[INCH-POUND]
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January 17, 1997
SUPERSEDING
MIL-P-82015C
28 October 1988

FEDERAL SPECIFICATION

PLANT, AGGREGATE, SECONDARY, WITH CONE CRUSHER, MOBILE, 75 TON PER HOUR CAPACITY

The General Services Administration has authorized the use of this specification by all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers a complete mobile, electric powered, crushing and screening plant capable of producing not less than 75 tons (68 040 kilograms (kg)) of aggregate per hour suitable for use in cement or asphalt concrete. This specification covers one classification of aggregate plant.

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents, of the issue in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specification

CC-G-2745 - Generator Sets, Diesel Engine, Alternating Current, For Facilities Construction: 10 KW through 1000 KW (Not Stocked).

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commanding Officer (Code 1581), Naval Construction Battalion Center, Port Hueneme, CA 93043-4301, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 3820

Military Specification

MIL-V-173 - Varnish, Moisture-and-Fungus-Resistant (for Treatment of Communications, Electronic, and Associated Equipment).

Military Standards

MIL-STD-209 - Slinging and Tiedown Provisions for Lifting and Tying Down Military Equipment.
MS51336 - Lunette-Coupler, Drawbar Ring.

(Copies of federal and military specifications and standards required by contractors in connection with specific procurement functions are obtained from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.1 Other Government documents and publications. The following other Government documents form a part of this specification to the extent specified herein.

DEPARTMENT OF TRANSPORTATION (DoT)

Federal Motor Carrier Safety Regulations.

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

DEPARTMENT OF LABOR (DoL)

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

Occupational Safety and Health Standards.

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

ASTM

ASTM C 33 - Concrete Aggregates.
ASTM C 131 - Test for Resistance to Degradation of Small-Size Coarse Aggregate by Use in the Los Angeles Abrasion Machine.
ASTM C 170 - Test for Compressive Strength of Dimension Stone.
ASTM D 692 - Coarse Aggregate For Bituminous Paving Mixtures.

(Private sector and civil agencies may purchase copies of these voluntary standards from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2059.)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA AB 1	-	Molded Case Circuit Breakers and Molded Case Switches.
NEMA ICS 1	-	General Standards for Industrial Controls and Systems.
NEMA ICS 2	-	Industrial Controls and Systems, Controllers, Contractors, and Overload Relays.
NEMA ICS 4	-	Industrial Controls and Systems, Terminal Blocks.
NEMA ICS 6	-	Industrial Controls and Systems, Enclosures.
NEMA MG 1	-	Motors and Generators.
NEMA PB 2	-	Deadfront Distribution Switchboards.

(Private sector and civil agencies may purchase copies of these voluntary standards from the National Manufacturers Association, 1300 North 17th Street, Suite 1847, Rosslyn, VA 22209.)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 - National Electrical Code.

(Private sector and civil agencies may purchase copies of these voluntary standards from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.)

SOCIETY OF AUTOMOTIVE ENGINEERS, INC. (SAE)

SAE J534	-	Lubrication Fittings.
SAE J551	-	Performance Levels and Methods of Measurement of Electromagnetic Radiation From Vehicles and Devices (30 - 1000 MHz).

(Private sector and civil agencies may purchase copies of these voluntary standards from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

TIRE AND RIM ASSOCIATION, INC. (TRA)

TRA Yearbook.

(Private sector and civil agencies may purchase copies of these voluntary standards from the Tire and Rim Association, Inc., 3200 West Market Street, Akron, OH 44313.)

(DoD activities may obtain copies of those adopted voluntary standards listed in the DoD Index of Specifications and Standards free of charge from the Standardization Document Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. The plant, aggregate, secondary, with cone crusher, further referenced as the aggregate plant, shall consist essentially of a cone crusher, vibrating screens, loading hopper, all electric power system, operating platform, and all accessories for a complete semitrailer mounted portable unit. When specified (see 6.2), the manufacturer shall provide a skid mounted diesel engine driven generator set (see 3.9.1).

3.2 Standard commercial product. The aggregate plant shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this specification but which are a part of the manufacturer's standard commercial product, shall be included in the aggregate plant being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.3 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.2.1.

3.4 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification.

3.5 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to ensure interchangeability of component parts, assemblies, accessories, and spare parts.

