11 Job Responsibilities

Time Management
   Time Consuming Activities
   Example Schedule

Frequency of Sampling and Testing
   Gradation
   Decantation
   Crushed Particles
   Deleterious Materials
   Additional Tests

Diary Requirements

Examples
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:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>EXPENDED TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting with management to receive production information</td>
<td>1 to 3 hours or more</td>
</tr>
<tr>
<td>Notifying the persons involved with process of sampling</td>
<td>5 minutes to 1 hour</td>
</tr>
<tr>
<td>Sampling the material per size</td>
<td>5 minutes to 1 hour or more</td>
</tr>
<tr>
<td>53, 73, and B borrow: splitting, drying, decant, drying, calculation, and</td>
<td>3 hours or more</td>
</tr>
<tr>
<td>charting per size</td>
<td></td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>EXPENDED TIME</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>5, 8, 9, 11, 12 and fine aggregates: splitting, drying, decant, drying,</td>
<td></td>
</tr>
<tr>
<td>calculation, and charting per size.</td>
<td>1 hour or more</td>
</tr>
<tr>
<td>Checking problems in the plant that may have caused a gradation problem</td>
<td>1 hour or more</td>
</tr>
<tr>
<td>Checking the quality control in the pit daily</td>
<td>1 hour or more</td>
</tr>
<tr>
<td>Notifying supervisor of any problems</td>
<td>5 minutes to 1 hour or more</td>
</tr>
<tr>
<td>Travel time</td>
<td>5 minutes to 1 hour; more than 1</td>
</tr>
<tr>
<td></td>
<td>hour will affect test time</td>
</tr>
<tr>
<td>Diaries</td>
<td>5 minutes to 1 hour</td>
</tr>
<tr>
<td>Cleaning lab</td>
<td>30 minutes to 1 hour</td>
</tr>
</tbody>
</table>

**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.
CAPP' DIARY

LOCATION: __________  DATE: ______  START: ______

INDOT #: __________  CAPP #: ______  STOP: ______

WEATHER: __________  DOWN DATES: ______

IDLE TIME: _______ (HOLIDAYS), _______ (WEEKENDS)

GRID: __________  : _______

<table>
<thead>
<tr>
<th>SAMPLES PULLED</th>
<th>TONS PRODUCED TODAY AND MONTHLY RUNNING TOTALS (MRT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>TYPE</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SUPERINTENDENT'S (OR REPRESENTATIVE) REMARKS

CHANGES - PLANT, GRID, KEY PERSONNEL, ETC:

EVENTS - PROBLEMS WITH PLANT, SCREENS, EQUIPMENT, ETC:

*SAMPLE TYPES

S = START UP FREQUENCY

N = NORMAL FREQUENCY

L = LOAD-OUT FREQUENCY

M = MISC.

R = RESAMPLE

CERTIFIED AGGREGATE TECHNICIAN'S REMARKS

(NAME - PRINTED) / (SIGNATURE)

FN: DIARY355

11-6
**AGGREGATE TECHNICIAN PLANT DIARY**

**COMPANY:**

**SOURCE & Q #:**

**DATE:** MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY

**WEATHER:** CLOUDY, SUNNY, RAIN, THUNDERSTORM, SNOW, COOL, COLD, WARM

**MATERIAL PRODUCED & TONS:**

<table>
<thead>
<tr>
<th>VISUAL INSPECTION</th>
<th>1ST VISIT</th>
<th>2ND VISIT</th>
<th>3RD VISIT</th>
<th>4TH VISIT</th>
<th>START-UP TIME</th>
<th>SHUTDOWN TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME / INITIAL</td>
<td>7AM</td>
<td>9:45AM</td>
<td>12:55PM</td>
<td>3:00PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOCKPILE/LOADOUT</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEGREDATION</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEGREGATION</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTAMINATION</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDGE/LIFT</td>
<td>PLANT CHANGES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHOT LOCATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIT AREA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SAMPLES PULLED**

<table>
<thead>
<tr>
<th>PRODUCTION</th>
<th>OBTAINED DATE</th>
<th>OBTAINED TIME</th>
<th>COMPLETED DATE</th>
<th>COMPLETED TIME</th>
<th>PASS/FAIL COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 / 2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FREQUENCY**

S = START-UP
N = NORMAL
I = INFO
A = AUDIT

**LOADOUT:** 8000

**RESAMPLE:**

**PROBLEMS / ACTION TAKEN AND CHANGES IN PLANT**

**OR KEY PERSONNEL:**

**SIGNATURE:**

**AUDIT SAMPLED BY:**
<table>
<thead>
<tr>
<th>SIEVE SIZE</th>
<th>LONG GRAD.</th>
<th>WEIGHT RETAINED</th>
<th>WEIGHT PASSING</th>
<th>PERCENT PASSING</th>
<th>CONTROL LIMITS</th>
<th>CUSTOMER SPEC</th>
<th>SAMPLE FROM</th>
<th>DATE</th>
<th>TIME</th>
<th>COMPLETED</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/4&quot; (19 mm)</td>
<td>1/4&quot; (6.35 mm)</td>
<td>3/8&quot; (9.5 mm)</td>
<td>1/2&quot; (12.7 mm)</td>
<td>3/4&quot; (19 mm)</td>
<td>1&quot; (25 mm)</td>
<td>2&quot; (50 mm)</td>
<td>2 1/2&quot; (63 mm)</td>
<td>3&quot; (75 mm)</td>
<td>5&quot; (125 mm)</td>
<td>8&quot; (200 mm)</td>
<td>16&quot; (400 mm)</td>
</tr>
</tbody>
</table>

**Material Status**
- K2: Accepted
- K8: Rejected
- K9: Visual
- L1: Info

**Quality Checks and Corrective Action**
- Too Fine
- Too Coarse
- Crusher Settings
- Jaw Setting
- Screen Changes
- Segregation
- Contamination
- Wash Sample
- Dry Shake

**Weather**
- Temperature
- Humidity
- Wind Speed

**Ledge and Stockpile Inspection Times**
- AM
- PM

**Remarks**
- Stockpile
- Bins or Tank
- Processing Equipment
- Truck, Byp, or Car
- Hydric, Hydro
- Ledge or Pit
- Customer Yard