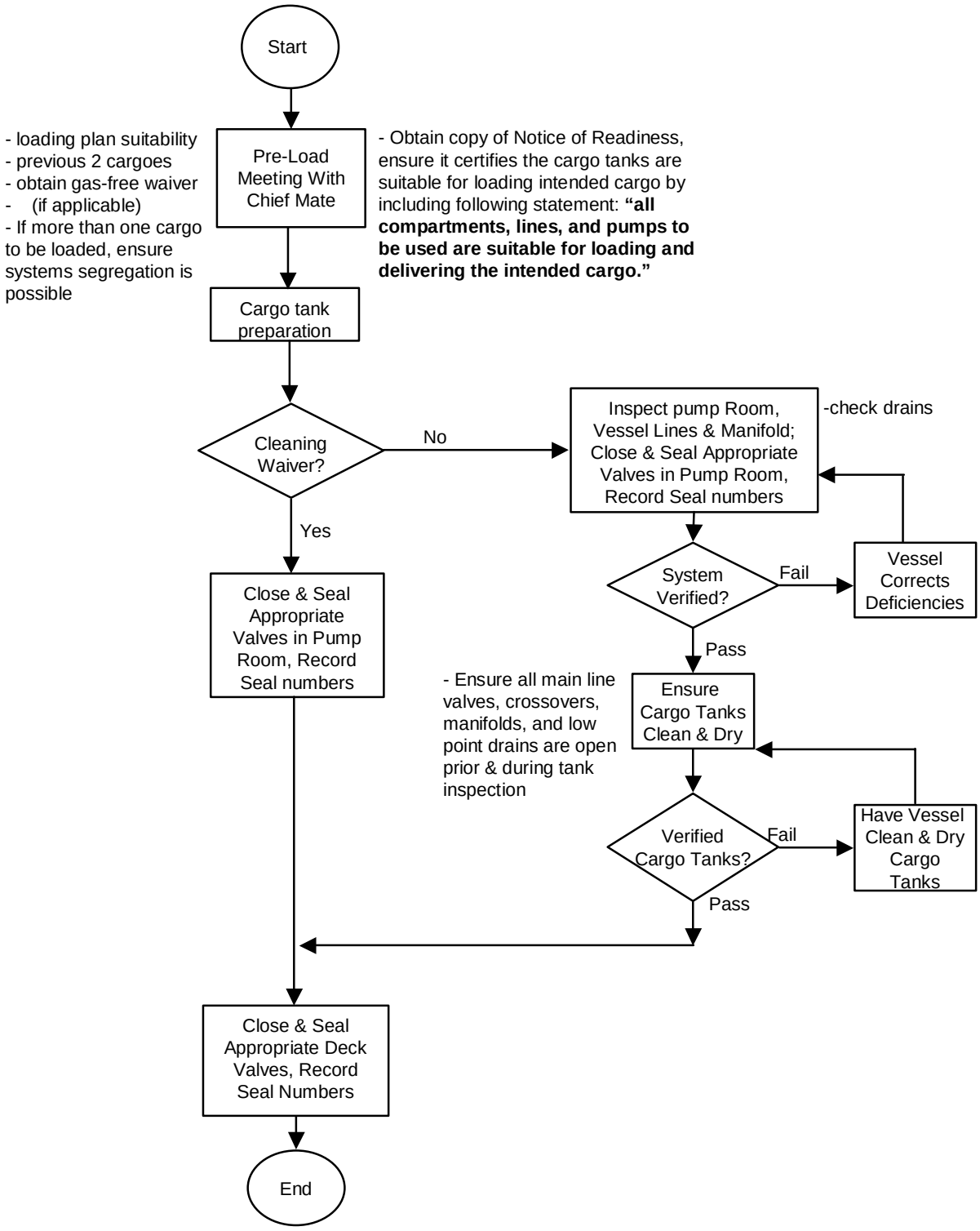
LOADING AND SHIPPING (TANKERS & BARGES) PROCESS FLOW (MANDATORY)



LOADING AND SHIPPING (TANKERS & BARGES) PROCESS FLOW (MANDATORY)



VESSEL INSPECTION PROCESS FLOW (MANDATORY)



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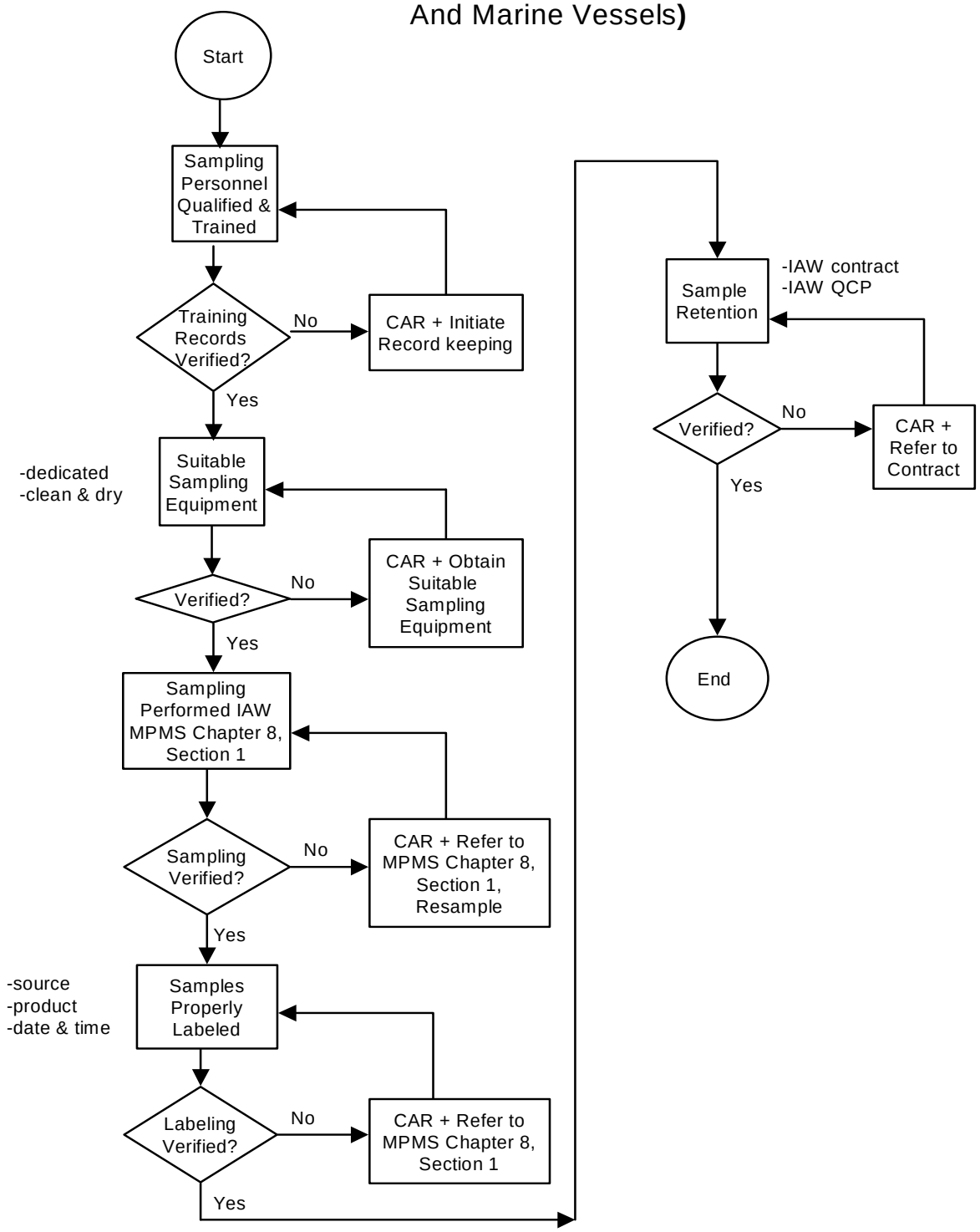
SAMPLING PROCESS FLOW
(MANDATORY for Shore Tanks And Marine Vessels)