3.6 Design and construction. The aggregate plant shall be so designed and constructed that normal adjustments, repair, and overhaul can be readily accomplished by means of general purpose tools with a minimum removal or disturbance of other elements of the aggregate plant. Ease of maintenance provisions shall ensure operating clearances for facilitating maintenance and servicing. Where possible, intricate locking devices, controls, and threaded fastenings, that can be

easily over-torqued by operators lacking feel through thick gloves or numbness, shall be avoided. Covers or plates that must be removed for component adjustment or for parts removal shall be equipped with substantial fastenings.

3.6.1 Cone crusher. The cone crusher shall be of the vertical type with a mantel sized large enough to produce material requirements as stated in 3.10. The cone crusher shall be protected from damage due to overload, tramp iron, and other noncrushable material. The aggregate plant shall have a mechanical overload release and reset with no readjustment being required. The crushing members shall have replaceable wearing surfaces of alloy steel with not less than 11 percent manganese content. A hydraulic or mechanical means shall be provided to aid the adjustment for raising and lowering settings varying the crusher discharge opening. One extra set of crushing members, with resin, caulking compounds, and other materials, if required, shall be furnished for the cone crusher. All moving parts of the cone crusher shall be lubricated by a force-feed system equipped with a pump, safety devices, oil temperature warning lights or alarm, low oil level and low oil pressure warning devices, instruments, flexible hoses, piping valves, and all necessary components for efficient operation of the cone crusher.

3.6.2 Vibrating screens. Vibrating screens shall be either the horizontal or inclined type, with not less than three decks designed to produce three products in addition to the oversize material which is routed to the cone crusher. Screen cloth shall be double crimp, standard or flattop oil-tempered steel with square openings, and adequate support shall be furnished to prevent sagging. Screens shall be readily replaceable. Screens shall be secured by an adjustable tensioning system. The vibrating mechanism shall be V-belt, electric-motor-driven, and shall consist of eccentric or unbalanced type drives for the horizontal type screen and one eccentric drive for the inclined type screen. A screen feed box or chute shall be provided to distribute the material on the screen. Master power panel for controlling and vibrating screens shall be operable from operator's platform. Two sets of screen cloths shall be furnished for the aggregate plant. Each set of screen cloths shall include the sizes shown in table I. The vibrating screen vibrations shall not be transmitted to the main structure. The receiving end of the vibrating screen shall be not greater than 14 feet (4.26 metre (m)) in height. The receiving hopper shall be fabricated from rigidly reinforced steel plate.

3.6.3 Loading hopper. A loading hopper may be provided to control and direct flow of material from the vibrating screen to the cone crusher feed opening. The loading hopper shall be fabricated from reinforced steel plate.

3.6.4 Conveyors. Conveyors shall be used to transport stone and gravel within the aggregate plant. Conveyors shall be of the belted type in accordance with the manufacturer's standard practice to provide for smooth and efficient flow of material.

3.6.4.1 Belt-type conveyors. Belt-type conveyor shall be equipped as follows: Troughing type idlers or rollers shall be provided with spacing not greater than 4 feet (1.22 m) between centers. Troughing idlers shall be designed to ensure true running and self-centering of the conveyor belts. When required by manufacturer's design, special rolls designed to absorb shock shall be installed under the conveyor belt, below the receiving area. Return idlers shall be provided with spacing of

not greater than 10 feet (3.05 m) between centers. The width and running speed of all conveyor belts shall be such as to ensure efficient movement of material, with a minimum of spillage and pileup at receiving points, when the aggregate plant is operating at full capacity. An accessible adjustment for maintaining proper belt tension shall be provided. Cleaning devices, capable of removing foreign material adhering to the pulley side of the belt, shall be provided. Conveyors which extend outside the basic dimensional limits of the unit shall be of the folding, retractable, or readily demountable type. Rubber coating on the carrying side of the belt shall be not less than 0.0625-inch (1.6 millimetre (mm)) thick and rubber coating on the bottom side shall be not less than 0.1875-inch (4.8 mm) thick. Each belt-type conveyor shall be driven from a separate electric or hydraulic motor. The capacity of the motors shall be sufficient to handle the loads encountered when the aggregate plant is operating at maximum capacity. Motors shall be positioned to transmit power directly or by V-belt to the head pulley via speed reducer. Inclined conveyors shall be designed to prevent rollback of the belt, in the event of power failure, if electric motors are used.

