Position Classification Standard for Navigational Information Series, GS-1361

Table of Contents

SERIES DEFINITION

This series includes all classes of positions involving the acquisition, collection, evaluation, selection, and preparation of vital aeronautical or marine information for dissemination in official publications concerning safe navigation and related operations, requiring the technical and practical knowledges of air or marine navigation and operations.

COVERAGE

This series covers positions responsible for producing air and marine navigational and related operational information which requires substantial technical knowledge of the principles, techniques, methods, procedures, rules, directives, and regulations affecting navigation, and of closely related aeronautical or marine subject matter concerned with air, sea or submarine operations. Knowledge of the occupational subject matter and practices and knowledge of the technical language of air or marine navigation and operations is of primary importance in producing these technical data and communications. Knowledge of the manner, style or format of presentation, or of different informational or illustrative media is secondary to the knowledge of the substantive content of technical information on air and marine navigation, such as data on tides, anchorages, marine or air hazards, harbors, aerodromes or airport facilities, electronic communications, special navigational systems, airways, various aids to navigation, air traffic control, special corridors, visual aids, airspace restricted areas, and so forth.

NATURE OF OCCUPATION

This occupation has its roots planted in the vast lore of ancient history, in the explorations of such men as Columbus and Marco Polo, and in the environments of "inner" and now outer space. Navigation, simply defined, is the process of safely directing the movement of a craft from one point on the earth's surface to another; however, the act of navigating (which some writers refer to as the art of navigation and others call the science of navigation) in this day and age is indeed complicated. To depart from an air or seaport and arrive safely at a destination, the twentieth century navigator must be well trained for his job and have readily available up-to-date charts, publications, directional indicators, electronic aids, and other means to determine or anticipate a geographical position, sometimes under highly dramatic or critical conditions. The present-day operating standards of air and sea craft require high speed and dependability without regard to weather conditions, time of the day or night, or season of the year. Vast improvements have been and will continue to be made in structural design and capabilities of air and sea craft, and in the various types of equipment aboard a ship or plane. For example, tomorrow's navigator may be able to derive electronically and instantaneously such factors as position, speed, and course from the outer space satellite systems, using advanced triangulation techniques. Since the various types of navigation equipment have become more complex it has been necessary to increase the scope of the basic and advanced education and related operational training of persons using such equipment, as well as of the personnel who must collect, evaluate, compile,

and select operationally pertinent navigation information or data for official presentation in an appropriate medium.

This standard covers the work of personnel who acquire, collect, receive and process such highly critical information or data from any and all domestic and foreign sources, including intelligence sources, and who select and verify items for inclusion in official publications of the Federal Government. Publications in the marine field include sailing directions, lists of lights and fog signals, radio navigational aids, pilot charts and navigational articles, oceanic route information and distances, printed and radioed notices to mariners, daily memoranda, hydrographic bulletins, and so forth. Information essential to those concerned with air navigation and operations is included in notices to airmen (NOTAM), flight information publications (FLIP) and supplements, memos for aviators, textual and graphic descriptions of landplane and seaplane facilities (having both immediate and long-term planning and intelligence significance) and established airways or routes, approach and landing information, terminal landing and enroute publications, navigational aids information ranging from visual to electronic data, air traffic control practices and procedures, civil and military airport procedures in domestic or foreign areas, and other similar information vitally essential to aircraft operations.

Since this occupation, as it exists in the Federal Government, deals with keeping operational and planning personnel and others informed on the current conditions that affect safety in air or marine navigation, it is important to consider the data acquisition, receiving and evaluation process. Navigation data are collected by instruments or by trained observers and forwarded to those involved in processing and interpreting the information. Trained personnel screen, evaluate and decide what to do with such information and how it should be presented for private or public use. It may be necessary in evaluation of the data to determine reliability of the source (a person or observer) and the validity, authenticity or accuracy of the information. Assignments within the occupation are made by dividing the work into geographical regions or areas, or by assigning personnel to subject-matter areas or to certain publications, such as high altitude and long-range data, navigational lights or radio beacons, etc. In the first type of assignment the specialist is responsible for receiving and reviewing all information related to air or marine navigation in a given geographical area, which may be a segment of a country, an entire country, or a group of countries. Similarly, the subject-matter specialist may be assigned responsibility for reviewing data on a part of the country, a region, or the entire world area covered by a particular technical publication.

