

**STATE OF OHIO (DAS)**CLASSIFICATION  
SPECIFICATION**CLASSIFICATION SERIES:**

Materials Controller

**SERIES NO.:**

8432

**MAJOR AGENCIES:**

Transportation

**EFFECTIVE DATE:**

02/26/2012

**SERIES PURPOSE:**

The purpose of the materials controller occupation is to perform specialized sampling & testing in all aspects of material control to assure compliance with construction & material specifications.

At the lower levels, incumbents perform field &/or laboratory sampling & testing of materials proposed for use in construction &/or operations projects or monitor sampling & quality control testing at producers plants or perform job control & quality control aggregate & soil aggregate sampling from plants operating in assigned work area.

At the higher levels, incumbents perform as lead workers or supervise lower-level materials controllers & bituminous plant inspectors to ensure proper testing & sampling of construction materials.

**CLASS TITLE**

Materials Controller 1

**CLASS NUMBER**

84321

**PAY RANGE**

26

**EFFECTIVE**

01/09/2005

**CLASS CONCEPT:**

The entry level class works under general supervision & requires some knowledge of construction materials sampling & testing in order to perform specific laboratory or field tests on materials proposed for construction &/or on producers' or suppliers' stock obtained from field to determine compliance with state specifications.

**CLASS TITLE**

Materials Controller 2

**CLASS NUMBER**

84322

**PAY RANGE**

27

**EFFECTIVE**

01/09/2005

**CLASS CONCEPT:**

The full performance level class works under general supervision & requires considerable knowledge of construction materials sampling & testing in order to perform specialized field &/or laboratory sampling & testing of materials proposed for use or used in construction to ensure compliance with specifications & to monitor quality control testing, or monitor sampling & quality control testing or perform job control & quality control sampling of various plants in assigned work area.

**CLASS TITLE**

Materials Controller 3

**CLASS NUMBER**

84323

**PAY RANGE**

29

**EFFECTIVE**

03/26/1990

**CLASS CONCEPT:**

The advanced level class works under direction & requires thorough knowledge of construction materials sampling & testing in order to perform as lead worker (i.e., provide work direction & training) over lower- level materials controllers, engineering aides or other sample procuring or testing personnel to insure quality control of project materials through sampling, testing & inspection of all project related materials.

**CLASS TITLE**

Materials Control Supervisor

**CLASS NUMBER**

84325

**PAY RANGE**

11

**EFFECTIVE**

08/06/1995

**CLASS CONCEPT:**

The supervisory level class works under direction & requires thorough knowledge of construction materials sampling & testing in order to supervise lower-level materials controllers, bituminous plant inspectors & related technical personnel to ensure performance of required testing on sample construction materials utilizing proper procedures & specialized equipment.

| <u>CLASS TITLE</u>     | <u>CLASS NUMBER</u> | <u>B. U.</u> | <u>EFFECTIVE</u> | <u>PAY RANGE</u> |
|------------------------|---------------------|--------------|------------------|------------------|
| Materials Controller 1 | 84321               | 07           | 01/09/2005       | 26               |

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Performs various laboratory tests on materials proposed for construction &/or on producers' or suppliers' stock obtained from field operations to determine compliance with state specifications (e.g., tensile strength per unit of steel; percent of elongation of steel; ductility & hardness of steel; physical properties of elastomeric products &/or expansion filler; absorption & specific gravity of coarse & fine aggregates; determines unit weight & weathering resistance of aggregates; tests petroleum products; tests corrugated pipe for galvanized coating thickness & physical dimensions; tests gradations of aggregate & dimensions of construction materials; performs soundness tests; tests concrete for plastic & hardened properties; tests bituminous concrete).

Maintains records of samples tested; calibrates & maintains laboratory & field test equipment & instruments; operates computer or CRT to input data & create records.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of geometry & trigonometry; sampling & testing standards pertaining to materials proposed for use in construction & operations. Skill in operation, calibration & maintenance of materials testing/sampling equipment. Ability to interpret variety of instructions in written, oral, picture or schedule form; demonstrate strength to lift 100 pounds; complete routine forms or prepare records of tests conducted.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Formal education in English that includes reading, writing & speaking common English vocabulary; 1 course or 3 mos. exp. in geometry or trigonometry; 6 mos. trg. or 6 mos. exp. in sampling & laboratory testing of materials proposed for use in construction &/or operations.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Positions working with bituminous or portland cement concrete will be required to obtain level one bituminous or portland cement concrete certification within 60 days after employment.

