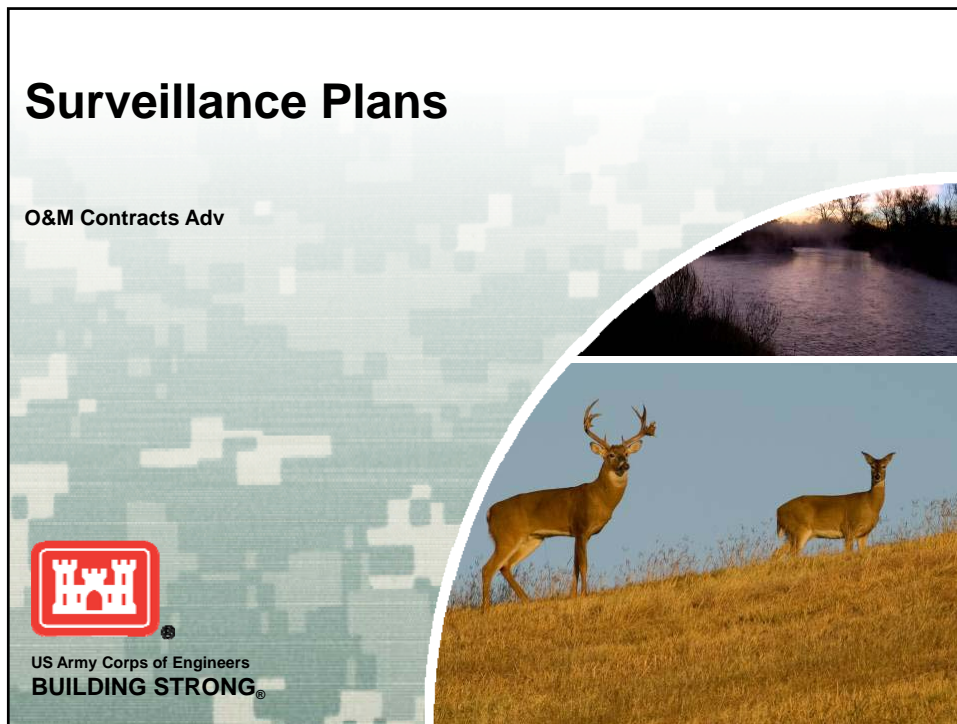


# Section 11: Surveillance Plans



## Objectives

- Utilizing instruction and the student workbook, at the completion of this block, each participant will be able to correctly:
  - ▶ Identify five methods of inspection available for use on service contracts.
  - ▶ Define acceptable quality levels in service contracts.



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# Section 11: Surveillance Plans

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## FAR Part 46 Quality Assurance Section

- 46.102 Policy
- 46.103 Contracting Office Responsibilities
- 46.104 Contract Administration Office Responsibilities
- 46.105 Contractor Responsibilities



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## FAR Part 46 Quality Assurance Section

- 46.102 Policy
  - ▶ Protect Gov't Interests
  - ▶ Inspect Contractor's Work (QA)
  - ▶ Reject Non-Conforming Work/Items
  - ▶ Meet Contract Requirements
  - ▶ All Contracts Inspected



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# Section 11: Surveillance Plans



## FAR Part 46 Quality Assurance Section

- 46.103 Contracting Office Responsibilities
  - ▶ Receive specifications for inspection, testing, and other quality requirements
  - ▶ Including proper requirements for the contractor's quality control
  - ▶ Issue instructions to Contract Administration Office and act on recommendations from same
  - ▶ Verify fulfillment of quality requirements if administration is retained



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## FAR Part 46 Quality Assurance Section

- 46.104 Contract Administration Office Responsibilities
  - ▶ Establish Procedures
  - ▶ Perform Procedures
  - ▶ Maintain Records
  - ▶ Implement instructions
  - ▶ Report Deficiencies
  - ▶ Recommend Changes to Improve Efficiency



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# Section 11: Surveillance Plans



## FAR Part 46 Quality Assurance Section

- 46.105 Contractor Responsibilities
  - ▶ Contractor Quality Control (CQC)
  - ▶ Control Quality of Supplies and Services
  - ▶ Ensure that Subcontractors have Acceptable CQC
  - ▶ Maintain Substantiating Evidence (CQC Report)
  - ▶ Inspections and Tests Required by the Contract



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## FAR Subpart 46.4 Government Contract Quality Assurance

- Quality Assurance required to determine that supplies or services conform to contract requirements
- Quality Assurance Surveillance Plans
  - ▶ Specify all work requiring surveillance
  - ▶ Specify method of surveillance
  - ▶ Included in IFB for information purposes; not a part of the contract
  - ▶ Allows flexibility in methods of inspection



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# Section 11: Surveillance Plans

## Other Reasons for QASP's

1. Outline corrective procedures to take against a contractor for poor performance.
2. Provides a means where the KO and the COR can evaluate the performance of government inspectors.
3. Provides evidence of the amount of inspection effort (manhours) required to administer a contract.



