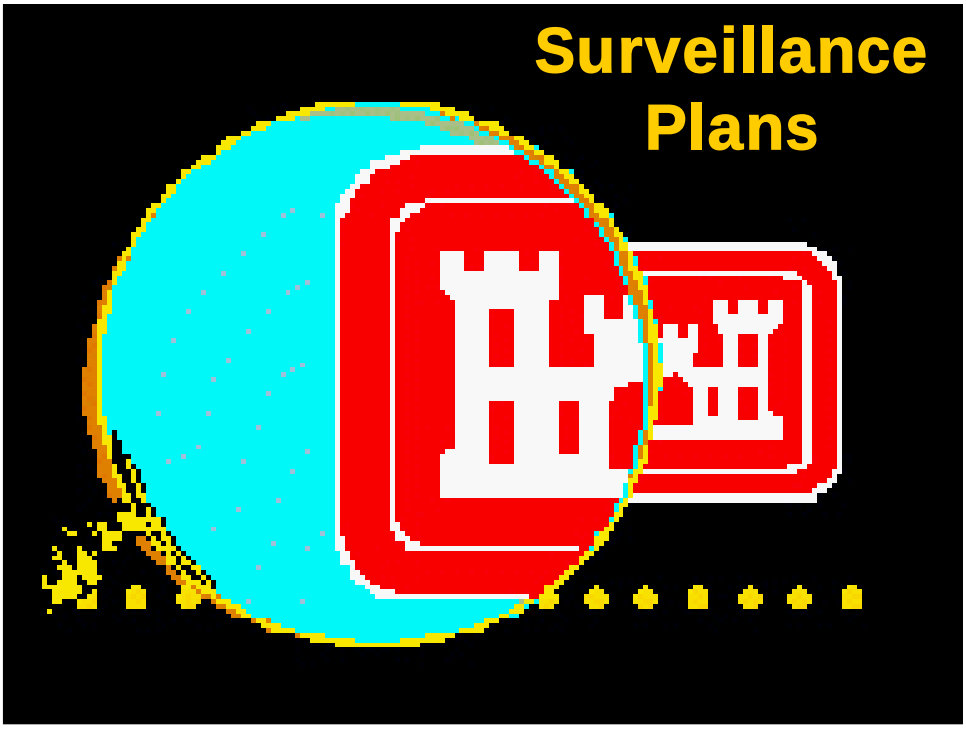
Surveillance Plans



Objectives:

Given student notes, handouts, and workbook, at the completion of this block of instruction, 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.**

Why Inspect Contracts?

It's Policy

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

Quality Management of Contracts

Who is Responsible????

The Contract Administration Office

OR **The Contractor???**

Answer: BOTH!

Quality Management of Contracts

Who is Responsible????

The Contract Administration Office

- Establish Procedures
- Perform Procedures
- Maintain Records
- Report Deficiencies
- Recommend Changes to Improve Efficiency

Quality Management of Contracts

Who is Responsible????

The Contractor:

- Contractor Quality Control (CQC)
- Control Quality of Supplies and Services
- Ensure that Subcontractors have Acceptable CQC
- Maintain Substantiating Evidence (CQC Report)

FAR 37.602-2

Quality Assurance Section

Service Contracts <u>Require:</u>

- **<u>Quality Assurance Surveillance Plans</u> must be developed.**
- **Must recognize contractor's responsibility for Quality control.**
- **Must have <u>measurable</u> inspection and acceptance criteria based on level of <u>performance</u> rather than methodology used by contractor.**

The Quality Assurance Surveillance Plan (QASP)

Used to assure the work specified under the contract is done satisfactory.

This plan is included in an IFB for information purposes only and will not be made part of any resulting contract.