**UNUSUAL WORKING CONDITIONS:**

May lift heavy weights; may work around project construction; exposed to smoke, dust, noise, odors, toxic fumes, solvents &/or chemicals; exposed to heavy equipment & traffic hazards; exposed to adverse weather conditions; may require travel.

| <u>CLASS TITLE</u>     | <u>CLASS NUMBER</u> | <u>B. U.</u> | <u>EFFECTIVE</u> | <u>PAY RANGE</u> |
|------------------------|---------------------|--------------|------------------|------------------|
| Materials Controller 2 | 84322               | 07           | 01/09/2005       | 27               |

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Performs specialized field &/or laboratory sampling & testing of materials & equipment proposed for construction &/or operations use &/or used in completed construction (e.g., field tests to determine in-place density of flexible pavement construction; takes specialized field samples for determining specific gravity; determines percentage of deleterious materials in aggregate sample by visual examination; performs soundness tests to determine durability of fine & coarse aggregate; performs specialized tests on bituminous materials or related products to determine viscosity, penetration, adhesion, solubility & other chemical & physical characteristics; performs compaction tests on embankment & subgrade & subbase to determine density & moisture) to determine suitability & compliance with state specifications, or monitors sampling & quality control testing at various plants, or performs job control & quality control material sampling of various plants operating in assigned work area (e.g., makes periodic audits of construction project material control records & reviews all tests results; inspects ready-mix concrete trucks & plants for specification compliance); uses truck mounted core drill to obtain pavement & bridge cores; monitors manufacture of prestressed concrete beams; performs concrete control tests).

Prepares & maintains records on samples collected & tests conducted; assists in preparation of material control books for district use; prepares & submits weekly reports; reviews daily inspectors' reports for accuracy & documents into project diaries & ledgers; performs routine materials sampling & testing when necessary; calibrates & maintains field & laboratory testing & sampling equipment & instruments; operates computer or CRT to input data & create records.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of geometry & trigonometry; sampling & testing standards pertaining to materials proposed for use in construction & operations. Skill in operation, calibration & maintenance of materials testing/sampling equipment. Ability to interpret variety of instructions in written, oral, picture or schedule form; work alone or handle contacts with refinery or plant personnel; demonstrate strength to lift 100 pounds.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Formal education in English that includes reading, writing & speaking common English vocabulary; 1 course or 3 mos. exp. in geometry or trigonometry; 18 mos. trg. or 18 mos. exp. in sampling & laboratory testing of materials proposed for use or used in construction &/or operations.

-Or 12 mos. exp. as Materials Controller 1, 84321.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Positions working with bituminous or portland cement concrete will be required to obtain level one bituminous or portland cement concrete certification within 60 days after employment.

**UNUSUAL WORKING CONDITIONS:**

May lift heavy weights; may work around project construction; exposed to smoke, dust, noise, odors, toxic fumes, solvents &/or chemicals; exposed to heavy equipment & traffic hazards; exposed to adverse weather conditions; may require travel.

| <u>CLASS TITLE</u>     | <u>CLASS NUMBER</u> | <u>B. U.</u> | <u>EFFECTIVE</u> | <u>PAY RANGE</u> |
|------------------------|---------------------|--------------|------------------|------------------|
| Materials Controller 3 | 84323               | 07           | 03/26/1990       | 29               |

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Acts as lead worker (i.e., provides work direction & training) over lower-level materials controllers, engineering aides or other sample procuring or testing personnel engaged in sampling, testing & inspection of construction materials to insure quality control of all project materials (e.g., calculates quantities & material test requirements to be used in material control books for district construction projects; reviews contract proposals & specifications for construction projects for purpose of calculating material quantities & implementing procedures for sampling & testing of materials by use of computer software programs; samples construction materials from producer plants, samples material delivered to projects, records samples & forwards to central laboratory).