EXCLUSIONS

1. Positions concerned with providing or disseminating foreign or domestic information, public information, writing and editing, technical writing, etc. (except where the continuing major qualification requirement is a knowledge of operational navigation) should be classified in the Information and Editorial Series (GS-0010), Public Information Series (GS-1081), Writing and Editing Series (GS-1082), Technical Writing and Editing Series (GS-1083), or other appropriate series.
2. Positions concerned with the collection, analysis, evaluation, interpretation and dissemination of information for intelligence purposes will be classified in the Intelligence Series, GS-0132

when such positions primarily require application of intelligence techniques and knowledges described in the GS-0132 standard. However, such a position will be classified in the Navigational Information Series, GS-1361 if navigational and related operational knowledges are essential requirements. (See introduction to the standard for the Intelligence, GS-0132 series.)

3. Positions concerned with general clerical or support duties in the field of navigation, which are not specifically classifiable in any other series, should be placed in the General Clerical and Administrative Series, GS-0301.

4. Positions concerned with final drafting or scribing work in the preparation of topographic, hydrographic, aeronautical, nautical, and other types of maps and charts; or with mapping the earth's surface, or in graphic representation of geographic or navigational information, where such work is characterized by solution of cartographic problems in evaluating or selecting methods, etc., of map or chart design or construction should be classified in the Cartographic Drafting Series (GS-0816), Cartographer Series (GS-1370), or other appropriate series under the Classification Act or, in some cases, in the Wage Board pay category.

5. Positions concerned with the scientific collection, compilation, analysis, interpretation, etc., of marine, nautical, or oceanic phenomena for the purpose of increasing man's knowledge of the ocean environment (but are not primarily concerned with evaluating and selecting such data for publications concerning the field of operational navigation and related operations) should be classified in the appropriate series covering the particular marine science involved.

6. Positions involved with work as operating navigators or instructors in navigation should be classified to the Aircraft Operations Series, GS-2181, or the appropriate series in the Education Group (GS-1700), based upon the criteria in the Grade Level Guide for Instructional Work.

GRADE-LEVEL CRITERIA

The work of providing evaluated and reliable information for the operational use of navigators, planners and others requires that data be acquired and collected from any and all available sources; and that these data be analyzed, operationally evaluated, and selected for practical use in navigation.

Criteria to evaluate the degree of difficulty and the level of responsibility of nonsupervisory positions in this series are found in the following factors:

1. *The nature and scope of the navigation information assignments*.--The very nature of the work of these positions, i.e., providing usable, vital, operationally reliable and current information on a continuing basis for dissemination to navigators and others, is significant in evaluating the difficulty and responsibility of these positions. The scope of an assignment in this series is determined to be more or less difficult by the complexity of the technical information or data and the complexity of a geographical or subject-matter assignment.

2. *The level of decision and judgment required.* -- The level of decision and judgment required to evaluate, verify and select appropriate operational and navigational data for inclusion on navigation charts and in regular or special publications, or for immediate dissemination via radio or electronic transmission, is related to the technical complexity of the assignment. In distinguishing between quality levels of decisions, it is useful to define the extremes: decisions that are repetitive and routine to the extent that a definite procedure has been worked out for handling such decisions; or decisions that are novel, unstructured and highly significant.

3. *Operational knowledges and abilities required.* -- Operational navigation knowledges and abilities are required to assess that information which is valuable and necessary for long-range planning or for immediate operational use, and to apply that information or data in facilitating navigation and related operations by means of appropriate publications. The degree and extent of knowledges required thus have a bearing on the evaluation of the position.

NOTES ON USE OF STANDARD

The grade-level discussions in this standard are to be considered as guides which must be read and applied in their entirety. The fact that one type of responsibility is mentioned at any one grade level in the standard, such as "briefing and/or debriefing foreign attaches . . ." at the GS-11 level should not be interpreted to mean that where a position has this responsibility the position is automatically a GS-11. The "full range" of responsibility for an assignment at the GS-9 level may or may not include briefing and debriefing activities. The absence of mention of a duty at any grade level does not preclude its presence in a position at that grade level; the over-all level of responsibility and difficulty of the work must be considered in arriving at an equitable grade-level determination. The standard provides general reference points which personnel specialists and operating officials will be able to use as a basis for agreement as to what constitutes a typical range of difficulty and responsibility for each grade level in the organization involved.