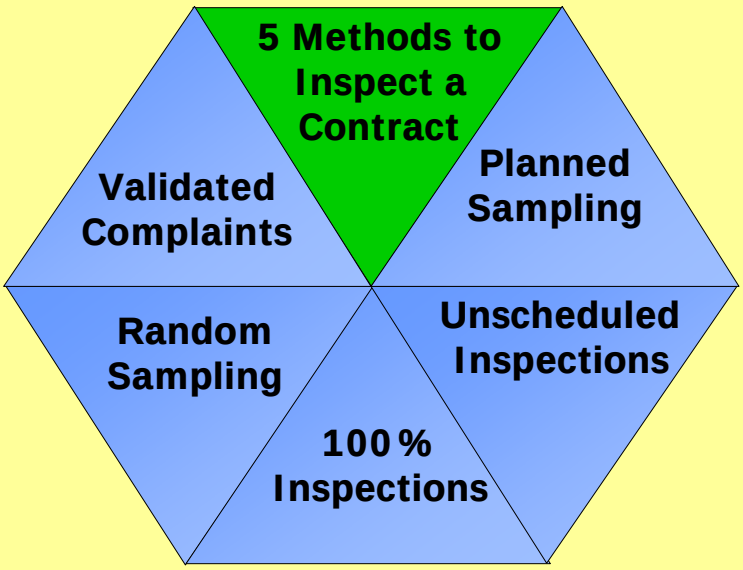
Allows us Flexibility in the methods of inspection.

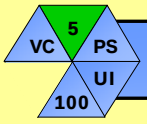
Other Reasons for QASP's

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.

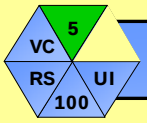
3. Provides evidence of the amount of inspection effort (manhours) required to administer a contract.





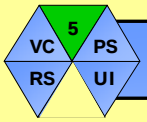
Random Sampling

- 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
- <u>Contractor unable to second guess</u>



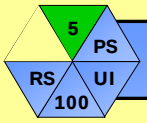
Planned Sampling

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



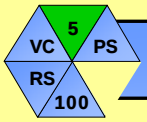
100% Inspection

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



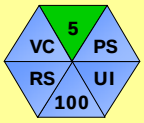
Validated Complaints

- **Customer Based**
- **<u>Uses as a Supplement Only</u>**



Unscheduled Inspections

- **Impromptu**
- **Similar to Planned Sampling**
- **<u>Bias</u>**

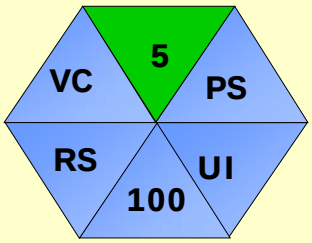


Choose the Best Method for <u>Each Bid Item in a Contract</u>

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)

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).**

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**

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.

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

- **Required Service to be Done**
- **Corresponding Contract Paragraph Number**
- **Standard to be Met**
- **Maximum Allowable Degree of Deviation**
- **Method of Surveillance**

Composition of a Typical QA Surveillance Plan (QASP)

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

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
- Acceptable Level Can be Normal, Reduced or Tightened.

QASP

Definitions

Best Described using the AQL Tables

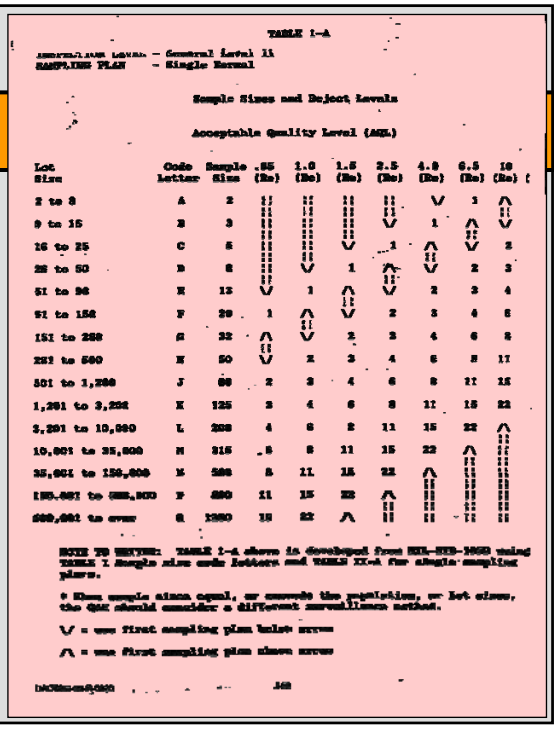


TABLE I-A

INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal

Sample Sizes and Reject Levels

Acceptable Quality Level (AQL)

