US Army Corps of Engineers

# Construction Bulletin

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**CEMP-C**

**Subject:** Developing and Analyzing Adverse Weather Data

**Applicability:** GUIDANCE

1. This construction bulletin is essentially a reissue of bulletin 93-20. It outlines the methodology provided in ER 415-1-15, Construction Time Extensions for Weather, for the development of adverse weather data to be incorporated into each construction contract. Although issued in 1989, DCE inspections and periodic queries from field activities indicate that the proper implementation of the ER remains a source of confusion.

2. Many of the difficulties in administering the special clause entitled TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER, which is required by the ER to be incorporated into each construction contract, arise from the use of "generic" data in each contract at a given location. This practice can at time generate a distorted picture of the anticipated weather delays that a contractor may incur, since whether weather is considered adverse is as dependent on the type of work as well as ambient conditions. In other words, weather that hinders or precludes progress on one project may have no effect at all on a second. To assure that each contract reflects a reasonable expectation of anticipated adverse weather, each project must be analyzed individually for potential impacts of unusually severe weather. Appendix B of the ER provides a comprehensive outline of the procedure to be used for the development of adverse weather data. I encourage you to review ER 415-1-15, with particular emphasis on Appendix B, and assure that you are properly developing adverse weather data for your projects. After proper calculation of adverse weather data for a project, review the result for reasonableness. For instance, rarely would any project be expected to incur adverse weather delay every day of a particular month. The appropriate time to develop the data is during the BCO review of the 90 percent design; assure that the correct data is incorporated into the contract at the time of the final back check.

3. The anticipated adverse weather data developed for each project must be included in the contract via the clause in Appendix A of the ER. The anticipated adverse weather delay is to be expressed as work days, not calendar days. The sample weather delay schedule in Appendix A assumes a standard five day work week, and expresses the

anticipated delay on that basis. If there is a reasonable expectation that the project will be executed on a different work schedule, the weather delay schedule should express anticipated delay on the basis of the projected work schedule. For instance, if the project is expected to operate on a four day work week, the schedule should be based on the four day week. The shorter the expected work week, the fewer days of weather delay should be anticipated. If, during the course of a project, the contractor changes his work schedule, the baseline of adverse weather days must also be changed based on the number of workdays per week.

4. If, after commencement of construction, it is determined that unusually severe weather occurred during any given month, be reminded that in itself this determination does not entitle the contractor to a time extension for the difference of days between the anticipated and actual adverse weather days. Delay to critical path activities must also be established. This includes confirming that the contractor had both the intent and ability to pursue the work at the time of the unusually severe weather. All of the contractor's required plans, particularly his cold weather protection plan, must have been submitted, approved, and implemented. The contractor must have been sufficiently mobilized to have proceeded with the work, and he must have taken reasonable efforts to work in seasonable weather.

5. Since the anticipated adverse weather days included in the contract are in work days, not calendar days, only those adverse weather days that the contractor is scheduled to work, and that affect the contract's critical path, are to be recorded in calculating any time extension due. Days meeting this criteria that are impacted by previous adverse weather days should also be counted. For example, a substantial snowfall on a Sunday, which is not a scheduled workday, could preclude work on the following day, which the contractor had intended to work. In this instance, the Sunday would not be counted as an adverse weather day, but the following Monday would be. After analyzing the adverse weather for the month, the difference between the anticipated weather delay and that actually encountered is to be converted to calendar days. This is accomplished by multiplication of the work day delay by a ratio of seven calendar days per week to the number of scheduled work days per week. For example, if the contractor is scheduled to work five day weeks, work days are converted to calendar days by multiplying by 7/5. The contract modification providing the time extension is in terms of calendar days.

6. When a contract modification providing for an additional activity is negotiated, consideration must be given to anticipated adverse weather if time is due the contractor. Otherwise, the added activities are essentially being expedited by not allowing a normal amount of time to complete the work. Equivalent fair weather days are the proper amount of time which should be allowed. Equivalent fair weather days are calculated by taking the basic number of workdays required to perform an activity and adding the anticipated adverse weather which is likely to affect the work. By the same token, activities which are displaced on the critical path, and pushed into periods of worse weather, may be impacted more severely and the durations of those activities may have to be adjusted. It should be noted that when solely weather modifications are executed, the contractor is given the unusually severe weather days which impacted his schedule plus any anticipated adverse weather days due if the schedule is pushed into another month.

7. Adjustments are to be made for weather when a contractor is past the contract completion date, that is, in a liquidated damages situation. The rule which controls is still the default clause. Therefore, only days of unusually severe weather are excusable weather delays. Adverse weather days for the period are established per the regulation, considering the expected impact on activities which are scheduled. This establishes the adverse weather which the contractor would anticipate to interfere with scheduled construction activities. We do not allow "day for day" time extensions for weather delays since the contractor is still responsible for establishing a schedule which includes normal adverse weather.

8. It is intended that this construction bulletin will clarify some of the misunderstandings of the weather clause. I encourage you to seek resolution of any future questions by dropping us a line on E-mail. This construction bulletin has been coordinated with the Office of the Chief Counsel (CECC-C) and the Operations, Construction and Readiness Division (CECW-OC).

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