TABLE I. Vibrating screen cloth sizes.

Clear opening (minimum)		Wire diameter	
2.50 in.	63.5 mm	0.50 in.	12.7 mm
2.00 in.	50.8 mm	0.4375 in.	11.1 mm
1.50 in.	38.1 mm	0.375 in.	9.5 mm
1.00 in.	25.4 mm	0.3125 in.	7.9 mm
0.75 in.	19.1 mm	0.25 in.	6.4 mm
0.50 in.	12.7 mm	0.192 in.	4.9 mm
0.375 in.	9.5 mm	0.162 in.	4.1 mm
0.25 in.	6.4 mm	0.135 in.	3.4 mm

3.6.5 Operator's platform. The operator's platform shall be centrally located to enable the operator to observe the aggregate plant's conveyor and crusher operation. Controls for aggregate plant operation shall be mounted on the platform for safe convenient operation of the unit by one operator. Access ladders, handrails, and guardrails shall be provided. Antiskid surfaces shall be provided for the deck, catwalks, and ladders. Platforms and catwalks shall be furnished to provide access to points requiring routine maintenance and adjustment. All guardrails around platform shall be demountable to reduce cube during transport.

3.6.6 Bearings. Antifriction or bronze bearings used on the aggregate plant, exposed to the elements, shall be provided with a dust-sealed device to prevent entry to abrasive materials.

3.7 Semitrailer. The stress imposed on any structural component of the semitrailer shall be not greater than 60 percent of the yield point. The semitrailer for the aggregate plant shall be equipped with a dolly and shall be capable of being safely towed over the roads at speeds of not less than 15 miles per hour (mph) (24 kilometre per hour (km/h)). The dolly drawbar shall be equipped with a lunette ring in accordance with MS51336. The angle of departure shall be not less than 25 degrees and projections below the main frame members shall be held to a minimum.

The gross weight on any one axle shall be not greater than 20,000 pounds (lbs) (9 072 kilograms (kg)); for tandem axle assembly, not greater than 40,000 lb (18 144 kg); for triple axle assembly, not greater than 60,000 lb (27 216 kg). Service breaks, lighting, reflectors, and associated equipment shall conform to DoT Motor Carrier Safety Regulations. The semitrailer shall be equipped with straight air service brakes controllable from the towing vehicle cab. All necessary air hose and standard air couplings for connecting to the brake system of a towing vehicle shall be provided. The service brake installation shall include a breakaway system capable of automatically applying the brakes in case the semitrailer is accidentally separated from the towing vehicle and shall be capable of maintaining the application for not less than 15 minutes. Parking brakes, or chock blocks securely chained to vehicle frame, shall be provided for each wheel. Chock block chains shall be of sufficient length to permit placing the blocks either ahead or behind the wheels. The blocks shall be equipped with snaphooks for storage. No less than six screw-jacks shall be provided on each aggregate plant. The jacks shall be capable of supporting each unit when operating fully equipped and fully loaded. Supports near the feed end of the aggregate plant and near the cone crusher shall be provided for blocking the aggregate plant during operation. The jacks shall retract sufficiently to preclude interference with the units normal travel capacities. Service brakes, lighting, reflectors, and associated equipment shall conform to DoT Motor Carrier Safety Regulations.

3.8 Tires and rims. The tire and rim rating shall conform to the TRA Yearbook recommendations for the type and size of tires furnished. Tire and rim sizes shall be the same for all wheels. Tires shall be tube or tubeless type with highway tread. Tires shall be of rated capacity not less than equal to the load imposed on each tire, measure at each wheel at the ground. Tires shall be not less than 100 level quality. When tube type tires are furnished, inner tubes shall be heavy-duty type, and shall be of proper size for the tires furnished.