Lot Size	Code Letter	Sample Size	.65 (Re)	1.0 (Re)	1.5 (Re)	2.5 (Re)	4.0 (Re)	6.5 (Re)	10 (Re)
2 to 8	A	2	⇓	⇓	⇓	⇓	⇓	1	⇑
9 to 15	B	3	⇓	⇓	⇓	⇓	1	⇑	⇓
16 to 25	C	5	⇓	⇓	⇓	1	⇑	⇓	2
26 to 50	D	8	⇓	⇓	1	⇑	⇓	2	3
51 to 90	E	13	⇓	1	⇑	⇓	2	3	4
91 to 150	F	20	1	⇑	⇓	2	3	4	6
151 to 280	G	32	⇑	⇓	2	3	4	6	8
281 to 500	H	50	⇓	2	3	4	6	8	11
501 to 1,200	J	80	2	3	4	6	8	11	15
1,201 to 3,200	K	125	3	4	6	8	11	15	22
3,201 to 10,000	L	200	4	6	8	11	15	22	⇑
10,001 to 35,000	M	315	6	8	11	15	22	⇑	⇓
35,001 to 150,000	N	500	8	11	15	22	⇑	⇓	⇓
150,001 to 500,000	P	800	11	15	22	⇑	⇓	⇓	⇓
500,001 to over	Q	1250	15	22	⇑	⇓	⇓	⇓	⇓

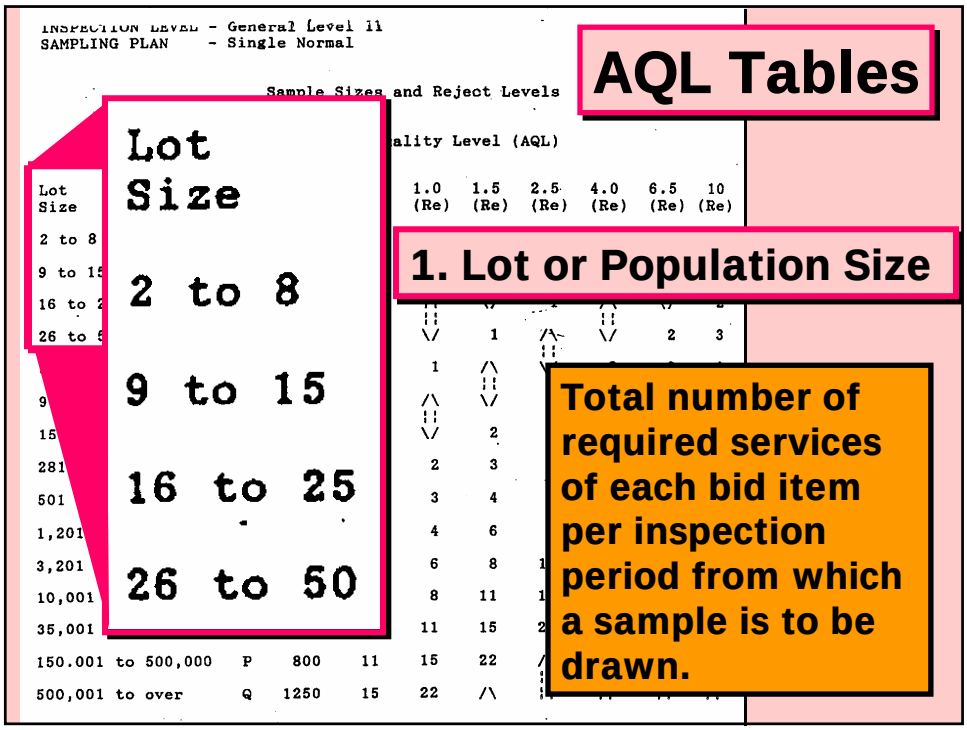
NOTE TO WRITER: TABLE I-A above is developed from MIL-STD-1916 using TABLE I Sample size code letters and TABLE II-A for single sampling plans.

* When sample sizes equal, or exceed the population, or lot size, the QAP should consider a different surveillance method.

⇓ = use first sampling plan below arrow

⇑ = use first sampling plan above arrow

AQL Tables



INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal

Sample Sizes and Reject Levels

ality Level (AQL)

Lot Size			1.0 (Re)	1.5 (Re)	2.5 (Re)	4.0 (Re)	6.5 (Re)	10 (Re)
2 to 8								
9 to 15								
16 to 25								
26 to 50								
51								
91								
151								
281								
501								
1,201								
3,201								
10,001								
35,001								
150.001 to 500,000	P	800	11	15	22	/\		
500,001 to over	Q	1250	15	22	/\			

