SETTING UP CASE EXAMPLES OF RUNS USED
TO DEVELOP THE COMPENSATION FORMULA   CHAPTER 4

The cases used to generate the compensation formula may be run using the NRDAM/CME, Version 2.4. This section outlines the steps needed to run the cases that are relevant to a specific spill scenario or set of scenarios (i.e., not all 5500 runs need to be made to examine the compensation formula for a specific scenario or region). Sections 5 and 6 discuss interpretation of the results and generation of a compensation formula based on model runs, respectively. This allows examination of the compensation formula that would be generated based on runs of Version 2.4 of the NRDAM/CME and the methodologies of the January 1994 proposed compensation formula.

Inputs to the NRDAM/CME for compensation formula runs are summarized in Exhibit 4.1. The user needs to create a wind file and a current file to use in these runs according to the specifications listed in Exhibit 4.1. Additionally, the habitat grid for the location of the spill needs to be edited to be of uniform habitat (i.e., a hypothetical environment) if the case is listed in Exhibit A.4. Otherwise, the default habitats of the NRDAM/CME Version 2.4 should be used.

The steps for performing a compensation formula run are as follows. The NRDAM/CME User's Manual (Volume II of the documentation) and the Tutorial for the NRDAM/CME (French and Rines, 1995) should be consulted for more specified details on running the software.

(1)   Enter the NRDAM/CME Version 2.4 program and select the location for the case to be run. Exhibit A-1 lists the cases under the appropriate locations.

(2)   Create a wind file using the wind data entry tool in the NRDAM/CME. The wind data needs to be specific to the case and season. The same file can be used for all oils and volumes spilled for that case. The wind should be constant starting on the spill date (according to season, Exhibit 4.1) and continuing for at least one month, at the speed and direction specified in Exhibit A.3.

(3)   Create a current file if the case assumed non-zero tidal currents (Exhibit A.5). For all cases background currents are assumed zero. Tidal currents as per Exhibit A.5 should be entered with either one or two tides per day, as specified. A unique current file must be created for each case. This file may be used for all runs of varying season, oil, or volume spilled for a given case.

(4)   To enter the currents, first create a grid surrounding the spill site and large enough to encompass any potentially affected areas for the scenarios. Next enter the tidal vector specified in Exhibit A.5 at the spill site. The current entry tool will spread the vector uniformly over the current grid to create unidirectional current field. The current tool also asks the user if one or two tides per day are desired (Exhibit A.5).

(5)   If specified as necessary in Exhibit A.4, edit the habitat grid (using the habitat editor tool in NRDAM/CME Version 2.4) where the spill site occurs. Exhibit A.4 describes the habitat code changes needed. For cases in wetlands ("saltmarsh" or "wetland"), change subtidal open water habitats to extensive wetlands and intertidal habitats to fringing wetlands. For eelgrass and coral reef habitats, change all subtidal cells to these types. For rocky shore habitat, change all intertidal cells to this type. The cells to edit are those downwind of the spill site.

(6)   Under the run model menu option, set up and run the scenario desired. Exhibit 4.1 outlines the sources of the needed data to be entered into the scenario form. Steps 2,3, and 4 above set up all needed files. All other inputs are made while setting up the scenario to run.

Exhibit 4.1 Summary of Model Inputs for compensation formula runs using the NRDAM/CME (Version 2.4).

User Input	Source of Information/Entry
Spill site: 　latitude 　longitude	[from Exhibit A-3, based on selection of case from Exhibit A-1 and A-2]
Habitat and editing	[use default habitats at spill site, unless specified otherwise in Exhibit A-4]
Spill date: 　year 　month 　day 　hour	1991 Jan, Apr., July, or Oct. for winter, spring, summer, or fall 5 0
Spill amount (gal.): 　Stage 1 　Stage 2	100, 1000, 5000, 10000, or 50000 0
Spill duration (hrs): 　Stage 1 　Stage 2	0 0
Chemical (oil)	Heavy (Prudhoe) crude, Light crude, No. 2 Fuel, Lt. Diesel, or Gasoline [use Exhibit A-6 to select an appropriate proxy to the oil spilled]
Wind file	[Create wind file of constant wind starting at the spill date according to Exhibit A-3]
Current file	[If no currents; no file used] [If tidal currents: create current grid surrounding study site with no (0) background current and uniform diurnal or semi-diurnal flood tidal currents at speed and direction given in Exhibit A-5]
Cleanup file	None
Ice file	For cases other than M10, M11, and M12: none Case M10: Ice Grid 5 Case M11: Ice Grid 4 Case M12: Ice Grid 1
Time of high tide	0 hours

Exhibit 4.1 (continued)

Tide range (m)	[from Exhibit A-5]
Air temperature	Default for location*
Water temperature	Default for location*

Suspended sediment;
   concentration
   settling velocity
	Default for location*
	Default for location*

Price Index	117.2
Closures	None
* These defaults are supplied by the user interface as part of the prompt when a case is run. They are documented in Volume III of the documentation for the NRDAM/CME, Version 2.4.	