3.9 Electric equipment. Electric motors shall conform to NEMA MG 1 polyphase induction, totally enclosed, fan-cooled type. The rated horsepower (hp) (Watt (W)) for each motor shall be equal to or greater than the hp (W) requirements of the equipment driven under all operating conditions. The hp (W) of the motors shall be such as to allow progressive starting of all electrically operated components. The electric motors shall contain provisions for operation on 230 Volt (V) or 460 V, 60 Hertz (Hz), 3 phase, alternating current from an outside source or when required (see 3.1), a skid mounted diesel engine driven generator set. A main distribution panel conforming to NEMA PB 2 shall provide circuit breakers for each electrical circuit, and a master circuit breaker that will disconnect the entire unit from the electric power supply. Circuit breakers shall conform to NEMA AB 1. A motor controller operated by momentary contact start and maintained contact stop push buttons shall be provided for control of each electric motor. Motor controllers shall conform to NEMA ICS 1, ICS 2, ICS 4, and ICS 6, type 3 enclosure. Motor control push buttons and an emergency panic push button, which controls tripping of the master circuit breaker, shall be installed in an easily accessible location at the operator's platform and each control station for each electric motor used on the aggregate plant. Panic push button enclosure shall be red. Enclosures for motors, motor controllers, distribution panel, push buttons, and other similar electrical apparatus shall be weatherproof and dustproof. Wiring of the aggregate plant shall be furnished, including interconnections between individual components and when connected to 60 Hz, 3 phase power source. A permanently legible wiring diagram shall be

installed on or near the main distribution panel. The function of all circuit breakers and controls shall be permanently marked on their respective panels or enclosures. Conductors shall be color coded or suitably identified. Wiring shall be adequately protected from physical damage. The wiring design and practices shall meet the applicable requirements of NFPA 70, including grounding requirements.

3.9.1 Skid mounted diesel engine driven generator set. When required (see 3.1), the manufacturer shall provide a type II, style A, class 1 skid mounted diesel engine driven generator set (referred hereinafter as the generator set) conforming to CC-G-2745. The generator set shall be capable of providing all power requirements at the voltages specified in 3.9 to operate all electrical motors and accessories of the aggregate plant under the loads specified in 3.10.

3.9.1.1 Electromagnetic interference suppression. When specified (see 6.2), the generator set shall meet the electromagnetic interference suppression limits of SAE J551.

3.10 Performance. The aggregate plant shall be capable of crushing any variety of rock having an average compressive strength of not less than 32,000 pounds per square inch (220 632 kilopascals (kPa)) when tested in accordance with ASTM C 170; shall have a percentage of wear not greater than 20 when tested in accordance with ASTM C 131, and a free moisture content of not greater than 6.50 percent. The aggregate plant shall be capable of crushing rock ranging in size from 6.0 inches (152 mm) to 3.0 inches (76 mm) cross section. The aggregate plant shall be capable of producing not less than a total of 100 tons per hour (TPH) (90 720 kilograms per hour (kgph)) from 2.50-inch (63.5 mm) minus, suitable for use in cement concrete, and not less than a total of 75 TPH (68 040 kgph) from 0.75-inch (19.1 mm) minus, suitable for use in asphaltic concrete. The sizes and percentages of the crushed aggregates produced shall conform to the general requirements of ASTM C 33 for cement concrete, or ASTM D 692 for asphaltic concrete.

3.11 Safety. All rotating or reciprocating parts, and parts subjected to high operational temperature, that are of such nature or are so located as to be or become a hazard to operating or attending personnel, shall be adequately guarded or insulated to the extent necessary to eliminate the hazard. All platforms, steps, and handholds shall be provided for easy access to the operator's position and other work areas. The aggregate plant shall comply with OSHA regulations in effect at time of manufacture.

3.12 Identification plate. An identification plate will be furnished by the contracting officer for each aggregate plant. The contractor shall stamp all necessary data in the blank spaces of the plate provided for that purpose, and securely affix a plate to each aggregate plant in a conspicuous place with nonferrous screws, rivets, or bolts not less than 0.125-inch (3.2 mm) in diameter. The applicable nomenclature contained in the contract item description shall be placed in the top blank.

3.13 Servicing and adjusting. Prior to acceptance of the aggregate plant by the Government, the contractor shall service and adjust the aggregate plant for immediate operational use as required in the operator's manual. The servicing and adjusting shall include at least the following:

a. Inflation of all tires.
b. Adjustment of brakes (when required).
c. Proper functioning of all lighting and electrical systems.
d. Wheel alignment (when required).
e. Adjustment of engine to include tune-up (when required).
f. Complete lubrication with grades of lubricants recommended for ambient temperature at the delivery point.
g. Cooling system filled to capacity with a clean solution of equal parts by volume of water and antifreeze (ethylene glycol). The aggregate plant shall be conspicuously tagged to identify the lubricants and their temperature range.