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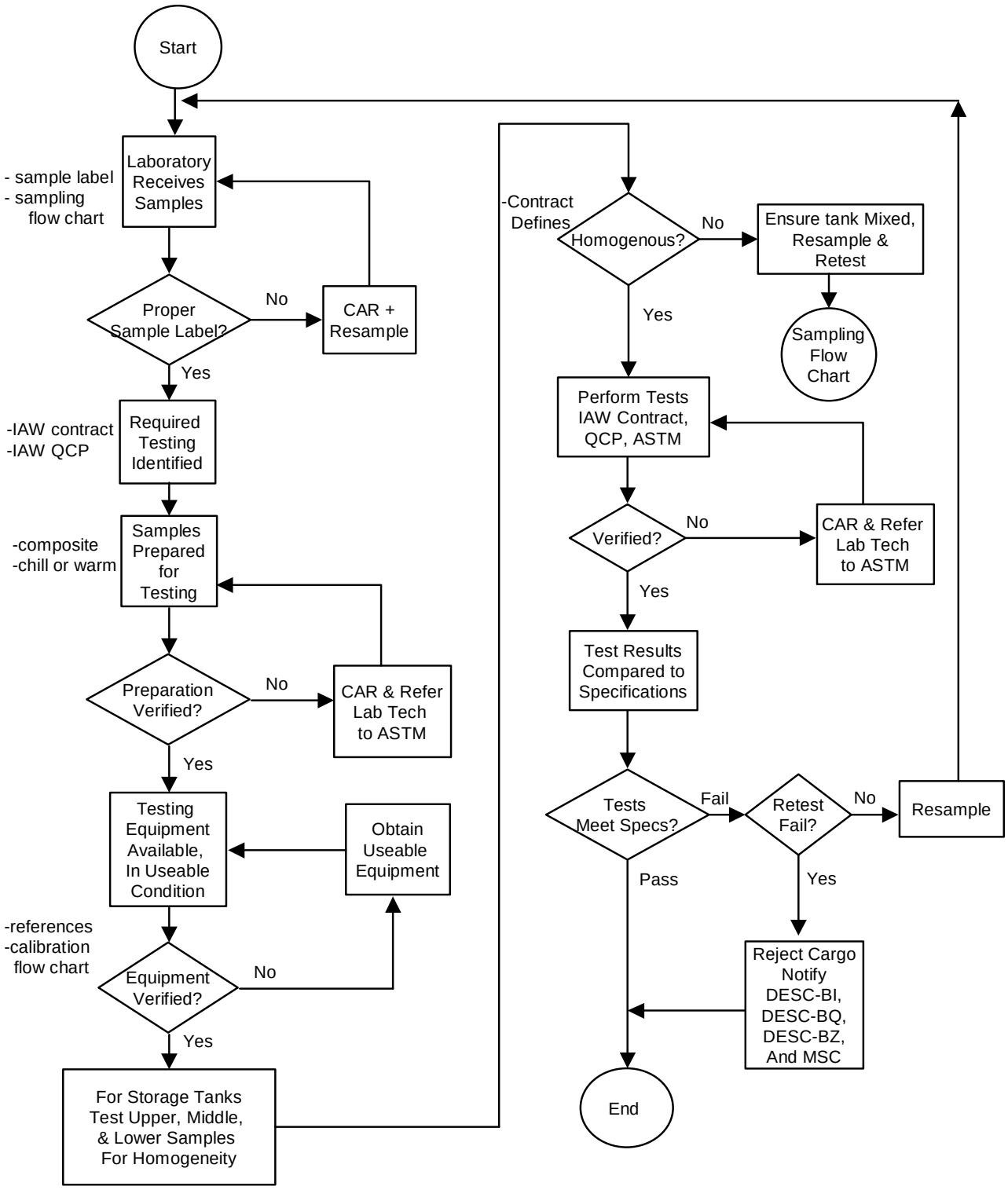
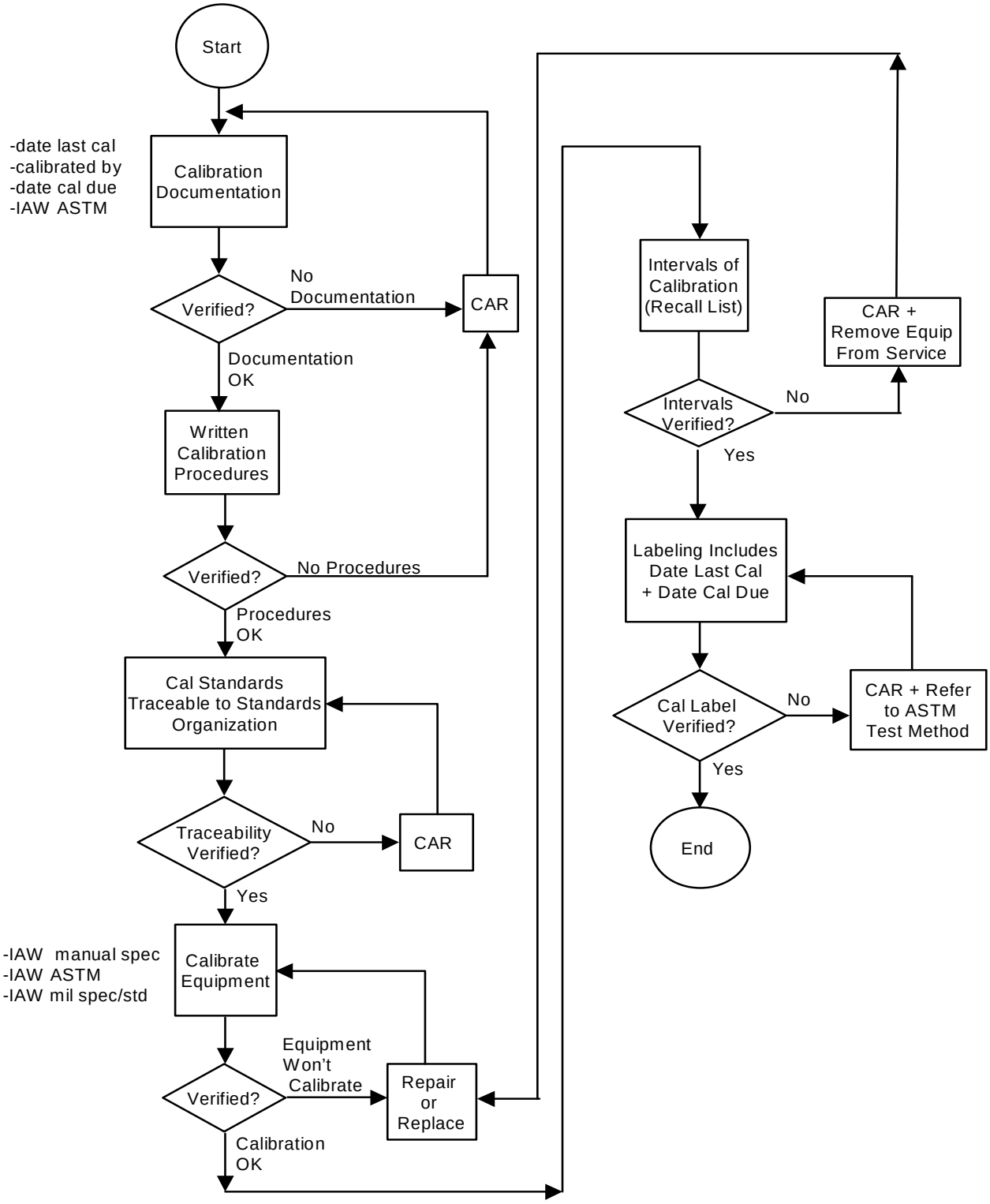
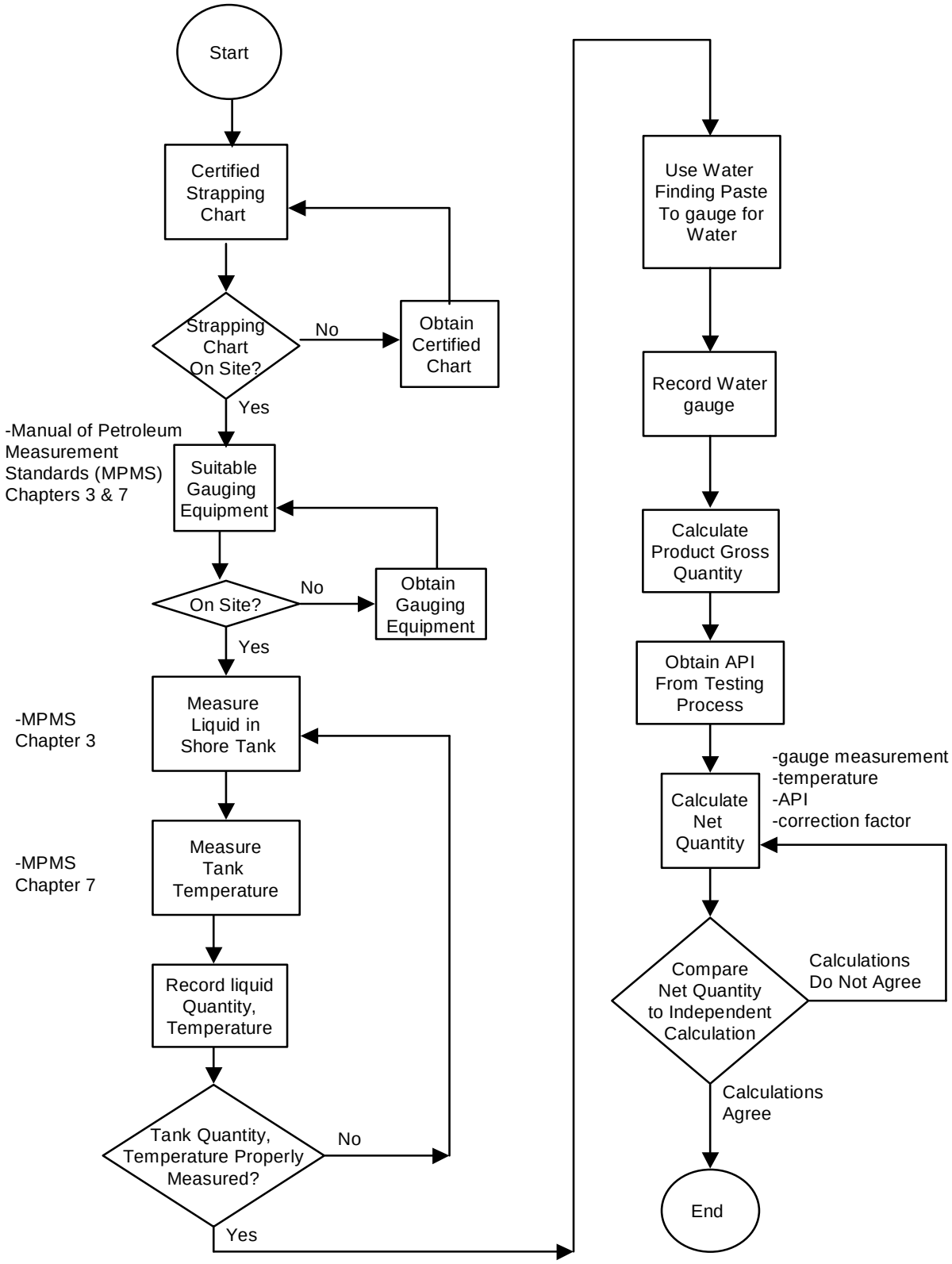
LABORATORY TESTING PROCESS FLOW
(**MANDATORY** for Shore Tank and Ships Composite)



