

QUALITY ASSURANCE SURVEILLANCE PLAN

for

Tree Planting

I. Introduction. This Government's Quality Assurance Surveillance Plan (QASP) provides the procedure and guidelines that will be used in evaluating technical performance of the Contractor for tree planting in a performance-based statement of work as required by FAR 37.602-2. The Government's QASP is not part of the contract, but is provided to the Contractor solely as information. A copy of this plan is furnished to the Contractor in the solicitation package and with the contract so the Contractor is aware of the methods that the Government intends to use in evaluating performance on this contract and to address any concerns that the Contractor may have prior to initiating work. The QASP is subject to change by the Government during the contract performance period. The Government reserves the right to perform assessments more or less often than is outlined in this QASP.

Purpose of the QASP:

- o Define the role and responsibilities of participating Government officials;
- o Define the types of work to be performed with required end results;
- o Describe the evaluation methods that will be employed by the Government in assessing the Contractor's performance;
- o Provide copies of the performance assessment form(s) that the Government will use in documenting and evaluating the Contractor's performance; and
- o Describe the process of performance assessment documentation.

II. Roles and Responsibilities of Participating Government Officials.

A. Contracting Officers Representative (COR). The COR is designated by the Contracting Officer to administer the contract within the authority and limitations specified on FS-R4-6320-27 which is provided to the Contractor at the pre-work and at any time there is a change in COR, to the COR, and maintained in the contract files. Refer to FSH 6309.11.04.4, WO Amendment 6309.11-91-1 for a full description of COR responsibilities.

Tree planting requires on-going intensive contract administration due to the perishable nature of the product and the limited time period available for tree planting. It is essential that the COR assure that the tree care, planting in progress, plot inspections, schedule, and Contractor's Quality Control are consistent with the contract and the approved work plan. The COR will keep the Contracting Officer and Contractor informed of progress and contract compliance, and any non-compliance issues. The COR may utilize "Work Orders and Notice of Non-compliance" as tools to communicate in writing with the Contractor. The Contracting Officer will work with the Contractor and COR to correct non-compliance issues rapidly especially where tree survival is at risk.

The COR will maintain Daily Diaries on the project as the record of contract progress and compliance, records of tree issuance, and documentation of materials issued and received from the Contractor. These will include only facts concerning the contract, and will be complete and unbiased as they will be used by the Contracting Officer to make further decisions on contract issues. The COR will provide an evaluation of the Contractor's performance to the CO.

The COR designates and supervises the work of the inspectors.

B. Inspectors. The Government inspector(s) are designated by the COR to represent him/her in securing compliance of contract requirements. The Designation of Inspector (form R4-FS-6309-310) will be used to designate their inspector(s) and specifies the responsibilities. Refer to FSH 6309.11.04.4, WO Amendment 6309.11-91-1. The inspector(s) will monitor Contractor performance and inform the Contractor of contract

deviations. The inspector(s) will monitor planting in progress (digging trees, measuring scalps, calculating trees per acre planted), and conduct quality assurance plots. The inspectors will not direct the operations of the planting crew but rather keep in direct contact with the foreman stressing the requirements of Contractor quality control as well as protect the Government's interest by assuring tree care and planting quality are adequate.

A lead inspector may be designated by the COR when more than one inspector will be on site to act as the leader of the Government inspectors and avoid confusion in communications with the Contractor.

The inspector(s) will maintain Daily Diaries, issue notice of non-compliance to the Contractor when s/he fails to meet contract requirements particularly when survival is at risk, and keep the COR informed of all contract progress, and conformance problems. The inspector(s) will maintain records of trees and other Government equipment issued and returned, obtain tree orders, anticipate change orders, and inform the COR.

C. District Ranger, Forest Supervisor, Silviculturist and other District, Forest and Regional employees. The Forest Supervisor is responsible for the administration of the National Forest, and the District Ranger acts as an authorized representative. These and other employees will act as resource advisors to the COR and Contracting Officer but do not have contract authority. Their role is to provide advice on project implementation, which may be used for contract decisions.

III. Assessing the Contractors Performance

A. Schedule. Due to the perishable nature of the trees and the limited planting period, the Contractor's schedule is extremely important. The COR and inspector will monitor progress and if the Contractor is falling behind schedule, the COR may issue a Notice of Non-Compliance (or take other contract action) to ensure the agreed-to schedule is maintained.

B. Tree Planting. The following plan will be used by the Government to assure the Contractor is providing the quality promised and work meets performance standards. Surveillance will consist of visual observations of the entire operation and sample plots to determine compliance with the specifications. The plots will be located throughout the planting area to obtain a representative sample of the work. Each contract unit will be inspected separately and inspection results will not be averaged with those of other contract units. Units within a subitem will be combined for payment. The Contractor or his representative may observe plot procedures while they are underway.