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## Additional QASP Resources

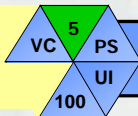
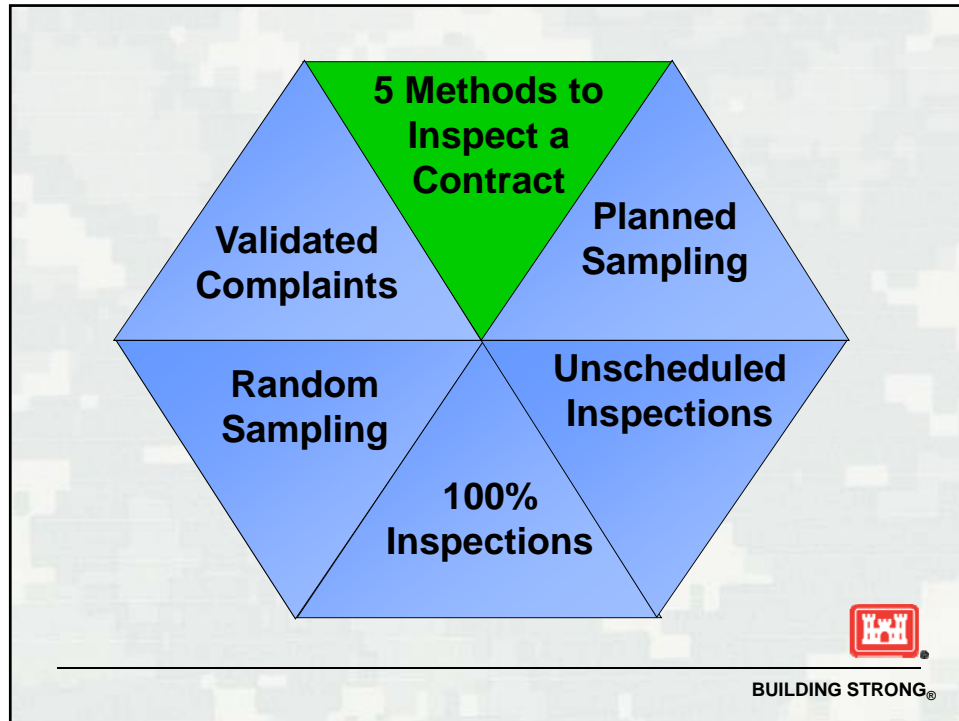
- CLC 013 – Performance Based Services Acquisition
  - ▶ Available online from Defense Acquisition University
  - ▶ <http://learn.dau.mil/html/clc/Register.jsp>
- AR 70-13, Management and Oversight of Service Acquisitions, 30 Jul 10
- *DA Pamphlet 715-15, Service Contract Administration*



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# Section 11: Surveillance Plans



## Random Sampling

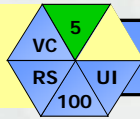
- Used for large homogeneous populations when 100% inspection is not feasible
- Inspect part, but not all of items
- Based on statistical theory
- Not affected by government bias
- Estimates the contractor's overall level of performance
- Contractor unable to second guess

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# Section 11: Surveillance Plans

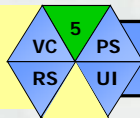


## Planned Sampling

- Similar to Random Sampling
- Subjective
- May be used to avoid excessive traveling time for the QA Inspector.
- Cannot Determine Overall Performance



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## 100% Inspection

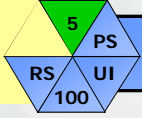
- Inspect Everything
- Used for
  - Critical Items
  - Items of Great Importance
  - Items that Occur Infrequently
  - Items Expensive to Perform
- Very Expensive Method of Inspection



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# Section 11: Surveillance Plans