3.14 Treatment and painting. Unless otherwise specified (see 6.2), the aggregate plant shall be treated and painted in accordance with the manufacturer's standard practice. All surfaces of the aggregate plant other than corrosion-resisting steel shall be protected against corrosion and present a neat appearance.

3.15 Instruction plates. The aggregate plant shall be equipped with instruction plates suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates shall be of a material which will last and remain legible for the life of the equipment. Plates shall be securely affixed to the equipment with nonferrous screws or bolts of not less than 0.125-inch (3.2 mm) diameter.

3.16 Toolbox(s). One or more toolbox(s) shall be provided. The toolbox(s) shall be large enough to store all tools required for field service or maintenance. The toolbox(s) shall be steel with a hinged lid and a fastener to keep lid secure when vibrated. The toolbox(s) shall be mounted in a protected accessible location.

3.17 Stenciling. The gross weight of each demountable component of the unit shall be stenciled on each side of the component in such a manner as to be readily discernible to personnel handling the equipment. The total gross weight of the aggregate plant shall be stamped on the identification plate by the contractor.

3.18 Prime equipment accessories. Prime equipment shall be shipped with all required accessories and tools unless written deviation is received from the contracting officer.

3.19 Lifting and tiedown attachments. When specified (see 6.2), the aggregate plant shall be equipped with lifting and tiedown attachments. Lifting and tiedown attachments shall conform to type II or type III of MIL-STD-209. A nonferrous transportation plate shall be provided and mechanically attached to the aggregate plant. Transportation plates shall be inscribed with a diagram showing the lifting attachments and lifting slings, the capacity of each attachment, and the required length and size of each sling cable. A silhouette of the item furnished showing the center of gravity shall be provided on the transportation plate. Tiedown attachments may be identified by stenciling or other suitable marking. Tiedown marking shall clearly indicate that the attachments are intended for the tiedown of the aggregate plant on the carrier when shipped.

3.20 Lubrication. Unless otherwise specified (see 6.2), means for lubrication shall be in accordance with the manufacturer's standard practice. The lubricating points shall be easily visible and accessible. Hydraulic lubrication fittings shall be in accordance with SAE J534. Where use of high-pressure lubricating equipment, 1,000 pound-force per square inch (psi) (6 894 kPa) or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.21 Fungus resistance. When specified (see 6.2), electrical components and circuit elements, including terminal and circuit connections, shall be coated with varnish conforming to MIL-V-173, except that:

a. Components and elements inherently inert to fungi or in hermetically sealed enclosures need not be coated.
b. Current-carrying contact surfaces, such as relay contact points, shall not be coated.

3.22 Workmanship.

3.22.1 Steel fabrication. The steel used in fabrication shall be free from kinks, sharp bends, and other conditions which would be deleterious to the finished product. Manufacturing processes shall not reduce the strength of the steel to a value less than intended by the design. Manufacturing processes shall be done neatly and accurately. All bends shall be made by controlled means to ensure uniformity of size and shape.

3.22.2 Bolted connections. Bolt holes shall be accurately punched or drilled and shall have the burrs removed. Washers or lockwashers shall be provided in accordance with good commercial practice, and all bolts, nuts, and screws shall be tight.

3.22.3 Riveted connections. Rivet holes shall be accurately punched or drilled and shall have the burrs removed. Rivets shall be driven with pressure tools and shall completely fill the holes. Rivet heads, when not countersunk or flattened, shall be of approved shape and uniform size for the same diameter of rivet. Rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member.

3.22.4 Welding. Welding procedures shall be in accordance with a nationally recognized welding code. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Welds shall be of sufficient size and shape to develop the full strength of the parts connected by the welds. Welds shall transmit stress without permanent deformation or failure when the parts connected by the weld are subjected to proof and service loadings.

3.22.5 Castings. All castings shall be sound and free from patching, misplaced coring, warping, or any other defect which reduces the casting's ability to perform its intended function.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification, where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in this document shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.2.1).
b. On-site inspection (see 4.2.2).

4.2.1 First article inspection. This inspection shall be performed at the manufacturer's facilities. Unless otherwise specified (see 6.2), the quality conformance inspection shall include the examination of 4.3.