CALIBRATION OF TEST EQUIPMENT PROCESS FLOW



MANUAL
QUANTITY MEASUREMENT (SHORE TANK)
PROCESS FLOW (MANDATORY)



1.0 Loading and Shipping.

1.1. Tanker and Barges - (MANDATORY)

Likelihood: Improper loading and shipping procedures is the result of expedience, poor or no training, shift change time, bad weather, lack of knowledge of the loading system, and/or all of the aforementioned problems. The possibility of one or more these factors occurring during any sampling is HIGH.

Consequence: Improper setting of shore system can lead to an off-specification problem. The wrong product can be loaded, additives required not injected or injected at an incorrect level, and/or loss of available product. In all such cases, an off-specification product is the result *(Performance and Cost)*. Such situations would require investigation, which could cause delays *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify improper loading and shipping procedures could lead to purchase of OFF-specification product. Petroleum products used in combat aircraft, tanks, ships, and submarines would add to the cost of any undetected off-specification product through increased maintenance, combat system failure, military theater of operations shut down, and loss of life and/or limb.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify proper loading and shipping (proper line setup) could lead to delays while investigating the cause, which, would lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained.

2.0 Vessel Inspection (QAR Process) - (MANDATORY) (Audit Checklist)

Likelihood: Improper vessel **inspection** is the result of expedience, poor or no training, bad weather, and/or all of the aforementioned problems. (It is imperative that QARs receive adequate training both formal and on-the-job (OJT) with an experienced petroleum QAR prior to being allowed to perform this function on their own. The amount of time spent in OJT will be dependent upon the experience and background of the QAR being trained.) The possibility of one or more these factors occurring, without proper training, during any vessel **inspection** is MODERATE.