Lot Size

2 to 8

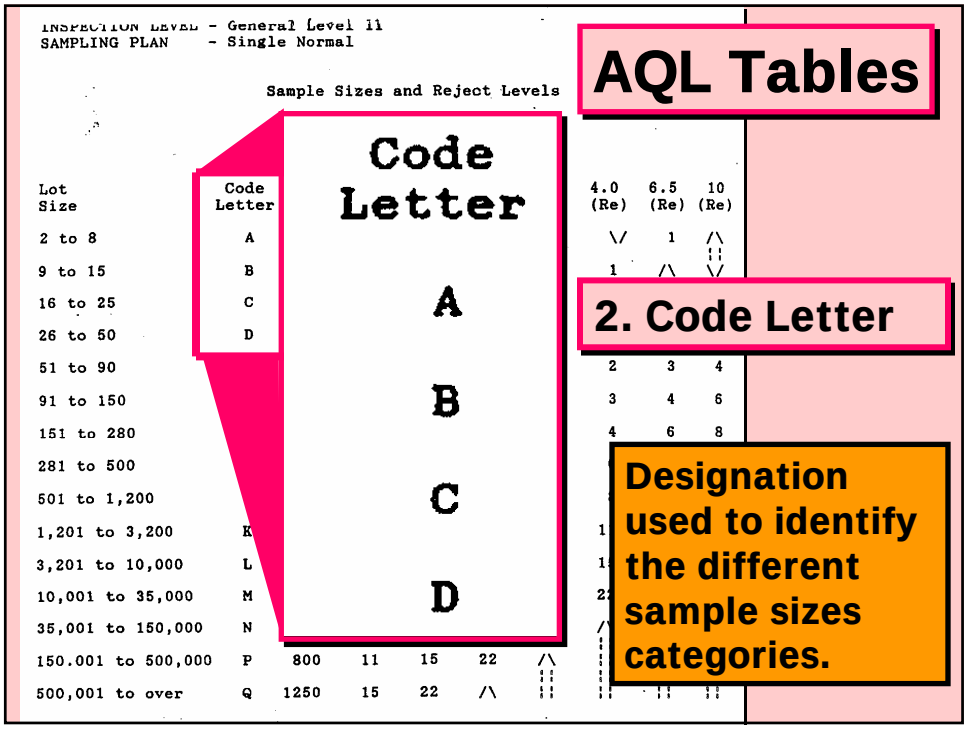
9 to 15

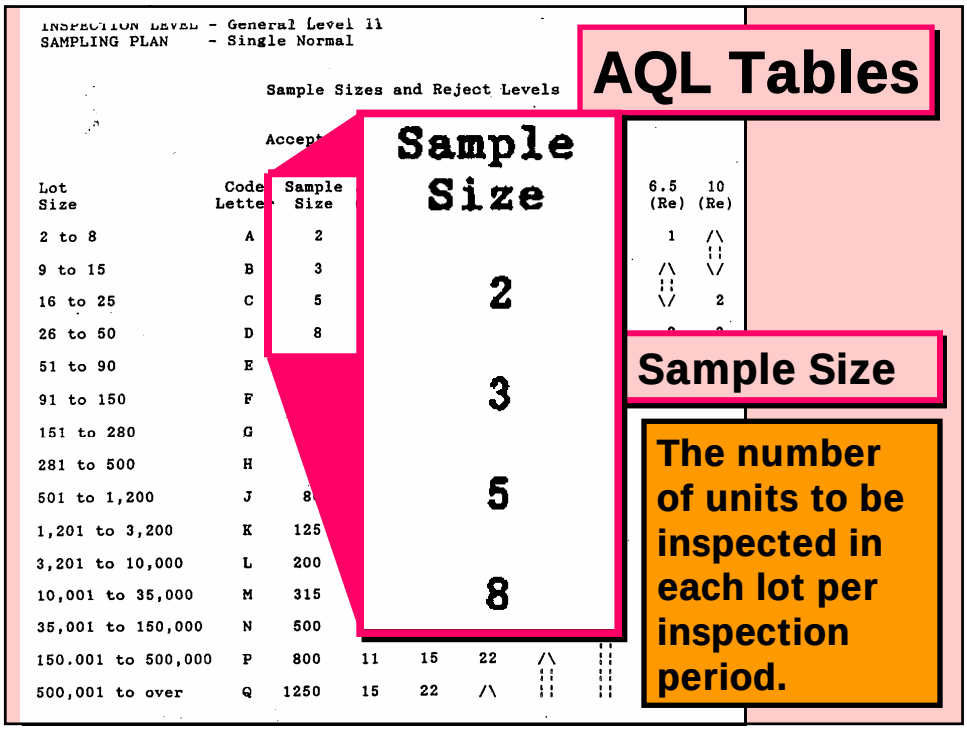
16 to 25

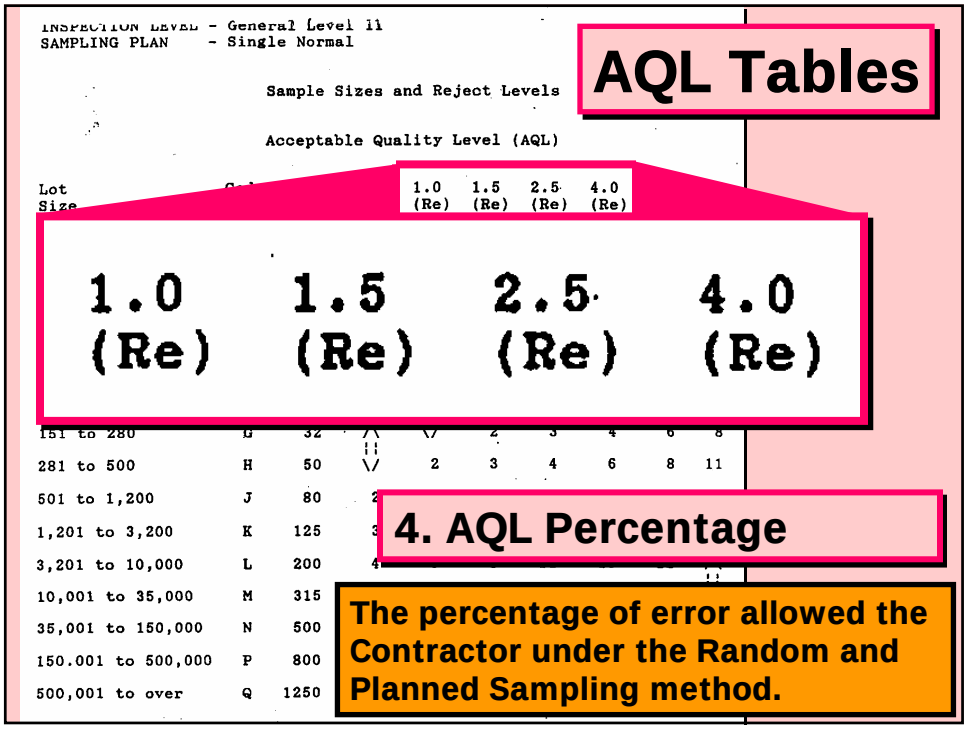
26 to 50

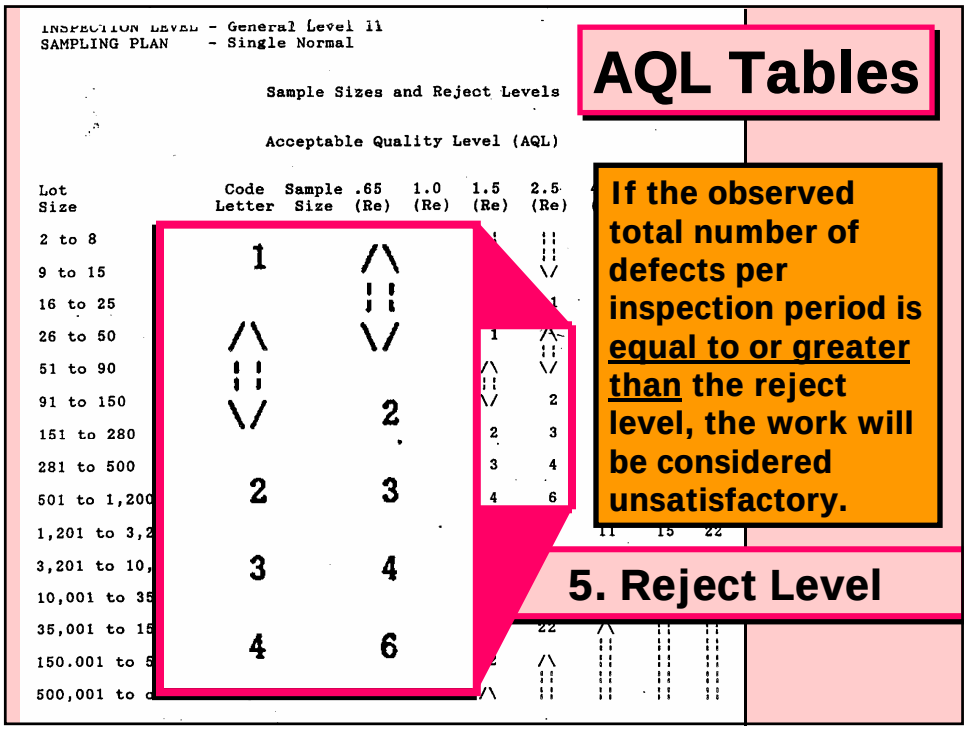
1. Lot or Population Size

Total number of required services of each bid item per inspection period from which a sample is to be drawn.


INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal
Sample Sizes and Reject Levels
Lot Size
Code Letter
Code Letter
A
B
C
D
4.0 (Re)
6.5 (Re)
10 (Re)
2 to 8 A
9 to 15 B
16 to 25 C
26 to 50 D
51 to 90
91 to 150
151 to 280
281 to 500
501 to 1,200
1,201 to 3,200 K
3,201 to 10,000 L
10,001 to 35,000 M
35,001 to 150,000 N
150.001 to 500,000 P 800 11 15 22
500,001 to over Q 1250 15 22
AQL Tables
2. Code Letter
Designation used to identify the different sample sizes categories.


INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal
Sample Sizes and Reject Levels
Lot Size
Code Letter
