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CHAPTER ELEVEN:

JOB RESPONSIBILITIES

All persons in the chain of command at the processing plant are required to be aware of their responsibilities and how they fit into the overall manufacturing process. As problems occur in the process, each individual in the system is required to perform in a professional manner to insure the final result is a quality product.

TIME MANAGEMENT

The Certified Aggregate Technician may be responsible for more than one plant. Therefore, the Technician and Supervisor are required to know how much time is needed for conducting tests and the travel time between plants before writing the Quality Control Plan. Job duties other than quality control also are required to be addressed.

TIME CONSUMING ACTIVITIES

The approximate times for the various required duties include the following:

ACTIVITY	EXPENDED TIME
Meeting with management to receive production information	1 to 3 hours or more
Notifying the persons involved with process of sampling	5 minutes to 1 hour
Sampling the material per size	5 minutes to 1 hour or more
53, 73, and B borrow: splitting, drying, decant, drying, calculation, and charting per size	3 hours or more

ACTIVITY	EXPENDED TIME
5, 8 9, 11, 12 and fine aggregates: splitting, drying, decant, drying, calculation, and charting per size.	1 hour or more
Checking problems in the plant that may have caused a gradation problem	1 hour or more
Checking the quality control in the pit daily	1 hour or more
Notifying supervisor of any problems	5 minutes to 1 hour or more
Travel time	5 minutes to 1 hour; more than 1 hour will affect test time
Diaries	5 minutes to 1 hour
Cleaning lab	30 minutes to 1 hour

EXAMPLE SCHEDULE

Every morning or at the beginning of the shift, the Technician should meet with the Supervisor to schedule the production and stockpile testing. The mining area the material is being produced, and if the material is required to meet any special requirements are necessary to know.

If process control is maintained at one or more locations, a time schedule is required to be established to meet the testing frequency of products at each location.

EXAMPLE OF A TYPICAL DAY	
1.	Meet with supervisor to receive production information
2.	Notify the persons involved with the process of sampling from production or stockpile (plant operator, stockpile driver, loader operator)
3.	Sample the material using the approved method and equipment
4.	Check stockpiles for any contamination or segregation problems, and check the mining area to make sure what material is being produced and what quality control procedures are being followed
5.	Record all the sample information in the log book and start testing procedures
6.	Notify the Supervisor of any failures and make copies of gradation analysis for customer, Supervisor, and file
7.	Plot all test results on the control charts and conduct statistical analysis before the end of the day
8.	Maintain a daily file on all tests conducted and keep a clean and orderly lab

Day-to-day operations may be interrupted by unexpected occurrences, such as customer relations, special requests, writing reports, or working with INDOT personnel.

FREQUENCY OF SAMPLING AND TESTING

The most time consuming activity required by the CAPP is the sampling and testing of the aggregates.

Each Plant/Redistribution Terminal is required to determine the frequency of sampling and testing based on the control required to assure that the customer is obtaining the product specified.

The term certified material is defined as a product produced under the CAP Program intended for INDOT use. A frequency is required to be established for each certified material in the Quality Control Plan.

GRADATION

The minimum frequencies of sampling and testing for gradation include three time periods: Start of Production, Normal Production, and Load-Out.

The minimum requirement for sampling and testing a certified material during Start of Production is:

- 1) One test per 1000 t for the first 5000 t produced
- 2) A maximum of two per calendar day

The minimum requirement for sampling and testing a certified material during Normal Production is:

- 1) One test per 2000 t
- 2) A maximum of two per calendar day

The minimum requirement for sampling and testing a certified material during Load-Out is:

- 1) One test per 8000 t shipped
- 2) A minimum of one test per month for any certified material shipped that exceeds 1000 t

DECANTATION

All load-out samples are required to be decanted. Unless specific problems are encountered, start of production and normal production samples do not require a decant test.

CRUSHED PARTICLES

The minimum requirement for determining the amount of crushed particles is one test per week for each size of material during start of production and normal production. No test is required if the week's production is less than 100 t.

DELETERIOUS MATERIALS

The minimum requirement for determining the percentage of deleterious materials is one test per week for each size of material during the start of production and normal production. No test is required if the week's production is less than 100 t.

ADDITIONAL TESTS

The exact frequency of sampling and testing is source specific and is required to be defined in the Quality Control Plan.

Each Plant/Redistribution Terminal may conduct additional tests to maintain control of their operation. More testing may provide an additional assurance that the product being shipped is within the controls established.