Consequence: Improper vessel **inspection** will have one or more consequences. If the vessel is not properly **inspected** the product being loaded into cargo tanks may become contaminated from previous cargo, water, or another product if more than one cargo is being loaded causing the product to be OFF-specification. Delays will be incurred while resolving quality issues during and after loading *(Performance and Cost)*. If the QAR doesn't have sufficient training and experience the QAR might require cleaning when it is not needed causing a delay in loading and shipping. Disputes between the product supplier and transportation contractor on liability will occur *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper vessel **inspection** HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to properly **inspect** a vessel increases Government costs, increases tanker delays creating inefficiencies in product resupply and dealing with off-specification product. Rehabilitation of product delays delivery to the customer and increases DoD costs.

SCHEDULE & COST

Risk Category - **MODERATE**- Failure to properly **inspect** a vessel could lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained based on DoD guidance.

3.0 SAMPLING

3.1. Shipping Tanks - (MANDATORY)

Likelihood: Improper sampling is the result of expedience, poor or no training, shift change time, night shift versus day shift, bad weather, incorrect sampling equipment, incorrect sample containers, and/or all of the aforementioned problems. The possibility of one or more of these factors occurring during any sampling is HIGH.

Consequence: Improper sampling will have one or more consequences. If a sample is taken from the top of the tank it will not be representative of the tank and may provide a test analysis that is ON-specification when the tank may have been, in fact, OFF-specification. In this situation, if sampling is not verified the Government will purchase OFF-specification product. A sample not representing the actual product will result in the Government purchasing an off-specification product or the contractor having to rework an on-specification product *(Performance and Cost)*. If the sampling equipment or sample container is not the correct type or is not clean and dry the test analysis may be OFF-specification when the tank may have been, in fact, ON-specification. In this situation re-sampling and re-testing would be required causing a delay in loading and shipping *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify improper sampling coupled with failure to **verify** testing would lead to purchase of OFF-specification product. Petroleum products used in combat aircraft, tanks, ships, and submarines would add to the cost of any undetected off-specification product through increased maintenance, combat system failure, military theater of operations shut down, and loss of life and/or limb.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify improper sampling coupled with failure to **verify** testing would lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained to keep cost of product down.

3.2. Vessel - (MANDATORY)

Likelihood: Improper sampling is the result of expedience, poor or no training, shift change time, bad weather, incorrect sampling equipment, incorrect sample containers, and/or all of the aforementioned problems. The possibility of one or more of these factors occurring during any sampling is HIGH.

Consequence: Improper sampling will have one or more consequences. If a sample is taken from the top of the vessels cargo tank it will not be representative of the tank and may provide a test analysis that is ON-specification when the cargo tank may have been, in fact, OFF-specification. In this situation, if sampling is not verified the Government will purchase OFF-specification product. A sample not representing the actual product will result in the Government purchasing an off-specification product or the contractor having to rework an on-specification product *(Performance and Cost)*. If the sampling equipment or sample container is not the correct type or is not clean and dry the test analysis may be OFF-specification when the vessel's tanks may have been, in fact, ON-specification. In this situation re-sampling and re-testing would be required causing a delay in shipping *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify improper sampling coupled with failure to **verify** testing would lead to purchase of OFF-specification product. Petroleum products used in combat aircraft, tanks, ships, and submarines would add to the cost of any undetected off-specification product through increased maintenance, combat system failure, military theater of operations shut down, and loss of life and/or limb.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify improper sampling coupled with failure to **verify** testing would lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained to keep cost of product down.

4.0 Testing

4.1. Shipping Tank - (MANDATORY)

Likelihood: Improper testing is the result of expedience, inadequate training, shift change time, night shift versus day shift, laboratory practiced shortcuts, incorrect test equipment, using incorrect formulas for calculations, and/or all of the aforementioned problems. The possibility of one or more of these factors occurring during any testing is HIGH.

Consequence: Improper testing will have one or more consequences. An improperly performed test may provide a test analysis that is ON-specification when the product may have been, in fact, OFF-specification. In this situation, if testing is not properly verified the Government will purchase OFF-specification product *(Performance and Cost)*. If the test equipment, test procedure, and/or calculation is not correct the test analysis may be OFF-specification when the product may have been, in fact, ON-specification. In this situation re-sampling and re-testing would be performed causing a delay in loading and shipping

(Schedule). Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify improper testing would lead to purchase of OFF-specification product. Petroleum products used in combat aircraft, tanks, ships, and submarines would add to the cost of any undetected off-specification product through increased maintenance, combat system failure, military theater of operations shut down, and loss of life and/or limb.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify improper testing would lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained to keep cost of product down.

4.2. Test Procedures - *Annual **witness** and validation of each test as a minimum* **(MANDATORY)**

Likelihood: Improper testing is the result of expedience, inadequate training, shift change time, night shift versus day shift, laboratory practiced shortcuts, incorrect test equipment, test procedure changed but still using older version, using incorrect formulas for calculations, and/or all of the aforementioned problems. The possibility of one or more of these factors occurring during any testing is HIGH.

Consequence: ASTM changes approximately 30% of test methods annually. It is imperative to validate changes to each test method are made by the contractor, to **ensure** the contractor has the correct method, and is capable of performing to the latest test method. Improper testing will have one or more consequences. Failure to make changes can cause variations to the test results *(Performance and Cost)*. Variations especially where test results are close to the limit may result in Government surveillance testing to indicate a failure. Undue delays at the depot and investigation efforts would be the result *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify changes in test procedures would lead to purchase of OFF-specification product. Petroleum products used in combat aircraft, tanks, ships, and submarines would add to the cost of any undetected off-specification product through increased maintenance, combat system failure, military theater of operations shut down, and loss of life and/or limb.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify changes in test procedures would lead to disruption of schedule and be costly. Petroleum is not easily scrapped or turned in for rework - rehabilitation when possible is expensive, sometimes manpower intensive and causes delays to customers since minimal inventory levels are being maintained to keep cost of product down.

5.0 Calibration (MANDATORY)

5.1. Meters - (MANDATORY)

Likelihood: Quantity measurements rely on accurate measures of several variables as well as the product direct or indirect quantity measurement. Inaccuracies in any measure or variable will result in an inaccurate quantity measurement. Improper care and maintenance result in an increased likelihood of putting meters out of calibration. While annual or semi-annual calibrations may be accepted for tank truck and tank car facilities; tanker, barge, and pipeline companies calibrate meters daily if not every shipment. The possibility of one or more these factors occurring during any gauging is HIGH.

Consequence: Improper calibration will have one or more consequences; for example, inaccurate observed volume found, temperature determination inaccurate, pressure correction inaccurate. An improperly performed calibration may cause the Government to pay for product that it did not receive. In this situation, if calibration is not properly verified the Government will purchase product that doesn't exist causing extra expense and possible shortfall in inventory levels *(Performance and Cost)*. An improperly performed calibration may cause the Contractor to provide more product than he is paid for causing them to lose money and increase production for the next cargo to make up for the perceived shortfall. Improperly performed calibration may cause delays in shipment due to investigating losses *(Schedule)*. Many other situations will cause similar consequences all of which make the consequences of improper calibration HIGH.