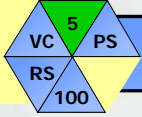


## Validated Complaints

- Customer Based
- Used as a Supplement Only




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## Unscheduled Inspections

- Impromptu
- Similar to Planned Sampling
- Bias

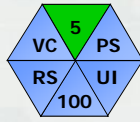


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## Section 11: Surveillance Plans

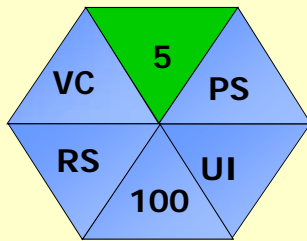


### **Choose the Best Method for Each Bid Item in a Contract**

Based on:

- Population Size - Large or Small
- Relative Importance
- QA Evaluations Resources
- Travel Considerations
- Continuous Requirements

**The Government has the right to change or modify inspection methods at its discretion.**



**Using these Inspection Methods.....**

### **The Quality Assurance Surveillance Plan (QASP)**

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# Section 11: Surveillance Plans

## QASP's Based on:

### Acceptable Quality Level (AQL)

- Recognizes that perfection is near impossible or cost prohibitive for some contract items.
- Accepts that a small amount of deviation from specifications can be tolerated (Acceptable).
- We determine the amount of deviation we will tolerate with a predetermined value selected by the Government and known by the Contractor (Quality Level).



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QASP

## Sampling Guide

For each bid item to be inspected:

- Service Requirement
- Method of QA
- AQL
- Lot Size, Sampling Size, Reject Level
- Sampling Procedures
- Inspection Procedures
- Performance Criteria
- Estimated Man Hours



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# Section 11: Surveillance Plans

**QASP**

## Performance Requirements Summary DA 5473-R

**A consolidation of all the sampling guides for all bid items**

**Easy to read summary explaining all work to be done and how it will be inspected.**

**It is a part of the IFB but not the contract.**



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**QASP**

## Performance Requirements Summary

### PERFORMANCE REQUIREMENTS SUMMARY

For use of this form, see DA PAM 715-15; the proponent agency is DCSLOG.

REQUIRED SERVICE	PARAGRAPH NUMBER	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION	METHOD OF SURVEILLANCE
SCHEDULE I, ALL CLEANING SERVICES AT ALL FOUR LAKES	SECTION C, PART 6, PARA. 6.1 THRU 6.17	ALL CLEANING SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS WITHIN THE TIME SPECIFIED.	"AQL 4.0" LOT SIZE IS EQUAL TO THE NUMBER OF CLEANINGS PER FACILITY PERFORMED MONTHLY.	RANDOM SAMPLING
SCHEDULE II, TEMPORARY TOILET FACILITIES AT ALL FOUR LAKES	SECTION C, PART 7, PARA. 7.1 THRU 7.5	TEMPORARY TOILET FACILITY SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS WITHIN THE TIME SPECIFIED.	REPERFORMANCE OR DEDUCTION.	100% INSPECTION
SCHEDULE III, REFUSE COLLECTION AND DISPOSAL AT ALL FOUR LAKES	SECTION C, PART 8, PARA. 8.1 THRU 8.19	REFUSE DISPOSAL SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS WITHIN TIME SPECIFIED.	"AQL 4.0" LOT SIZE IS EQUAL TO THE NUMBER OF SERVICES PER UNIT PERFORMED MONTHLY	RANDOM SAMPLING



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## Section 11: Surveillance Plans

### Composition of a Typical QA Surveillance Plan (QASP)

- AQL Tables
- Definitions
- Performance Requirements Summary
- Method of Payment Analysis
- Sample Forms and Other Appendices



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#### QASP

### Acceptable Quality Level (AQL) Tables

- For evaluation by random/planned sampling
- AQL's are stated in percentages (i.e., 0.65, 1.0, 1.5 ... 15)
- Used by the Government to distinguish between satisfactory and unsatisfactory performance
- Inspection Procedures Can be Normal, Reduced or Tightened.



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# Section 11: Surveillance Plans

## QASP

## Definitions

- **Lot Size** - Total number of required services of each bid item per inspection period from which a sample is to be drawn.
- **Inspection Level** - Determines the relationship between the lot size and the sample size.
- **Code Letter** - Designation used to identify different sample size categories.
- **Sample Size** - Number of units to be inspected in each lot per inspection period.
- **AQL Percentage** - Percentage of error allowed the Contractor under the Random and Planned Sampling Method.
- **Reject Level** - If the observed total number of defects per inspection period is equal to or greater than the reject level, the work will be considered unsatisfactory.