The proportion of time spent in performing a responsibility may not be as important in determining the value of a position as degree of capable and mature judgment required in its performance and the degree of technical knowledge essential to arriving at timely conclusions. Generally speaking, the size of a geographical area is, in itself, not the governing criterion as to grade. It must be considered in relation to (a) the scope and complexity of subject matter comprising the assignment, (b) the level of decision and judgment required, and (c) the knowledges required to evaluate information and make decisions. Thus, the term "major geographical area" used in this standard means major, not solely from a geographical point of view, but also, as appropriate, from the standpoint of subject-matter coverage of the area assignment, significance and complexity of the navigational information to be evaluated and disseminated, adequacy of source data, and other elements discussed in the grade-level criteria. Similarly, the term "major subject-matter area" should be considered in relation to geographic coverage and other criteria mentioned above.

The grade-level guides in this standard cover nonsupervisory positions in grades GS-5 through GS-12. Any nonsupervisory positions evaluated at a higher level, such as staff positions, should be based upon sound projection of the criteria in the standard.

Although even numbered grades (GS-6, 8, and 10) are not covered in the guide, these grade levels may be used, as appropriate.

SPECIALIZATION AND TITLES

The following specializations and titles are provided:

Aeronautical Information Specialist. -- Positions in this specialization acquire, collect, analyze, evaluate, verify, compile, select and prepare aeronautical data or information on navigation and related operations for dissemination in regular or special reports and publications.

Marine Information Specialist. -- Positions in this specialization acquire, collect, receive, analyze, evaluate, verify, compile, select and prepare nautical or marine data or information on navigation and related operations for dissemination in regular or special reports and publications.

AERONAUTICAL INFORMATION SPECIALIST, GS-1361-05

MARINE INFORMATION SPECIALIST, GS-1361-05

This is the initial entrance level at which employees are trained to assume more responsible work in providing information on air or marine navigation and related operations. An individual selected for such work is oriented in the procedures, regulations, and specifications involved in producing such vital and important data. The scope of his work includes developing the know-how to acquire, collect, evaluate and select items of practical and operational interest for eventual inclusion in some form of publication media. Some employees do not have to be oriented on the broad subject matter of the field of work because their qualifications (in air or marine navigation or closely related fields) make them familiar with some or many of the published products. The trainee may receive orientation on a proposed geographical area of assignment. He may check computations of data, plot new data on charts, or develop descriptive data on marine or air facilities. An assignment at this level is performed under close supervision and direction. General knowledges of navigation and related subjects are required to perform the work of this level.

AERONAUTICAL INFORMATION SPECIALIST, GS-1361-07

MARINE INFORMATION SPECIALIST, GS-1361-07

Nature and Scope of Assignment

Work at this level is limited in the scope of assignment. Employees assigned to work at this level receive, compile, evaluate and select pertinent data of a fairly routine nature. They make preliminary analyses of operationally unevaluated data in terms of such factors as adequacy, authenticity and/or validity for a limited subject-matter assignment, or collaborate on a segment of a geographical area assignment. They compile and tabulate data to be incorporated into revisions of navigation publications. They learn to recognize reliable informants on, or sources of, operational information; and learn to recognize valid, adequate, and authentic data. They become acquainted with the organization, structure, functions and activities of cooperating domestic and international agencies. Positions at this level are subject to fairly close guidance and detailed review of the results of work. Personal work contacts are generally limited to associates; outside contacts are made by the supervisor who may accompany the specialist for the purpose of obtaining or clarifying information, or enlarging his knowledge of sources.

Level of Decision and Judgment Required

The level of decision and judgment required to determine a course of action in a position at this level is fairly repetitive and minimal, being governed by established regulations and specifications that can be easily applied and by the close supervisory review required.

Knowledges and Abilities Required

In addition to the knowledge and ability requirements of the preceding level, work at this level requires a general knowledge of operational navigation. The ability to clearly express oneself orally and in writing is desirable; foreign language ability is also desirable. The capacity to learn the methods and techniques characteristic of navigational information work is necessary.