1. Care of Trees. Due to the perishable nature of trees, care and protection of the seedlings is considered critical. The inspector and COR will observe the operations throughout the planting day to assure the Contractor is providing tree care and protection per the contract, and that the Contractor is complying with his/her Quality Control Plan. Trees that are handled in an unsatisfactory manner may be declared "wasted" trees. The Contractor will pay for wasted trees as a liquidated or actual damage, described in Section G. Deliberate wasting trees, such as stashing bundles or stuffing extra trees into holes, is specifically not acceptable. The COR will put the Contractor on notice of non-compliance and take corrective action consistent with the CO's direction and the Contractor's QCP.

The inspector will keep track of the number of trees requested, issued to the Contractor, and returned at the end of the day.

2. Planting Quality - In Progress. The inspector and COR will frequently observe tree planting in progress, dig trees to check underground planting quality, observe planting methods, put in occasional "informal plots," etc., to identify any planting problems and report them to the foreman to allow the problems to be corrected. The inspector and COR will not direct the operations of the crew, however, as this is the responsibility of the Contractor. The Government expects the foreman to inspect planting in progress and take corrective action on any planting problems prior to being identified by the inspector/COR consistent with the Contractor's Quality

Control Plan. The Contractor will be put on notice of non-compliance or further contract action taken for failure to conduct his/her own quality control while planting is in progress.

3. Planting Quality – Assurance Plots. The inspector will take representative sample plots of the planting unit to verify the Contractor's planting quality for above and below ground quality utilizing the standard plot procedure described in FSH 2409.17, 2.82.2. The Government's method should mirror the Contractor's plot method described in the Contractor's QCP and further agreed to, but be in different locations and generally different sample intensities. Any deviations must not affect inspection results. The Planting Inspection Sheet (R4-FS-2400-133a) will be used. Refer to instructions in the handbook and the instructions on the backside of the form. Artificial shade, and in some cases ADC, may be applied at the time of planting and be included in the planting inspection. If this is the case, it must be as reflected in Section C and carried throughout the contract requirements.

The (Government) inspector should put in enough plots to assure the Government's quality assurance plots represent planting quality (adequate to judge if the Contractor's inspection plot are within 5% of Governments). This may be a small sample (e.g. 0.2%) up to 1% although it generally should not exceed 0.5%, which is half of what the Contractor is required to do. The CO and COR should determine the sample size, which should be influenced by the real or anticipated problems associated with planting or Contractor quality control.

- a. Planting Quality Calculation. After all plots have been taken and recorded on a Unit, the planting quality will be computed using the formula on the backside of the Inspection form. Calculate the quality to at least thousandths (.000) and round the final percentage of quality to the nearest whole percent.
- b. The Government inspector or COR will monitor the Contractor's quality inspection plots on a frequent basis to assure the Contractor is providing inspection consistent with the Contractor's accepted Quality Control Plan (QCP). The Government inspector may observe the Contractor's plots in progress or check them after completion. The Contractor will be put on notice of non-compliance (or other contract action taken) for failure to conduct plot inspections as per his QCP. The Contractor's inspector is not permitted to modify plot deficiencies nor influence the planting quality by indicating to the planters of upcoming plot locations.

The Government inspector or COR will review all plot sheets and re-check calculations after receipt from the Contractor. (The COR may return the plot sheets if the Contractor fails to properly fill out the inspection sheet, for excessive math errors, failure to sign the form, etc). The Government inspector will compare the Contractor's plot results with the Government's results. The COR will inform the Contractor if the quality is acceptable after comparing the Government assurance plots with the Contractor's plots after the entire unit is planted. When they are within 5%, the Contractor will be informed that his/her quality control is acceptable for tree planting quality and pay will be calculated based on the Contractor's plot results. (refer to E.2.4 and G.3.1)

- c. When the inspector compares the Contractor's inspection to the Government's assurance plots prior to the unit being completed, it will only be considered an indication of the progress and not considered an acceptance of the Contractor's work. The Government does not need to reveal the results of their plots, but will notify the Contractor if it appears that the Contractor's inspection is greater than 5% from the Government's. Based on the Inspection of Services clause (attached as reference and included by reference in Section E) the Contractor should be notified as soon as it is apparent that there may be a problem so they can improve in their inspection process if it does not conform to the standards.

If at unit completion, the Contractor's results differ by greater than 5% from the Government's QA plots, payment will be based on the Government's plot results. (G.3.1.)