PERFORMANCE

Risk Category - **MODERATE** - Failure to identify meter calibration problems would lead to systemic issues with quantity determinations.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify meter calibration deficiencies would lead to increased time trying to determine what caused the discrepancy, which would lead to investigative measures that would tie up resources far greater than had the validation been performed originally.

6.0 Quantity Measurement.

6.1. Shore Tank - (Manual Gauging MANDATORY)

Likelihood: Improper gauging is the result of expedience, poor or no training, shift change time, bad weather, incorrect or faulty equipment, fraud, and/or all of the aforementioned problems. The possibility of one or more these factors occurring during any gauging is HIGH.

Consequence: The opening gauge is lost as soon the loading starts - it cannot be re-verified after load starts, one chance only. It is no longer possible to accurately determine payment quantity. An improperly performed gauge may cause the Government to pay for product that it did not receive. In this situation, if gauging is not properly verified the Government will purchase product that doesn't exist causing extra expense and possible shortfall in inventory levels *(Performance and Cost)*. An improperly performed gauge may cause the Contractor to provide more product than he is paid for causing them to lose money and price increase to cover the perceived losses. Every shipment is validated by the receiver

(sometimes another contractor like a pipeline company or marine vessel) when signing for product. Discrepancies greater than allowed tolerances must be investigated. This causes marine movement delays, which affect inventory positions *(Schedule)*. Transportation time is lost and increases DESC's costs. DoD personnel resources are used to investigate these discrepancies, which further wastes valuable resources. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to identify improper gauging would lead to purchase of product that doesn't exist thus raising the stock fund price or not pay the contractor for all product he supplied and cause the contractor to lose money and consequently recover these costs on a follow-on contract.

SCHEDULE & COST

Risk Category - **MODERATE** - Failure to identify improper gauging would lead to increased time trying to determine what caused the discrepancy, which would cause disruption of schedule and be costly.

7.0 Problem Reporting (QAR Process) - (MANDATORY)

7.1. Production (QAR Process) - (MANDATORY)

Likelihood: Every contractor at one time or another experiences problems that can affect delivery of product. The possibility of such a problem occurring during any delivery is HIGH.

Consequence: DESC purchases are timed well in advance to meet anticipated demands. Transportation is scheduled to meet this demand while promoting efficiencies, which reduces transportation expenses. Without notification, adjustments to the transportation schedule can lead to lost transportation time, which cannot be recovered. Without notification, DESC cannot address the issue with the product supplier. At times, these delays can be resolved so as not to affect schedules if DESC brings it to the attention of contractor management. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE, SCHEDULE & COST

Risk Category - **MODERATE** - Failure to properly identify production delays results in missed deliveries. This affects operational readiness and increases DESC costs as alternate source(s) of supply are arranged.

7.2. Transportation (QAR Process) - (MANDATORY)

Likelihood: External and internal factors frequently affect the ability of a transporter to adhere to schedules. Weather, strikes, congestion at a facility, port regulations and miscommunication can result in transportation to be delayed or less frequently to be early. The possibility of one or more these factors occurring is HIGH.

Consequence: Transportation that arrives early may wait for its scheduled load time. Transportation that is on long-term hire by DoD is paid for whether in use or not *(Performance and Cost)*. Transportation that is delayed fails to meet delivery windows, which affects resupply to the customer *(Performance and Schedule)*. Alternate resupply is

required at a higher cost to the Government *(Cost)*. Many other situations will cause similar consequences all of which make the consequences of improper sampling HIGH.

PERFORMANCE

Risk Category - **HIGH** - Failure to properly report transportation problems affect resupply and efficiencies in the logistics system. Management of product and transportation assets is more intense when this occurs. The ability to assume product is available for customers is reduced. Contractors expect DoD to lift the product ordered. Failure to remove it from their facilities delays their ability to produce subsequent orders. Long delays in lifting ordered product could cause refinery shutdowns or claims against the Government for damages.

SCHEDULE & COST

Risk Category - **MODERATE** - Transportation problems increase costs as other assets are diverted to meet demand or additional assets/higher cost logistic options are brought on-line to fulfill the orders. Product contractors incur costs to hold product not lifted which are passed onto DESC directly through claims or indirectly through next years bid price.

7.3. Quality (QAR Process) - (MANDATORY)

Likelihood: All contractors experience quality problems at one time or another. As the production of petroleum products is a continuous process with constant changes in raw materials and production process variables, at one time or another contractors make off-specification product. Every time petroleum products are moved, the risk of contamination or degradation is possible, HIGH.

Consequence: Off-specification product affects delivery schedules and transportation assets. Failure to deliver requires readjustment to other schedules and deliveries. DESC requires immediate notification of these problems to begin working through the quality, contract, and logistics consequences. Failure to take immediate action can results in mission failure, transportation assets being under utilized, and increased costs to DoD. When a quality problem occurs during loading or shipping, the QAR is required to investigate and provide information to DESC as to the cause, responsibility, and possibility of corrective action. The QAR will be required to provide a formal report in such instances (see Appendix 4).

PERFORMANCE

Risk Category - **HIGH** - Failure to report quality problems in a timely manner can results in mission failure, transportation assets being under utilized, and increased costs to DoD.

SCHEDULE & COST

Risk Category - **MODERATE** - Off-specification product affects delivery schedules and transportation assets. Failure to deliver requires readjustment to other schedules and deliveries.

DEFENSE LOGISTICS AGENCY
DEFENSE ENERGY SUPPORT CENTER
8725 JOHN J. KINGMAN ROAD, SUITE 4950
FT. BELVOIR, VA 22060-6222

REPLY
REFER TO

DESC-BQ

19 Jun 1998

MEMORANDUM FOR MILITARY SEALIFT COMMAND (P51D)
DEFENSE CONTRACT MANAGEMENT COMMAND
DEFENSE ENERGY REGIONS/OFFICES

SUBJECT: DESC-BQ-98-01 Policy for Vessel's Carrying DESC Cargoes – Cleaning/Gas Freeing Inspecting and Quantity Variations and Quality Requirements for Bulk Fuel Contracts

The enclosed Policy has been agreed to by the Defense Energy Support Center (DESC) and Military Sealift Command (MSC) and supersedes DFSC-BQ-97-01. MSC contracts require vessel owner to warrant that their vessel is suitable for carrying the cargo designated. MSC will have this new policy reflected in the vessel cleaning and certification requirements for MSC chartered vessels. This policy supplements current cleaning requirements as identified in MSC contracts for Quality Assurance Acceptance of MSC-chartered vessels. DESC Contracts and MIL-HDBK-200, *Quality Surveillance Handbook for Fuels, Lubricants, and Related Products* will be amended to reflect these changes. This Policy Memorandum will remain in effect until these documents have been changed to reflect this change in Policy

Petroleum Quality Assurance Representatives (QARs) and Quality Surveillance Representatives (QSRs) may implement these procedures immediately. QARs/QSRs will inspect vessels prior to the first DoD product loaded on time chartered vessels, on vessels that have not maintained segregated ballast conditions, or on vessels that have been in dry dock or had repairs done to their cargo system. MSC will provide notification to the QAR/QSR prior to loading regarding vessels which have been in dry dock or had repairs done to their cargo system. QARs/QSRs shall validate that vessels present the required certificate stating that cargo tanks are clean and suitable to accept the intended cargo. This certificate shall be made part of the official loading documentation package. Additional procedural guidance may be provided/issued after receipt of MSC guidance to its vessel contractors.