DIARY REQUIREMENTS

Each Plant/Redistribution Terminal is required to maintain a diary. Test reports do not substitute for a diary. The diary is required to be an open-format book with at least one page devoted to each day that there is a material related operation. Entries into the diary are required to include:

- 1) General weather conditions
- 2) Area of extraction-location and ledges or pit area
- 3) Estimated quantity of materials produced
- 4) Time test samples obtained and tested, and corrective action if there were problems
- 5) Changes in key personnel, if any
- 6) Changes in equipment, plant, screens, etc., which may affect the current statistical results of aggregate materials
- 7) Any significant events or problems
- 8) Any nonconforming condition, as well as the action taken to correct the condition, if needed.

The diary entry is to be routinely signed each day by the Certified Aggregate Technician or Management Representative. On occasion the diary may be signed by another person; however, the diary is required to then be counter-signed by the Certified Aggregate Technician or Management Representative. Examples of diaries are shown on the following pages.

AGGREGATE TECHNICIAN PLANT DIARY

COMPANY: _____						
SOURCE & Q #: _____						
DATE: _____ MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY						
WEATHER: _____ CLOUDY, SUNNY, RAIN, THUNDER STORM, SNOW, COOL, COLD, WARM						
MATERIAL PRODUCED & TONS: _____						
VISUAL INSPECTION:	1ST VISIT	2ND VISIT	3RD VISIT	4TH VISIT	START - UP	
TIME:/ INITIAL	7AM	9:45AM	12:55PM	3:00PM	TIME	
STOCKPILE/LOADOUT:						
DEGREDDATION	YES/NO	YES/NO	YES/NO	YES/NO	SHUT-DOWN	
SEGREGATION	YES/NO	YES/NO	YES/NO	YES/NO	TIME	
CONTAMINATION	YES/NO	YES/NO	YES/NO	YES/NO		
LEDGE/LIFT: _____	PLANT CHANGES: _____					
SHOT LOCATION: _____	_____					
PIT AREA: _____	_____					
SAMPLES PULLED	OBTAINED	OBTAINED	COMPLETED	COMPLETED	PASS/FAIL	
PRODUCTION:	DATE:	TIME:	DATE:	TIME:	COMMENTS:	
1000 / 2000	LAB #	FREQ	SIZE			
FREQUENCY						
S = START-UP						
N = NORMAL						
I = INFO						
A=AUDIT						
LOADOUT:						
8000						
RESAMPLE:						
PROBLEMS:/ ACTION TAKEN AND CHANGES IN PLANT					SIGNATURE	
OR KEY PERSONNEL:					_____	
_____					_____	
_____					_____	
_____					_____	
_____					_____	
_____					AUDIT SAMPLED BY	
_____					_____	

TOTAL WEIGHT		GRAMS		LBS.		Report No.		Contract No.		RS 4-95	
LONG GRAD. WEIGHT RET.	WEIGHT RETAINED	WEIGHT PASSING	PERCENT PASSING	CONTROL LIMITS	CUSTOMER SPECS.	SIEVE SIZE	LONG GRADE MATERIAL	LONG GRADED MATERIAL	GRAMS LOSS	% LOSS	REMARKS
						3" (75 mm)					
						2 1/2" (63 mm)					
						2" (50 mm)					
						1 1/2" (37.5 mm)					
						1" (25 mm)					
						3/4" (19 mm)					
						1/2" (12.5 mm)					
						3/8" (9.5 mm)					
						No. 4 (4.75 mm)					
						No. 6 (3.35 mm)					
						No. 8 (2.36 mm)					
						No. 12 (1.70 mm)					
						No. 16 (1.18 mm)					
						No. 20 (850 um)					
						No. 30 (600 um)					
						No. 50 (300 um)					
						No. 60 (250 um)					
						No. 80 (180 um)					
						No. 100 (150 um)					
						No. 140 (106 um)					
						No. 200 (75 um)					
						No. 270 (53 um)					
						No. 325 (45 um)					
PAN	ORIGINAL	FINAL	% LOSS								
DECANT											
NON-DURABLE	TOTAL WT. 3/8" UP	WT. OF NON-DUR.	% NON-DUR.								
AGG SIZE 5.8.57.53.73											
TOTAL CHERT	SAMPLE WT. 3/8" UP	WT. OF TCT CHERT	% TOTAL CHERT								
AGG SIZE 5.8.57.53.73											
MECH. CRUSHED	SAMPLE WT. NO. 4 UP	WT. OF MECH. CRUSHED PT.	% MECH. CRUSHED								