Sample Size
Sample Size
2
3
5
8
6.5 (Re)
10 (Re)
2 to 8 A 2
9 to 15 B 3
16 to 25 C 5
26 to 50 D 8
51 to 90 E
91 to 150 F
151 to 280 G
281 to 500 H
501 to 1,200 J
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 11 15 22
500,001 to over Q 1250 15 22
AQL Tables
Sample Size
The number of units to be inspected in each lot per inspection period.


INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal
Sample Sizes and Reject Levels
Acceptable Quality Level (AQL)
Lot Size
1.0 (Re) 1.5 (Re) 2.5 (Re) 4.0 (Re)
1.0 (Re) 1.5 (Re) 2.5 (Re) 4.0 (Re)
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
AQL Tables
4. AQL Percentage
The percentage of error allowed the Contractor under the Random and Planned Sampling method.


INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal
Sample Sizes and Reject Levels
Acceptable Quality Level (AQL)
Lot Size
Code Letter
Sample Size
.65 (Re)
1.0 (Re)
1.5 (Re)
2.5 (Re)
2 to 8
9 to 15
16 to 25
26 to 50
51 to 90
91 to 150
151 to 280
281 to 500
501 to 1,200
1,201 to 3,2
3,201 to 10,
10,001 to 35
35,001 to 15
150.001 to 5
500,001 to o
1 2 3 4
AQL Tables
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.
5. Reject Level

INSPECTION LEVEL - General Level II
SAMPLING PLAN - Single Normal

Sample Sizes and Reject Levels

Acceptable Quality Level (AQL)

Lot Size	Code Letter	Sample Size	.65 (Re)	1.0 (Re)	1.5 (Re)	2.5 (Re)	4.0 (Re)	6.5 (Re)	10 (Re)
2 to 8	A	2	↓	↓	↓	↓	↓	1	↑
9 to 15	B	3	↓	↓	↓	↓	↓	↓	↑
16 to 25	C	5	↓	↓	↓	↓	↓	↓	↑
26 to 50	D	8	↓	↓	1	↑	↓	↓	↑
51 to 90	E	13	↓	1	↑	↓	2	↓	↑
91 to 150	F	20	1	↑	↓	2	3	↓	↑
151 to 280	G	32	↑	↓	2	3	↓	↓	↑
281 to 500	H	50	↓	2	3	4	↓	↓	↑
501 to 1,200	J	80	2	3	4	6	↓	↓	↑
1,201 to 3,200	K	125	3	4	6	↓	↓	↓	↑
3,201 to 10,000	L	200	4	6	8	↓	↓	↓	↑
10,001 to 35,000	M	315	6	8	11	15	↓	↓	↑
35,001 to 150,000	N	500	8	11	15	22	↓	↓	↑
150.001 to 500,000	P	800	11	15	22	↑	↓	↓	↑
500,001 to over	Q	1250	15	22	↑	↓	↓	↓	↑