Performs documentation & record keeping of all projects & related material production (e.g., processes field testing reports from construction projects for accuracy & completeness with state & federal specifications & logs them into material control books for permanent records; maintains activity & statistical records & history of each sample & each producer by project & reviews & records various documents from each project; reviews field inspection reports & plant tested approved material reports for accuracy & completeness of documentation).

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of supervisory principles/techniques\*; employee training & development\*; construction materials sampling & testing standards; federal, state & departmental established test procedures & standards pertaining to materials. Skill in operation, calibration & maintenance of materials testing/sampling equipment. Ability to define problems, collect data, establish facts & draw valid conclusions; maintain & complete accurate & concise reports; establish friendly atmosphere as lead worker.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Formal education in English that includes reading, writing & speaking common English vocabulary; 1 course or 3 mos. exp. in geometry or trigonometry; 30 mos. trg. or 30 mos. exp. in sampling & laboratory testing of materials proposed for use or used in construction &/or operations.

-Or 18 mos. exp. as Material Controller 2, 84322.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Positions working with bituminous or portland cement concrete will be required to obtain level one bituminous or portland cement concrete certification within 60 days after employment.

**UNUSUAL WORKING CONDITIONS:**

May lift heavy weights; may work around project construction; exposed to smoke, dust, noise, odors, toxic fumes, solvents &/or chemicals; exposed to heavy equipment & traffic hazards; exposed to adverse weather conditions; may require travel.

| <u>CLASS TITLE</u>           | <u>CLASS NUMBER</u> | <u>B. U.</u> | <u>EFFECTIVE</u> | <u>PAY RANGE</u> |
|------------------------------|---------------------|--------------|------------------|------------------|
| Materials Control Supervisor | 84325               | EX           | 08/06/1995       | 11               |

**JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)**

Supervises materials controllers, bituminous plant inspectors & related technical personnel assigned to central office or district testing laboratories &/or bituminous plants to ensure performance of required sampling & testing of construction materials (e.g., aggregate, bituminous concrete, Portland cement concrete, soils, steel, pipe, quality assurance testing for Federal Aid Construction projects) utilizing proper procedures & specialization equipment (e.g., rapid permeability, asphalt content, level certifications, determination-nuclear gauge, resilient modulus) &/or conducts plant inspections for safety & working conditions, monitors daily work load to ensure that work is distributed proportionately among workers & that priority jobs receive immediate attention.

Determines proper testing methods of unusual or research materials &/or coordinates adjustments of non-conformance material between testing laboratories & bituminous plants; reviews test results for accuracy, completeness & conformance to applicable specifications & plans; ensures sampling & production data are properly reported & posted; consults with higher-level departmental staff for guidance or advice concerning sampling &/or research reports; communicates with district or field personnel (e.g., resolves problems with sampling & testing of materials &/or problems related to asphalt plants).

Assists with &/or conducts training & review sessions for district field inspection personnel & plants inspectors; attends training sessions & seminars in order to keep abreast of changes in methods & procedures for proper testing & mixing of construction materials.

Oversees maintenance of testing equipment & recommends replacement or repair &/or conducts periodic audits of construction (e.g., extractions of bituminous from bituminous concrete, mechanical analysis of extracted aggregates, maximum specific gravity of bituminous paving mixtures, core density determinations, percentages of air voids & compaction) &/or inspects bituminous plants for compliance.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of supervisory principles/techniques; employee training & development; construction materials sampling & testing standards; federal, state & departmental established test procedures & standards pertaining to materials. Skill in operation, calibration & maintenance of materials testing/sampling equipment. Ability to use proper research methods in gathering data; interpret variety of technical material in books, journals & manuals; define problems, collect data, establish facts & draw valid conclusions; prepare meaningful, concise & accurate reports.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

39 mos. trg. or 39 mos. exp. in sampling & laboratory testing of materials proposed for use or used in construction projects; 12 mos. trg. or 12 mos. exp. in supervisory principles/techniques.

-Or 18 mos. exp. as Materials Controller 3, 84323.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

Exposed to smoke, dust, noise, odor, toxic fumes, traffic & heavy equipment; may require travel.