QARs/QSRs shall notify DESC-BQ of all non-conformances found upon loading or discharge. DESC-BQ shall process all validated claim actions to MSC, after appropriate investigations have been performed.

QARs/QSRs shall report all incidents to DESC and the Defense Energy Region/Office (DER/DEO) in the following situations. The QAR/QSR should immediately advise DESC-BQ/BZ and DER/DEO personnel during normal duty hours. During DESC non-duty hours, the QAR/QSR should immediately contact the DESC Command and Control Center at (703) 767-8420 or DSN 427-8420:

Federal Recycling Program Printed on Recycled Paper

SUBJECT: DESC-BQ-98-01 Policy for Vessel's Carrying DESC Cargoes - Cleaning/Gas-Freeing, Inspecting and Quantity Variations

a. Product quality problems that prevent loading of the vessel to within the quantity tolerances as permitted by contract clauses.
b. Product availability problems that would prevent loading of the vessel to within the quantity tolerances permitted by contract clauses.
c. Problems which would result in delay of the vessel beyond the authorized laytime.

Point of Contact for this office is Robert Koeller, DSN 427-8744/Commercial 703-767-8744.

NORMAN B. HODGES III
Colonel, USA
Director, Bulk Energy's

Attachment

SUBJECT: DESC-BQ-98-01 Policy for Vessel's Carrying DESC Cargoes - Cleaning/Gas-Freeing, Inspecting and Quantity Variations

1. Scope. The following Policy, which amends and supersedes the January 9, 1997 policy letter (DESC-BQ-97-01) sab, applies to Vessel Cleaning/Gas Freeing, Inspecting, and Quantity Variations between the Military Sealift Command (MSC) and Defense Energy Support Center (DESC), and has been coordinated with the Defense Contract Management Command (DCMC). This Policy applies only to MSC time chartered vessels, the current cleaning requirements shall remain in effect for voyage chartered vessels. This Policy supplements current vessel cleaning requirements as identified in MSC contracts for Quality Assurance Acceptance for DESC-procured products. It also waives DESC procurement clause E1, Contractor Inspection Responsibilities, Table V, Guide for the Preparation of Tanker Cargo Tanks, and replaces cleaning requirements for U.S. Government-owned fuel as identified in MIL-HDBK-200, *Quality Surveillance Standard for Fuels, Lubricants, and Related Products*, Table V, Minimum Requirements for the Preparation of Tanker Cargo Tanks. This Memorandum will remain in effect until the above documents have been changed to reflect this change in Policy.

2. Responsibility. Vessel owners/operators are responsible for providing vessels suitable to load and deliver the intended cargo, and determining the need-to-clean vessel cargo tanks, based on monitoring vessel cargo history and the cargo to be loaded. The process for monitoring cargo history and identifying when vessel cargo tanks will require cleaning will be developed by vessel owners/operators for each vessel. Copies of the DD Form 250-1, including test reports, will be forwarded to vessels by the loading Quality Assurance Representative (QAR) or Quality Surveillance Representative (QSR) should early departure preclude obtaining a copy.

3. Required Cargo Tank Cleaning. The following MSC vessel cleaning requirements shall remain in effect. Exceptions to these requirements will be coordinated with DESC-BQ prior to the proposed cargo loading:

a. The vessel cargo tanks held ballast between the prior cargo discharge and the scheduled follow-on cargo;

b. The cargo to be loaded is JP-5, and the previous cargo was other than JP-5;

c. The cargo to be loaded is JP-8/AN-8, and the previous cargo was other than JP-8 or JP-5;

d. The initial loading of a spot charter;

e. The vessel has been in dry dock, or repairs have been performed on the cargo tanks.

f. The cargo to be loaded is MOGAS, and the previous cargo was F-76.

g. The cargo to be loaded is other than MOGAS, and the previous cargo was MOGAS.

4. Inspection Requirements. DESC and DCMC Quality Representatives will inspect vessels that are loading their first DoD cargo under any MSC charter, or that have not maintained segregated ballast conditions, or that have been dry docked or had repairs made to their cargo system. MSC will provide notification to the QAR/QSR prior to loading regarding vessels which have been in dry dock or had repairs done to their cargo system. Other internal cargo tank inspections shall be made by request as follows:

a. Any party may request inspection prior to a vessel loading, provided that their request is accompanied by written justification. Justification may be formal documentation (i.e. DD-250-1's, test reports, etc.) or a narrative explanation citing the reason(s) why an inspection should be performed.

b. When an inspection request is initiated by MSC, the request will be coordinated with DESC-BQ. If an inspection is deemed necessary, MSC will notify the vessel and the appropriate DESC/DCMC Field Office and quality representative of the inspection requirement and the reason for the inspection.

c. When an inspection request is initiated by a DESC or DCMC Field Office, the request will be coordinated with DESC-BQ, who will in turn submit it to MSC. If an inspection is deemed necessary, MSC will notify the vessel and the appropriate DESC/DCMC Field Office and quality representative of the inspection requirement and the reason for the inspection.. Notification will be done prior to the intended cargo, with adequate time to allow for Quality Representatives to be present for an internal tank inspection Otherwise no internal cargo tank inspection will be performed by DCMC or DESC.

d. In all cases, when internal cargo tank inspection is deemed necessary, the vessel operator will present the QAR/QSR a "gas-free certificate" that indicates the cargo tanks are safe for entry.

5. **Suitability to Load.** Vessels will arrive at the required port ready to load the intended cargo. Vessels will certify the cargo tanks are suitable for loading the intended cargo by including this statement in the Notice of Readiness: "ALL compartments, lines, and pumps to be used are suitable for loading and delivering the intended cargo." Vessels will also provide the Quality Representative with soundings of product / water onboard, and validated onboard quantities (OBQ) prior to loading.

6. **Quantity Variation.** Investigations will be conducted by MSC and DCMC/DESC Quality personnel for variations exceeding the following (shore-to-shore, loading to final destination): 0.2% for cargoes not requiring cleaning, gas-freeing, drop/strip; 0.3% for cargoes requiring drop/strip; 0.5% for cargoes requiring gas-freeing and cleaning. API Manual for Petroleum Measurement Standard, Chapter 17.5, Guidelines for Cargo Analysis and Reconciliation, will be used.

7. **Responsibility for Off-Specification Cargo.** Vessel owner/operators are responsible for off-specification product cargoes, when the vessel is identified at fault. The Vessel owner / operator will be given the opportunity to secure the services of an independent petroleum surveyor in the event a discrepancy is suspected or identified. A representative sample taken at the custody transfer point shall be used as the principal factor in determining the source of the contamination and the responsible party.