AQL Tables

1. Lot or Population Size
2. Code Letter
3. Sample Size
4. AQL Percentage
5. Reject Level

OUPUT: Daily Inspection Sheet

CANYON LAKE
RANDOM INSPECTION WORKSHEET

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

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

NAME OF INSPECTOR:

[✓] ACCEPTED (OVER 84 POINTS) [ ] EXCUSED (CLOSED\OCCUPIED)
[ ] REJECTED (UNDER 85 POINTS) [ ] OFF-SCHEDULE (TIME: _____)

SPECIFIC ITEM	POINT VALUE	POINTS GIVEN	REMARKS
GROUNDS (DETAIL)	8	4	small pieces litter
GROUNDS (SPECIFIC AREA)	8	8	
VAULT CONDITION	6	6	
COMMODES	12	12	
DEODORANT CAKE	3	0	NO DEO. CAKE
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	
TOTAL POINT VALUE	100	93	

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

QASP

Method of Payment Analysis

Services will be received and payment will be authorized:

- Full Payment
- Full Payment plus Incentive
- Re-due Work & Pay Re-inspection Fees
- Reduction in Payment
- Reduction & Payment of Re-inspection Fees

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**

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

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

AQL = 4.0
Single Normal

5. 10 inspections defective

NO DEDUCTIONS

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

AQL = 4.0
Single Normal

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

Deduction Exercise B

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

QASP

Method of Payment Analysis

Random Sampling Method

Deduction Exercise B

Granger Lake - 4 units/32 units in sample size = 1/8 = 0.125

.125 x $1,832 = $229.00

$229 Total Deduction from Contract Payment

QASP

Method of Payment Analysis

100% Inspection & Planned Method

Contractor has responsibility for QC

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, OR

3. Terminate the contract for default if repetitive. (See contract clause 41)

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 x Number of Re-inspections = Deduction $40.00 x 2 = $80.00

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

QASP

Method of Payment Analysis

100% Inspection & Planned Method

Deductions for Work not preformed:

Handout Exercise C.

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

$25 Total Deduction from Contract Payment

QASP

Forms - Contract Discrepancy Report (CDR)

CONTRACT DISCREPANCY REPORT For use of this form, See DA PAM 715-15; the proponent agency is DCSLOG.	1. CONTRACT NUMBER
2. TO: (Contractor and Manager Name)	3. FROM: (Name of QAE)

DATES			
PREPARED	ORAL NOTIFICATION	RETURNED BY CONTRACTOR	ACTION COMPLETE

4. DISCREPA

Notification of unsatisfactory performance by exceeding the reject level shall be in the form of a Contract Discrepancy Report.

5. SIGNATURE OF CONTRACTING OFFICER OR AUTHORIZED REPRESENTATIVE

6. TO: (Contra

CDR must be signed by Contractor

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.)