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MIL-STD-105E

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## AQL Tables

TABLE I - Sample Size code letters

### 1. Lot or Population Size

Lot or batch size	Special inspection levels				General inspection levels		
	S-1	S-2	S-3	S-4	I	II	III
2 To 8	A	A	A	A	A	A	A
9 To 15	A	A	A	A	A	B	B
16 To 25	A	A	B	B	B	C	C
26 To 50	A	B	B	C	C	D	E
51 To 90	B	B	C	D	D	F	G
91 To 150	B	B	C	D	D	F	G
151 To 280	B	C	D	E	E	G	H
281 To 500	B	C	D	E	F	H	J
501 To 1200	C	C	E	F	G	J	H
1201 To 3200	C	D	E	G	H	K	L
3201 To 10000	C	D	F	G	J	L	M
10001 To 35000	C	D	F	H	K	M	N
35001 To 150000	D	E	G	J	L	N	P
150001 To 500000	D	E	G	J	M	P	Q
500000 And Over	D	E	H	K	N	Q	R

### 2. Inspection Level

### 3. Code Letter

CODE LETTERS



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# Section 11: Surveillance Plans

# AQL Tables

MIL-STD-105E

TABLE II-A – Single sampling plans for normal inspection (Master table)

See 4.9.3. and 4.9.4

		Acceptable Quality Levels (Normal Inspection)																										
Sample size Code Letters	Sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	
A	2																											
B	3																											
C	5																											
D	8																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
R	2000																											

1. Code Letter

2. Sample Size

3. AQL Percentage

4. Reject Level

= Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspections

↑ = Use first sampling plan above arrow.

Ac = Acceptance number

Re = Rejection number

SINGLE  
NORMAL

		Acceptable Quality Level (AQL)									
		Code Letter	Sample Size	1.0 (Re)	1.5 (Re)	2.5 (Re)	4.0 (Re)	6.5 (Re)	10 (Re)	15 (Re)	25 (Re)
2 to 8	A	2									
9 to 15	B	3									
16 to 25	C	5									
26 to 50	D	8									
51 to 80	E	13									
91 to 150	F	20									
151 to 280	G	32									
281 to 500	H	50									
501 to 1,200	J	80									
1,201 to 3,200	K	125									
3,201 to 10,000	L	200									
10,001 to 35,000	M	315									
35,001 to 150,000	N	500									
150,001 to 500,000	P	800									
500,001 to over	Q	1250									

NOTE TO WRITER: TABLE 1-A above is developed from MIL-STD-105D using TABLE 1 Sample size code letters and TABLE II-A for single sampling plans.  
 \* When sample sizes equal, or exceeds the population, or lot sizes, the AQL should consider a different surveillance method.  
 / = use first sampling plan below arrow  
 \ = use first sampling plan above arrow

DNV-1000-10000 J58

- Alternate AQL Table
  - General Level II
  - Single Normal



# Section 11: Surveillance Plans

**OUTPUT:**  
**Daily**  
**Inspection**  
**Sheet**

CANYON LAKE  
RANDOM INSPECTION WORKSHEET

DATE OF INSPECTION: SUNDAY - 19 DEC 99  
CREW LEADER AND TIME: A 9:00

INSPECTION LOCATION: OVERLOOK PARK  
TYPE OF FACILITY: RESTROOM  
NUMBER OF UNIT: 1

NAME OF INSPECTOR: *[Signature]*

☒ ACCEPTED (OVER 84 POINTS)    ☐ EXCUSED (CLOSED/OCCUPIED)  
☐ REJECTED (UNDER 85 POINTS)    ☐ OFF-SCHEDULE (TIME: \_\_\_\_\_)

SPECIFIC ITEM	POINT VALUE	POINTS GIVEN	REMARKS
GROUNDS (DETAIL)	8	7	<i>Small pieces filled</i>
GROUNDS (SPECIFIC AREA)	6	8	
VAULT CONDITION	6	6	
COMMDES	12	12	
DEODORANT CAGE	3	8	<i>NO DEO. CAGE</i>
FLOOR	8	8	
HAND DRYER/MIRROR	3	3	
LIGHT BULB/COVER	4	4	
OBSTRUCTIONS	5	5	
PIPE SPACE	4	4	
SHOWER	10	10	
SINK	4	4	
TISSUE PAPER	7	7	
URINALS	8	8	
WALLS/CEILINGS	10	10	
<b>TOTAL POINT VALUE</b>	<b>100</b>	<b>93</b>	