AERONAUTICAL INFORMATION SPECIALIST, GS-1361-09

MARINE INFORMATION SPECIALIST, GS-1361-09

Nature and Scope of Assignment

Positions at this level are responsible for soliciting, acquiring, collecting, evaluating, compiling and selecting appropriate technical navigational and related operational data for appropriate changes or additions to data in official publications, charts or communications directed to aviators, mariners or operational planners regarding procedures, hazards and over-all operational

and intelligence information. Assignments at this level range from responsibility for a small geographical area of a country to a region of the world, or one or more segments of subject-matter periodicals or publications of limited scope and complexity. Complexity of assignments depends upon the level of decision necessary and the knowledge required. The work is not closely supervised, but is generally reviewed for accuracy, adequacy, conformance and agreement with specifications, procedures and policies. The specialist may plan and participate in conferences, including briefing or debriefing foreign service attaches and others.

Level of Decision and Judgment Required

The requirement to make sound decisions and judgments, depending upon the complexity of the assignment, is affected by the relative independence from detailed supervision and review of work, and by the guidelines available in terms of regulations, specifications, procedures, etc. At this level, the individual must make sound decisions on using or screening out a wide range of technical navigational or related operational data as found in a small area assignment or a segment of a broader subject-matter assignment. For example, he may be considered an authority on air facilities and related information or on sailing directions in an area, and make decisions commensurate with such an assignment. The evaluation and compilation of technical navigational data are not closely supervised, and the employee is expected to arrive at his own conclusions as to what information should be submitted for publication. Since he is the specialist in the area, he has final authority for determining the specific technical contents of the publication. He decides on what data should be retained for files or discarded, and recommends the collection of and search for information to fill some gaps in his area (subject matter or geographical) assignment. Standard guidelines are available; when conflicting reports on information of substantial consequence are encountered, the incumbent seeks the advice of higher-grade specialists. Due to the general adequacy of source data for work at this level, there is little need to speculate on or fill in gaps in information; however, incumbents of these positions are expected to estimate, project or make a technical judgment on the basis of insufficient information as to facilities that might or should exist, in the absence of the immediate capability to verify such data, in connection with an assignment of limited scope and complexity.

Knowledges and Abilities Required

In addition to the knowledges and abilities required at the preceding levels, incumbents must be able to write clearly; must possess full knowledges of the field of navigation and of air or marine operations, including the functions of navigational aids, various methods of computing distances and courses, how to compute points along a Great Circle Route, etc.; must be familiar with, but not as a specialist, cartographic, lithographic and artistic processes and their limitations in illustrating technical navigational data and symbols; must possess a comprehensive knowledge of a geographical or subject-matter area in terms of navigational and related operational requirements; and must have a thorough knowledge of the techniques and processes involved in screening, selecting, and presenting navigational and related data for publication and dissemination.

AERONAUTICAL INFORMATION SPECIALIST, GS-1361-11

MARINE INFORMATION SPECIALIST, GS-1361-11

Nature and Scope of Assignment

Positions at this level are responsible for soliciting, collecting, acquiring, evaluating, compiling, and judiciously selecting a full range of complex technical navigational and related operational data for dissemination in official publications. Typically, such assignments involve complete responsibility for a major geographical or subject-matter area, requiring comprehensive knowledge of a major portion of a country, world area, or subject-matter area as related to information on marine or air navigation and related operations. Positions at this level provide advisory or technical informational services to air or marine navigators, operations planners and others, including the public, interested in their specialized area of knowledges. Incumbents are responsible for developing original expository reports or writing creative articles on new navigational techniques, equipment, information, etc., to induce general acceptance. Safe practices and established navigational methods are evaluated for use in conjunction with newly developed systems and equipment. Illustrated manuals and instructions for field use are developed.

Responsibility is given at this level for planning, arranging, and participating in conferences connected with the major area of assignment, including the briefing or debriefing of foreign attaches and others. The specialist is considered an authority on the major area of assignment and has final authority for the technical content of the publication or publications to which his material is directed. He coordinates and controls the flow of information that is integrated into the production line of air or marine navigation and related operational publications, devices, visual aids, film strips, video plates and tapes, etc., pertaining to the area of assignment.