4.2.2 On-site inspection. The on-site inspection shall be in addition to the first article inspection performed at the manufacturer's facilities. Unless otherwise specified (see 6.2), on-site inspection shall consist of the tests of 4.4.

4.3 Examination. Each aggregate plant and related equipment supplied under this specification shall be examined for compliance with the requirements specified in section 3 of this document. Any redesign or modification of the contractor's standard product to comply with specified requirements, or any necessary redesign or modification following failure to meet specified requirements shall receive particular attention for adequacy and suitability.

4.4 Tests. The component units shall be arranged in the order as shown in the approved arrangements plan of the aggregate plant and the piping and accessories shall be connected to the

component units for compatibility and subjected to test in accordance with 4.4.1 through 4.4.4. Nonconformance to the requirements as specified in section 3 shall constitute failure and cause for rejection.

4.4.1 Test conditions. Prior to being tested, the aggregate plant shall be lubricated. Oils shall be those designated for use in the ambient temperature at which the tests are being performed. During all aggregate plant tests, the motors shall be run at normal operating speeds. When the generator set is required (see 3.1), the aggregate plant shall be disconnected from the normal power supply and connected to the generator set. The generator set shall supply all the necessary electrical power to operate all components and accessories of the aggregate plant at normal operating speeds. As services and adjustments are performed, the aggregate plant shall be checked for ease of maintenance.

4.4.2 Operational test. The aggregate plant shall be completely assembled, adjusted, lubricated, or otherwise serviced for operation. The motors shall be started and subjected to a warmup period as recommended by the manufacturer. The aggregate plant shall be given a run-in test and all controls operated a sufficient number of times to ascertain that the components and mechanisms actuated by the controls operate promptly, fully, and without restriction or malfunction. When the generator set is required (see 3.1), the aggregate plant shall be disconnected from the normal power supply and connected to the generator set. The operational test shall then be repeated, using the generator set as the sole power supply for the aggregate plant. Each wheeled unit shall be towed a distance of not less than 10 miles (16 km) at an average speed of not less than 15 mph (24 km/h) over unpaved road. Failure to pass any phase of this test shall be cause for rejection.

4.4.3 Electromagnetic interference suppression. When specified (see 6.2), the generator set shall be tested in accordance with SAE J551 to meet the requirements of 3.9.1.1.

4.4.4 Lifting and tying down attachment tests. When lifting and tying down attachments are required, they shall be tested to conform to 3.19.

5. PACKAGING

5.1 Packaging requirements. The preservation, packing, and marking shall be as specified in the contract or order.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The aggregate plant covered by this specification is intended for use in crushing and screening aggregate to a uniform size.

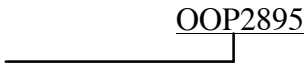
6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. When a type II, style A, class 1 skid mounted diesel engine driven generator set conforming to CC-G-2745 is required (see 3.1 and 3.9.1).
c. When first article sample and inspection is required (see 3.3 and 4.2.1).
d. When electromagnetic interference suppression is required for the generator set (see 3.9.1.1 and 4.4.3).
e. Color of finish coat (see 3.14).
f. When lifting and tiedown attachments are required (see 3.19).
g. When lubrication requirements are different than that of the manufacturer's standard practice (see 3.20).
h. When treatment for fungus resistance is required (see 3.21).
i. When on-site inspections shall be greater than as required in 4.4 (see 4.2.2).

6.3 First article. When a first article inspection is required, the item will be tested and should be a first article sample, or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of one unit. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, test, and approval of the first article.

6.4 Supersession data. This specification replaces Military Specification MIL-P-82015C dated 28 October 1988.

6.5 Part or Identifying Number (PIN). The specification number forms a PIN for aggregate plants covered by this document. The PIN for the aggregate plants is established as follows:



6.6 National Stock Numbers (NSNs). The following is a list of NSNs assigned which correspond to this commercial item description. The list may not be indicative of all possible NSNs associated with the commercial item description.

There are no NSNs for this item.

6.7 Subject term (key word) listing.

Cement plant

6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to previous issue.

MILITARY INTEREST:

Custodian:
Navy - YD1

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

Preparing Activity:
Navy - YD1

(Project 3820-0024)