**Inspection of a Restroom**

**93 out of 100=Accept**

## To Determine Satisfactory Contract Performance:

1. Count the Number of Rejects per Item per month
2. Check Acceptable Level of Rejects from AQL Table
3. Make Full or Partial Payment



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# Section 11: Surveillance Plans


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**QASP**

**Method of Payment Analysis**

Services will be received and payment will be authorized:

- Full Payment
- Redo Work & Pay Re-inspection Fees
- Reduction in Payment
- Reduction & Payment of Re-inspection Fees

  
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**QASP**

**Method of Payment Analysis**

**Determining Amount of Deductions:**


Payment Analysis examples will be shown for:


- Random Sampling Method
- Planned Sampling Method
- 100% Sampling methods

  
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## Section 11: Surveillance Plans

QASP	Method of Payment Analysis	
	Random Sampling Method	
	Deduction Example	
	AQL = 4.0 Single Normal	
	1. Population = 455 x 20 = 9,100 PCU's	
	2. Code Letter = "L"	
	3. Reject Level = 15 units	
	4. # of Insps. = 200 inspections	
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QASP	Method of Payment Analysis	
	Random Sampling Method	
	1. Population = 455 x 20 = 9,100 PCU's	
	2. Code Letter = 'L'	
	3. Reject Level = 15 units	
	4. # of Insps. = 200 inspections	
	5. 10 inspections defective	
	NO DEDUCTIONS	
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# Section 11: Surveillance Plans

QASP		
	Method of Payment Analysis	
	Random Sampling Method	
	1. Population = 455 x 20 = 9,100 PCU's	
	2. Code Letter = 'L'	AQL = 4.0
	3. Reject Level = 15 units	Single Normal
	4. # of Insp. = 200 inspections	
	6. 20 inspections defective	
	Deduction= 20/200 = 0.1	
	0.1 x \$11,938.00 = \$1,193.80	
		

QASP		
	Method of Payment Analysis	
	Random Sampling Method	AQL = 4.0
		Normal
	Each Lake is a separate population	
	Belton Lake - 5 rejects	8=Reject Level-OK
	Stillhouse - 0 rejects	6=Reject Level-OK
	Geog'town - 1 reject	6=Reject Level-OK
	Granger - 4 rejects	4=Reject Level-NO



## Section 11: Surveillance Plans

<b>QASP</b>	<b>Method of Payment Analysis</b>
	<b>Random Sampling Method</b>
	Granger Lake - 4 units/32 units in sample size = $1/8 = 0.125$
	$.125 \times \$1,832 = \$229.00$
	<b>\$229 Total Deduction from Contract Payment</b>
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<b>QASP</b>	<b>Method of Payment Analysis</b>
	<b>100% Inspection &amp; Planned Method</b>
<b>Contractor has responsibility for QC</b>	
If Gov't QA finds work not done, we may:	
1. Have Contractor complete work and deduct a re-inspection fee from payment,	
2. Have work done by alternate source and deduct that charge from payment, <b>OR</b>	
3. Terminate the contract for default if repetitive. (See contract clause 41)	



# Section 11: Surveillance Plans

QASP


Method of Payment Analysis

100% Inspection & Planned Method

Example of deductions for re-inspections:

Example: Re-inspection of Facility Mowing is required on 15 sites in Temple Park and on 2 sites in Westcliff Park. The re-inspection deduction is made as follows:  $\$40.00 \times \text{Number of Re-inspections} = \text{Deduction } \$40.00 \times 2 = \$80.00$

Re-inspection fee of \$40.00 per park is stated in QASP

  
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QASP

Method of Payment Analysis

100% Inspection & Planned Method

Deductions for Work not preformed:


Amount of deduction = Cost of having work performed by an alternate method

  
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# Section 11: Surveillance Plans