8. **DESC Suggestions.** The following suggestions are provided to MSC and Vessel owner/operators for incorporation into their Monitoring Process: that Cargo Tank Cleaning, Gas-Freeing, or Drop/Strip **not** be required as a matter of routine preparation by segregated

ballast tankers going from like-cargoes to like-cargoes, such as: JP-5 to JP-5; JP-8 to JP-8; F-76 to F-76; JP-5 to JP-8; and JP-5 to F-76. Because of differences in Flash Point, DESC suggests that Drop/Strip be required when going from JP-8 to F-76. Finally, suggest that (OBQ) be expanded to include such quantities as trim corrected and non-trim corrected results. DESC will continue to provide MSC guidance on product quality issues.

A. **TECHNICAL CAPABILITIES**

1. Date Plant Commissioned/established: _____

2. Number of Production employees/skilled _____ unskilled _____

3. Storage Capacity

PRODUCT	TANK TYPE	# OF TANKS	TOTAL TANKAGE
Crude Oil	_____	_____	_____
Naphtha	_____	_____	_____
Run Down	_____	_____	_____
Motor Gasoline	_____	_____	_____
JP4	_____	_____	_____
Jet A-1	_____	_____	_____
JP8	_____	_____	_____
JP5	_____	_____	_____
Kerosene	_____	_____	_____
Diesel	_____	_____	_____
Residual FO	_____	_____	_____
Other	_____	_____	_____

Type Tanks: Cone Roof - External Floating Roof - Internal Pan
Flat Bottom - Crown Bottom - Cone Bottom - Sloped Bottom
SA = Strapping Charts made available at PAS

4. Additive Injection Capabilities:

In-line blending	YES _____	NO _____
Corrosion Inhibitor	YES _____	NO _____
Static Dissapator Additive	YES _____	NO _____
FSII (DIEGME)	YES _____	NO _____
Metal Deactivator	YES _____	NO _____
Anti-Oxidant	YES _____	NO _____
Other, Type _____	YES _____	NO _____

Were all additives required by the contract or product specification present at the time of the PAS?
YES _____ NO _____

Additional Remarks: _____
_____
_____
_____

5. Government Contract Historical Data

Previous Supplier YES _____ NO _____
Current Supplier YES _____ NO _____

Products and Volumes: _____
_____
_____

Failure to Perform Incidents: _____
_____
_____

B. **PRODUCTION CAPABILITY**

1. Source(s) of Crude Oil _____

2. Refinery Crude throughput per day in Mbbls at 100% Capacity: _____

3. Current Refinery Operating at _____ % Capacity.

4. Current Crude Throughput per day in Mbbls _____

5. % Total Throughput for Export _____

6. Present Refinery Run in Mbbls/Day:

a. Gasoline Range: _____
Motor Gasoline: _____
Naphthelenes (JP4): _____
Others: _____

b. Distillates: _____
Jet A-1: _____
JP8: _____
JP5: _____
Kerosene: _____
Diesel Fuel: _____
Others: _____

c. Residuals: _____
Bunker C: _____
No. 6 FO: _____
Asphalt: _____
Others: _____

7. Maximum quantity per shipment of products offered _____
_____

8. Potential increase in refining capacity of offered products _____
_____

9. Planned construction/conversion this calendar year _____
_____

10. Projected dates of refinery turnaround _____

11. Impact of turnaround on contract delivery _____

* Note: If a refinery is not operational at the time of the PAS, the conclusion statement should indicate an assessment at to the prospect of its operability by the start of the delivery period and the details of what has to be accomplished to make it operational, i.e., equipment, construction, retooling, repair, etc...

C. **QUALITY ASSURANCE CAPABILITY**

1. Does the prospective contractor possess necessary Military/Commercial Specifications as stated in Section C of the solicitation? YES _____ NO _____
Remarks: _____

2. Is the prospective contractor familiar with the inspection criterion contained in Section E of the solicitation? YES _____ NO _____
Remarks: _____

3. Is the lab equipment calibrated? YES _____ NO _____
Remarks: _____

4. Does the laboratory possess the required testing equipment to test all offered products to Military/Commercial specifications? YES _____ NO _____
Remarks: _____

5. Is the required equipment in working order? YES _____ NO _____
Remarks: _____

6. Does the prospective contractor have a written quality manual?
YES _____ NO _____
Remarks: _____

7. Are the quality control records of inspection, tests, corrective action, solutions, etc.. available?
YES _____ NO _____
Remarks: _____

8. Does the prospective contractor understand contract documentation requirements?
YES _____ NO _____
Remarks: _____

9. Does the prospective contractor retain copies of the form DD-250-1's for a period of three years, as applicable? YES _____ NO _____
Remarks: _____

10. Additional Remarks: _____

D. **FINANCIAL CAPABILITY**

1. If the prospective contractor has been a successful bidder in the past, a history of financial performance is required here for previous contracts.

2. Prospective contractor affiliation with other corporations?_____
_____
_____

3. What is the financial outlook for the bidder? _____
_____
_____

4. Has the company ever undergone a financial reorganization? If so, when? _____
_____
_____

E. **ACCOUNTING SYSTEM**

1. Does the prospective contractor have an accounting department?
YES _____ NO _____

2. Is it adequately staffed?
YES _____ NO _____

3. Was a review of the accounting records made by the QR during the PAS?
YES _____ NO _____

4. Has the prospective contractor been audited by any Government Agency?
YES _____ NO _____. When? _____
What agency? _____
5. Remarks: _____
_____
_____

A. **GOVERNMENT PROPERTY CONTROL**

1. Is the storage facility adequate for protection of Government-owned products?
YES _____ NO _____
Remarks: _____
_____
_____
_____

2. Offered tank information:

	Tank #	Tank #	Tank #	Tank #	Tank #
Product					
Capacity					
Current Use					
Type Roof					
Type Floor					
Size Suct.					
Size Disc.					
# Pumps					
Max Rate					
Nom Rate					
Cleaning					
Pos. Sump					
F/S					
Add. Inj.					

* Indicates that a roof supplement and bottom supplement are included in the calibration charts for the tank.

3. Is there a cleaning requirement for the tanks offered or for the transfer lines?
YES _____ NO _____
4. Last product in transfer lines offered. _____
_____

5. Transfer lines dedicated or multi-product? _____
_____

6. Is a fuel/water separator connected to a positive sump on each tank offered?
YES _____ NO _____ Explain: _____
_____

7. Is adequate sampling/testing equipment available? _____
_____
   a. Are calibration records available and accurate? _____
_____

8. Is an adequate additive injection system available? _____
_____

9. Is the refinery connected to a pipeline? _____

10. Is the pipeline a dedicated/multi-grade pipeline? _____

11. What product(s) are carried in the pipeline? _____

12. Are records maintained in such a manner that an audit may be performed by an audit agency with a minimum of man hours expended? YES _____ NO _____
Explain: _____
_____
_____

13. Is the inventory control action adequately staffed and trained in quantity determination? YES _____ NO _____ Remarks: _____
_____
_____

B. **TRANSPORTATION**:

1. Product Delivery Capability

a. Tank Truck

(1) Does the prospective contractor have tank truck loading capability?
YES _____ NO _____