Level of Decision and Judgment Required

These factors are closely related to the complexity found in the assignment and to the independence from close review and supervision. At this level, a complex and difficult technical assignment involving a major world area or major subject-matter field requires sound decisions that tend to be novel and highly significant, and substantial judgment in producing data for a publication on or for use in navigation. Such decisions take into consideration all the aspects of navigation and related operations, e.g., detailed safe enroute directions, and detailed but codified information on highly technical facilities, etc. Incumbent decides whether certain technical information has to be verified or checked before publication and sends out field requests to domestic or foreign sources for additional data on significant operational facilities or other information. Work at this level is reviewed for accomplishment of objectives, accuracy of judgment, and general compliance with policies and procedures. Many independent decisions are required and there may be little or no supervision for extended periods, but the incumbent may seek technical guidance and advice on unusual problems from higher-grade specialists. At this level, the employee must frequently make judgments, sometimes based on vague or barely

adequate data and at other times based on abundant but conflicting data as to the existence of facilities, services, hazards, etc., and as to what the navigator or planner may expect or require. The same guidelines may exist for this level as for the preceding level.

Knowledges and Abilities Required

In addition to the knowledges and abilities required at the preceding levels, this level of work requires a comprehensive knowledge of a major geographical area or subject-matter area; ability to write original and creative or expository articles with a popular appeal to gain acceptance on navigation subjects; and a thorough knowledge of operational navigation practices, techniques, methods, etc. It requires the knowledge and ability to make relatively independent and accurate decisions; and, depending on the field of air or marine interest, a thorough knowledge of geography, upper and lower air space, terrain, hydrographic conditions, and similar phenomena or conditions and their effect on navigation and air or marine operations. Area knowledges required include a knowledge of the physical facilities in the area and some insight into the probable extent of financial support of the facility; some knowledge of the political and economic situation to ascertain the extent of planning and control of facilities or routes; some knowledge of physical phenomena associated with navigation, such as meteorology or weather conditions in determining these influences on operations; and other pertinent technical knowledges related to air or marine navigational operations in the assignment.

AERONAUTICAL INFORMATION SPECIALIST, GS-1361-12

MARINE INFORMATION SPECIALIST, GS-1361-12

Nature and Scope of Assignment

Positions at this level are responsible for soliciting, collecting, acquiring, evaluating, selecting, compiling and presenting broad-range navigational and related operational data. Typical nonsupervisory positions involve very significant assignments (geographical area or subject matter) of greater technical scope and importance than are typical of the GS-11 level. Incumbents of such positions provide high-level technical navigational and operational advice to other specialists, to representatives of other agencies, and/or to the public. They may serve on committees or interagency work groups. Long-range plans and arrangements are made at this level to obtain vital information required to comprehensively fulfill the data needs of the most significant geographical or subject-matter areas. Assignments undertaken at this level require active individual leadership in achieving a high level of technical proficiency, meeting deadlines and planning the successful execution of an important and unusually complex assignment. Incumbents continually study trends and changes in their area of assignment, and are thoroughly familiar with technical publications, studies and changes beyond the usual requirement for accomplishing this work.

Level of Decision and Judgment Required

The high level of technical complexity of the assignment and the great independence required to perform the assignment define the level of decision and judgment required. These assignments are performed under general administrative direction, which reflects current program objectives and requirements. Results of work are reviewed for compliance with directives or higher-level decisions, but are not usually questioned on a technical basis.

Since the technical content of such an assignment is very broad and complex, and the field is rapidly changing, the incumbent must exercise sound and novel judgment in utilizing and verifying source information, and in applying such data to an operationally-oriented official publication, directive, or report. He is often required to present logical conclusions in a manner conducive to general understanding which will elicit major acceptance by users and planners; this calls for originality, initiative, and good judgment. The same guidelines are available at this level as at the preceding levels. However, this level of responsibility requires a person who is recognized as an expert and who recommends changes in regulations, policy, and specifications for sound operational reasons, based on his proficiency in more than one major area assignment. This level of work also requires sound judgments or the extension of unusually complex information from inadequate source material for use by planners, as found at the GS-11 level, but the significant nature of the assignment places greater consequence on a decision at this level.

Knowledges and Abilities Required

In addition to the knowledges and abilities required at the preceding levels, this level of work requires a comprehensive understanding of the specialized field of navigation and related operations, and their relation to scientific and other technical fields. It requires the ability to make independent decisions and judgments having a substantial effect on navigation and related air or marine operations.