If the Contractor finds this objectionable, he may request a re-evaluation. The FS will then conduct a 2% sample and if the results confirm the Contractor's results (or within 5%), payment will be based on Contractor's results. However if the 2% sample indicates the Government results are correct (or greater than 5% from the Contractor's), then payment is based on Government 2% results and Contractor pays for the actual costs associated with the 2% sample. Refer to E.2.4.1.

- d. When the Contractor's work is below 93%, the COR may require the Contractor to rework the unit or portion of the unit where the deficiency occurred. Rework will only be required when the COR determines the deficiencies are correctable (e.g., poor scalping or shading) and/or if trees are available for additional planting to increase the tree quantity in the unit thereby potentially increasing planting quality. The Contractor will re-inspect this work and the Government will conduct similar surveillance as the original work, but different plot locations. When work cannot be corrected, or trees are not available, or at agreement with the Contractor, the Government may accept work with the deductions stated in Section G.
- e. Wasted trees will be determined by adding the wasted trees on each plot (sum of column 8). Note that if this amount is minor in nature the wasted tree charge can be waived (see Section G-Liquidated damages) unless the unit total of trees (column 7) exceed the unit total for maximum trees (column 6). In no case will a waiver be given if the total Planted Trees (column 6 of R-4 Inspection form) exceeds the Maximum Number Allowable Trees (column 7 of R-4 Inspection form) for any pay item. Wasted trees will be based on the plot results that are used for payment.
- f. **Tree Quantity:** On per thousand units of measure, the COR will determine the quantity by taking a series of "count" plots where trees planted and wasted are tallied using the Planting Inspection Sheet (do not worry about the quality of the trees planted; this is to determine the numbers of trees only). A 2-percent sample will generally be taken. The Contractor or Government's quality plots may be used for a portion of the 2-percent sample (e.g., 1-percent using quality plots, 1-percent with count plots). The Contractor is paid based on the trees on the plots using the following calculation up to the number of trees issued. In no case is the Contractor paid for quantities that exceed the number of trees issued. Large discrepancies between plot calculations and trees issued should be further investigated.

Total No. Trees	_	Total Wasted			
<u>Planted (Col. 7)</u>	<u>Trees (Col 8)</u>	X	Reciprocal of Plot Size	X	Acres = Number of Trees
Number of Plots					

C. Artificial Shade or ADC material installation. When artificial shade and ADC is inspected separate from planting (and separate unit price), the Government inspector shall observe the installation of shade tubes or ADC netting and will put in random plots for verifying quality percent. The plots will be located throughout the area to obtain a representative sample of the work. Each contract unit will be assessed separately and results will not be averaged with those of other contract units.

1. The Contractor shall inspect as per his/her QCP. The Government's inspector will assess whether the Contractor inspects consistent with his plan. The COR may issue a notice of non-compliance (or take other contract action) if the Contractor's quality plots are not within 5 percent of the Government's assurance plots. This is the same procedure as that described for B. Planting Quality above. In many cases, re-work will be an option to achieve required performance of 93%.

2. **Plot Procedure.** The Government will take representative sample plots of the treated unit sufficient in number to assess if the Contractor is performing the services required and the Contractor's inspection adequately reflects this quality. The Government's quality assurance plots should mirror the Contractor's methods; any deviations must not affect the plot results.
3. **Artificial Shade/ADC Quality Computations.** After all plots have been taken and recorded on a unit, the quality of work will be computed by the following formula:

$$\text{Quality \%} = \frac{\text{total number of satisfactorily netted or tubed trees}}{\text{total number of trees requiring netting or tubing}} \times 100$$

Calculate the quality to at least thousandths (.000) and round the final percentage of quality to the nearest whole percent.

D. Work Schedule. The work schedule will be monitored as previously described. When the Contractor does not complete work within the accepted time, the CO has several options that allows the Contractor to continue to work but s/he may be assessed the actual damages incurred by the Government for work performed after the performance period.

E. Contractor's Quality Inspection. As previously described the Contractor's Quality inspections are very critical to the project. Refer to the FAR 52.246 -4 *Inspection of Services* for the basis for acceptance or rejection of the Contractor's inspection and the assessment of Government costs when work is unacceptable.

F. Worksite and Campsite. The inspector and COR will periodically assess the campsite and daily monitor the worksite to assess if it is clean and meets the requirements set forth in the contract. The COR will require the Contractor to clean up the worksite or campsite or suspend operations if it is a safety hazard. Final payment will be withheld until the worksite is cleaned, including boxes or packing materials that was be left in the unit, and the campsite meets the camping permit requirements.