<b>QASP</b>	
<b>Forms - <u>Contract Discrepancy Report (CDR)</u></b>	
<b>CONTRACT DISCREPANCY REPORT</b> <small>For use of this form, See DA PAM 715-15; the proponent agency is DCSLOG.</small>	
1. CONTRACT NUMBER	
2. TO: (Contractor and Manager Name)	3. FROM: (Name of QAE)
DATES	
PREPARED	ORAL NOTIFICATION
RETURNED BY CONTRACTOR	ACTION COMPLETE
4. DISCREPANCY OR PROBLEM(S)	
<b>Notification of unsatisfactory performance by exceeding the reject level shall be in the form of a Contract Discrepancy Report.</b>	
5. SIGNATURE OF CONTRACTING OFFICER OR AUTHORIZED REPRESENTATIVE	
6. TO: (Contractor)	
<b>CDR must be signed by Contractor</b>	
8. CONTRACTOR RESPONSE AS TO CAUSE, CORRECTIVE ACTION AND ACTIONS TO PREVENT RECURRENCE. ATTACH CONTINUATION SHEET IF NECESSARY. (Cite applicable Q.A. program procedures or new A.W. procedures.)	

<b>QASP</b>
<b>Appendices</b>
<b>Sample Forms</b>
<b>Tabulations of Park Areas and Facilities</b>
<b>Maps of Cleaning Areas</b>
<b>Frequency Tables</b>
<b><u>Typical Drawings</u></b>

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# Section 11: Surveillance Plans

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## Preparing the Surveillance Plan

### Select Type of Inspections

#### 1. Select the Type of Inspections Required for Each Work Item:

- Random Sampling
- Planned Sampling
- 100% Inspection
- Validated Complaints
- Unscheduled Inspection



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## Preparing the Surveillance Plan

### Select Type of Inspections

### Select the AQL

#### 2. Select the AQL for Each Item to be Inspected:

- Normal
- Tightened
- Reduced
- Special



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# Section 11: Surveillance Plans

## Preparing the Surveillance Plan

**Select Type of Inspections**

**Select the AQL**

**Sampling Guide for Each Item**

### 3. Prepare a Sampling Guide for Each Item to be Inspected:

- Service Requirement
- Method of QA
- AQL
- Lot Size
- Sampling Size
- Reject Level
- Sampling Procedures
- Inspection Procedures
- Performance Criteria
- Estimated Man Hours



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## Preparing the Surveillance Plan

**Select Type of Inspections**

**Select the AQL**

**Sampling Guide for Each Item**

**Performance Requirements Summary**

### 4. Prepare a Performance Requirements Summary (DA Form 5473-R) lists:

- Service to be Done
- Contract Paragraph #
- Standard to be Met
- Deviation Allowed
- Method of Surveillance




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# Section 11: Surveillance Plans

**Preparing the Surveillance Plan**


<b>Select Type of Inspections</b>	<b>5. Write the Plan</b> <ul style="list-style-type: none"><li>• Opening Statement</li><li>• AQL Tables</li><li>• Definitions</li><li>• Performance Requirements Summary</li><li>• Method of Payment Analysis</li><li>• Appendices</li></ul>
<b>Select the AQL</b>	
<b>Sampling Guide for Each Item</b>	
<b>Performance Requirements Summary</b>	
<b>Write the Plan</b>	

  
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**Plans are only good if they are properly executed.....**

**A surveillance plan and adequately trained quality assurance people should be in place prior to the start of a contract...including**

- Inspectors
- Administrative Specialists
- COR's

  
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# Section 11: Surveillance Plans

## FAR Part 46 Quality Assurance

Agencies shall **develop quality surveillance plans** when acquiring services (see 46.103 and 46.401) **QASP in place**

These plans shall recognize the responsibility of the contractor (see 46.405) to ensure the **Contractor does QC**

quality control obligation. **Measurable Criteria**  
**measurable inspection and acceptance criteria**

corresponding to the quality **Performance, not methods**

contained in the statement of work. Plans shall focus on the **level of performance** required by the statement of work, **rather than the methodology** used by the contractor to achieve that level of performance. [FAC 97-1, 62 FR 44802, 8/22/97, effective 10/21/97] **F.A.R. Check**



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# Section 11: Surveillance Plans

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1. What are the advantages of random sampling?
2. What are the advantages of using a written surveillance plan?
3. When using the payment analysis method of inspection what documents should you prepare to go with the I.F.B.?
4. Why should you use a predetermined inspection schedule?
5. What is an acceptable quality level?



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