(2) Bottom loading: YES ____ NO ____, Top loading: YES ____ NO ____

(3) Number of fill stands _____

(4) # of products that can be loaded simultaneously _____
_____

(5) What is the minimum/maximum load rate: _____

(6) Are meters available? YES ____ NO ____. All fill stands? YES ___ NO ___

(7) Are the meters calibrated? YES ____ NO ____. Frequency? _____
Methods? _____

(8) Does the prospective contractor own or lease the tank trucks? _____
If leased, what percentage? _____

(9) Does the contractor have a filter/separator for jet fuel loading? _____

(10) Does the contractor have the capability to inject additives? _____

b. Rail Car

(1) Does the prospective contractor have rail car loading capability?
YES _____ NO _____

(2) Bottom loading: YES ____ NO ____, Top loading: YES ____ NO ____

(3) # of products that can be loaded simultaneously _____
_____

(4) Number of cars per grade than can be accommodated for loading/discharging at one time?
_____

(6) What is the minimum/maximum loading rate: _____

(7) Can rail cars of the same product be loaded/discharge simultaneously through different systems? YES ____ NO ____

(8) Are meters available? YES ____ NO ____. All fill stands? YES ___ NO ___

(9) Are the meters calibrated? YES ____ NO ____. Frequency? _____
Methods? _____

(10) Switching provided by? _____

(11) Lead time for services? _____

(12) Condition of Track Yard? _____

(13) Rail Gauge? _____

(14) Track (Wood or concrete)? _____

(15) Number of rail cars that can be staged? _____

c. Marine

(1) Is marine transportation available? YES ____ NO ____

(2) Tanker? YES ____ NO ____, Barge? YES ____ NO ____

(3) Pier/berth Information:

	Berth No. ___	Berth No. ___	Berth No. ___
LOA	_____	_____	_____
Maximum Draft	_____	_____	_____
Max Vessel Length	_____	_____	_____
Max Vessel Width	_____	_____	_____
Lines per Product	_____	_____	_____
Tidal Difference	_____	_____	_____
Hoses/Chicssans	_____	_____	_____
Max Load Rate	_____	_____	_____
Nom Load Rate	_____	_____	_____
Ballast Facility (Clean/Dirty/Both)	_____	_____	_____
Filter/Separator	_____	_____	_____

(4) Harbor Draft Restrictions? _____

(5) Harbor Arrival/Departure Restrictions? _____

(6) Number of products that can be loaded/discharged simultaneously and types.
_____

(7) Maximum loading rates per product? _____
_____

(8) Nominal loading rates per product? _____
_____

(9) Are calibrated meters available? YES ____ NO ____. Frequency? _____
_____

(10) Type meter (in-line proving, temperature and/or pressure compensating)? ___
_____

(11) Meter manufacturer? _____

(12) Ballast Receipt Volume: Clean _____ Dirty _____

(13) Ballast Receipt Rate: _____

(14) Restrictions on Receipt of Dirty Ballast: _____

(15) Port de-ballasting restrictions: _____
_____

e. Pipeline

(1) Does the prospective contractor have a pipeline or connection to a pipeline?
_____

(2) Size of pipeline? _____

(3) Length of pipeline? _____ Pump Stations? _____
Number of pumps? _____ Additive Injection? _____

(4) Is the pipeline dedicated/multi-product? _____

(5) What products? _____

(6) Does the pipeline have the capability to be pigged? _____

(7) Are meters available? YES ____ NO ____.

(8) Are the meters calibrated? YES ____ NO ____. Frequency? _____
Methods? _____

(9) Maximum pump rates per product? _____
_____

(10) Nominal pump rates per product? _____
_____

(11) Pipeline have breakout tankage? _____

C. **PACKING CAPABILITY**

1. Is the lube oil plant within the refinery complex? YES _____ NO _____

2. Has the lube plant been thoroughly inspected? YES _____ NO _____

3. What is the plant's packaging capabilities? (Drums, pails, gallon can, etc.) _____
_____
_____

4. How many blending vats does the plant have? _____
_____

5. What condition are the vats in? _____
_____

6. Does the prospective contractor have the capability to produce the quantity and quality of specification products offered in response to the solicitation? _____
_____

7. Does the plant employ an adequate number of trained and qualified employees? _____
_____

8. Maximum production capability in gallons per day? _____
_____

9. Present production in gallons per day? _____
_____

10. Number of high-viscosity products are produced in this plant? _____
_____

11. Does the plant use the refinery's laboratory? _____
_____

12. Was an examination of the plant's processing procedures conducted? _____
_____

13. Were the plant's quality control procedures examined? _____
_____

14. Are the quality and processing procedures adequate? _____
_____

15. How many lube oils does the prospective contractor have registered under the U.S. Government qualification program? _____ Number and type? _____
_____

16. Products possessing LPL certification: _____

D. **SECURITY**

1. Is the plant/terminal fenced? _____

2. Is a guard on-duty at all times?_____

3. Are unguarded gates locked when not in use? _____

4. Has an in-plant communication system been installed? _____
Is it self-powered? _____

5. Is the night lighting sufficient? _____

6. Do all storage tanks have dikes and fire walls? _____
List exceptions: _____

7. Is the entrance control point guarded at all times? _____

8. Is there a visitor register available? _____

9. Are all visitors required to sign in and out? _____

E. **PLANT SAFETY**

1. Is the plant/terminal equipped with a fire department? _____

2. Is it manned full time? _____

3. Are plant workers trained to assist in fire fighting? _____

4. Is fire training available to plant workers? _____

5. Are fire and safety drills performed frequently? _____

6. Is outside fire fighting assistance available? (List source and amount.) _____
_____

7. Military or Civilian? _____

8. Location and distance from site? _____

9. Are hydrants and hoses installed in the storage area? _____
Production area? _____

10. Is the system a constant-pressure type? _____ What is the water supply pressure during tests?
_____

11. Do offered tanks have foam systems installed? _____

12. Rate housekeeping in the storage are. Poor ___ Fair ___ Good ___ Excellent _____

13. Does the plant/terminal have a safety department? _____

F. **ENVIRONMENTAL/ENERGY CONSIDERATIONS**

1. Does the prospective contractor have an environmental program? _____

2. Does the prospective contractor drain effluent water from tanks that contain FSII into fire wall containment's? _____

3. Does the prospective contractor aerate cooling water before re-introduction back into the environment?
_____

4. Is the prospective contractor in compliance with local/national regulatory body environmental regulations? _____
_____
_____

G. **ABILITY TO MEET DELIVERY SCHEDULE**

1. Will the prospective contractor dedicate tankage solely to the blending of contracted products?
YES _____ NO _____
Exceptions: _____
_____

2. Dedicated tankage data:

Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____
Grade: _____	No. Of Tanks: _____	Total Capacity: _____

3. Does the contractor's previous performance justify a new award? _____
_____
_____
_____

4. Unique local government regulations that constrain export product production? _____
_____
_____
_____

LEASED STORAGE TANKS

1. Tank history (previous products) in offered tanks? _____
_____
_____

2. Line history servicing offered tanks? _____
_____
_____

3. Does the facility have recirculation capabilities? _____
_____
_____

4. Additive injection on receipt? _____

Additive injection on issue? _____
Additive injection during re-circulation? _____

H. ADDITIONAL COMMENTS/NOTES/OBSERVATIONS: _____