G. Safe Working Conditions. Safety should be discussed at the prework meeting. Emergency numbers and similar information needs to be shared with Contractor. The CO/COR should use "common sense" when dealing with safety on the planting site. When there are extreme conditions such as, windy weather where there is the potential for blowdown, the CO/COR should use their contract authority to reduce the safety risks. Example of actions to take include moving the planting to a safer unit, posting lookouts, dropping portions of a unit, suspending operations with contract time. The COR should use available resources to recognize the potential for winds or other unsafe conditions.

If the contractor brings a safety hazard to the attention of the COR, the COR/CO and Contractor must find resolution. Options for resolution include suspension with contract time, or moving to another area until the hazard (like in the case of wind) has ceased, or altering specifications to avoid the hazard (an example is modifying the contract to not work within a certain distance of snags), or mitigation such as posting a lookout.

When working in areas with high potential for blowdown, falling debris, or similar situations, the Government and Contractor shall gain a mutual understanding relative to the administration of the safety program during the prework meeting. If the Contractor fails to follow the safety plan, the CO/COR should issue a Notice of Non-compliance. Refer to Section H and FAR 52.236-13 Accident Prevention and Alternate I.

IV. Contractor Final Performance Assessment

A. Final Performance Assessment

The COR will document the Contractor's performance under this contract/task order. The COR will document his/her understanding of the contract requirements, what was actually completed, and the impact or consequences of what was not completed, and any recommendation for rework.

The COR will summarize the Contractor's performance in the following aspects:

- Quality of planting and related services (including Quality Control, quality percent, non-compliance issues and corrective action taken.)
- Cost Control
- Timeliness of Performance
- Business Relations
- Customer Satisfaction: Was the Contractor committed to customer satisfaction?
- Would you recommend the selection of this Contractor again (after contract expiration)? Why?

Utilize these ratings along with a short explanation.

- o Unsatisfactory = nonconformance issues jeopardize the achievement of contract requirements despite the use of Agency's resources.
- o Poor = overall compliance requires MAJOR agency resources to ensure achievement of contract requirements.
- o Fair = Overall compliance requires MINOR Agency resources to ensure achievement of contract requirements.
- o Good = Overall compliances does not impact achievement of contract requirements.
- o Excellent = There are no quality problems and Contractor goes beyond what is expected of contract to achieve services.

B. Analysis of Performance Assessment Results

The Contracting Officer will review each Performance Assessment prepared by the COR. When appropriate, the Contracting Officer may investigate the event further to determine if all the facts and circumstances surrounding the event are considered in the COR opinions outlined on the forms. The Contracting Officer will prepare the final Performance Assessment that will be entered into the Past Performance Database. Prior to entering information, the Contracting Officer will provide a copy of the final performance rating to the Contractor and allow time for the Contractor to provide rebuttal if desired.

QASP Attachments

Planting Inspection Sheet R4-FS-2400-133a (10/80)

Artificial Shade and/or ADC inspection forms *[not included- use local form.]*

Performance Requirements Summary

Sample Form for Calculating Liquidated Damages

FAR Clauses for Reference: Inspection of Service, Suspension of Work, Default, and Accident Prevention.

Sample Form for Calculating Liquidated Damages.

Instructions for determining and using Liquidated Damages in Tree Planting Contracts

The use of a liquidated damage clause in a contract requires that although the exact damages are difficult to calculate, estimates of the damages that may be suffered by the Government must be calculated. This estimate must be as accurate as possible at the time the estimate is prepared. Although the estimate may contain some average costs, it must take into consideration anything about the particular contract that makes it different from average figures. This must be done for each contract.

The worksheet for liquidated damages provides you with guidelines necessary to do the calculation of the damages expected to be suffered by the Government resulting from unacceptable planting. Although the worksheet will help with consistency in the factors included in the calculations of liquidated damages, it is not intended to be the only document used in calculating the liquidated damage. All of the backup data used to calculate the liquidated damages must be in the contract folder.

Liquidated Damage Calculation (per acre)

1. Cost of Replanting	\$ <u>200</u>
2. Cost of Trees	\$ <u>213</u>
3. Cost of seed (if not included in tree cost)	\$ <u>3</u>
4. Cost of site preparation (if additional site preparation is anticipated)	\$ <u>0</u>
5. Cost of preparation of new contract	\$ <u>5</u>
6. Cost of administering new contract	\$ <u>20</u>
7. Cost of lost tree growth (Difficult to determine. Enter -0- if no significant loss is anticipated due to prompt replanting)	\$ <u>0</u>
TOTAL	\$ <u>441</u> / acre