QASP

Appendices

Sample Forms

Tabulations of Park Areas and Facilities

Maps of Cleaning Areas

Frequency Tables

Typical Drawings

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

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**

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**

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

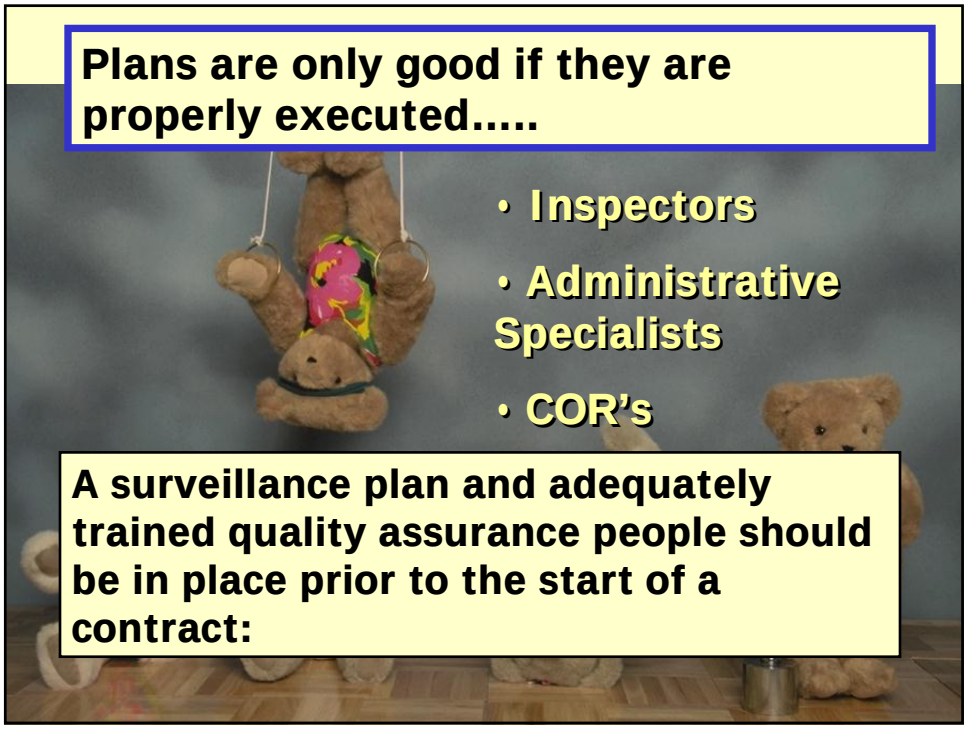
Preparing the Surveillance Plan

- Select Type of Inspections
- Select the AQL
- Sampling Guide for Each Item
- Performance Requirements Summary
- Write the Plan

5. Write the Plan

- Opening Statement
- AQL Tables
- Definitions
- Performance Requirements Summary
- Method of Payment Analysis
- Appendices

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



- Inspectors
- Administrative Specialists
- COR's

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

FAR 37.602-2 Quality Assurance

Agencies shall develop quality surveillance plans when acqui
(see 46.103 and 46.401(a))

These plans shall recog
of the contractor (see 46.105) to carry out its
quality control obliga
measurable inspection and acceptance criteria
correspondi
contained in the statement of work.

The quality
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]

QASP in place

Contractor does QC

Measurable Criteria

Performance, not methods

F.A.R.

√F.A.R. Check

1. What are the advantages of random sampling?

2. What are the advantages of using a written surveillance plan?

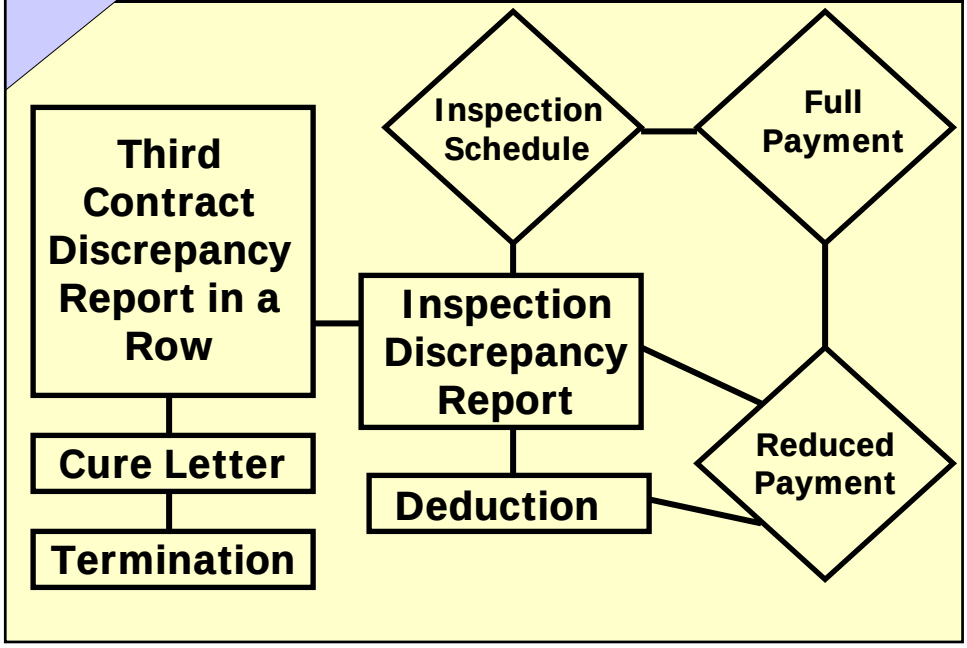
3. When using the payment analysis method of inspection what documents should you prepare to go with the I.F.B.?

4. Why should you use a predetermined inspection schedule?

5. What is an acceptable quality level?

QASP

Method of Payment Analysis



THE END