APPENDIX D - BIOASSESSMENT OF THE POTENTIAL IMPACTS RESULTING FROM DISPERSANT USE IN OFFSHORE WATERS IN THE GULF OF MEXICO (DECEMBER 16, 1994)

INTRODUCTION

Region VI is considering the establishment of areas in the Gulf of Mexico for which dispersant use would be pre-approved, under specific conditions. These conditions include limiting the pre-approval to aerial application of dispersants, and the pre-approval area includes offshore waters beyond the 10-meter isobath or three miles from the shoreline, whichever is further offshore.

The intent of this paper is to briefly summarize the potential environmental impacts on living natural resources resulting from dispersant use in offshore waters of Texas and Louisiana under these conditions of use. The approach taken is to discuss the distribution and life history of key species for each major resource category of concern (e.g., lesser scaup are representative of diving ducks that are present in offshore waters). The resource categories and key species are as follows, listed in groups according to the risk of being directly affected by the use of dispersants in offshore water:

Resources at **Low Risk** of Being Directly Affected by Dispersant Use
(because of predominance of inshore or nearshore distribution)

- Colonial sessile shellfish: American oyster
- Solitary infaunal shellfish: Southern quahog clam
- Anadromous fish: Gulf sturgeon
- Dabbling duck: Mallard
- Wading bird: Whooping crane
- Shorebird: Piping plover
- Raptor: Bald eagle

Resources at **Medium Risk** of Being Directly Affected by Dispersant Use
(because of deep-water preference or low numbers likely to be offshore)

- Benthic-spawning fish: Red snapper
- Diving bird: Brown pelican
- Seabird: Herring gull
- Marine reptile: Kemp's Ridley; green; loggerhead; hawksbill; and leatherback sea turtles
- Marine mammal: Fin whale (baleen); sperm whale (toothed); and bottlenose dolphin

Resources at **High Risk** of Being Directly Affected by Dispersant Use
(because of water surface or upper water column preference in offshore waters)

- Free-swimming shellfish: Brown shrimp (buoyant eggs); white shrimp (sinking eggs); and blue crab
- Water column-spawning fish: Gulf menhaden
- Diving duck: Lesser scaup

DISTRIBUTION AND LIFE HISTORY OF KEY SPECIES

For each key species, the distribution and life history are briefly summarized below:

Resources at **Low Risk** of Being Directly Affected by Dispersant Use
(because of predominance of inshore or nearshore distribution)

American oyster (colonial sessile shellfish)
- important commercial and recreational species
- mainly found shoreward of the 10 m contour
- eggs/larvae are planktonic, present in nearshore waters during March-November
- juveniles/adults are attached to hard substrates, often forming reefs

Southern quahog clam (solitary infaunal shellfish)
- important commercial and recreational species
- mainly found in intertidal and subtidal areas of estuaries and bays
- eggs/larvae are planktonic, present in nearshore waters during March-December
- juveniles/adults found in sand or seagrass bottoms, mainly burrowed in the substrate

Gulf sturgeon (anadromous fish)
- protected (threatened) subspecies, formerly a commercial species (caviar)
- occurs in Louisiana, doubtful in Texas, generally in large rivers and Gulf waters (depths not known)
- eggs sinking and adhesive in rivers, larvae also in rivers
- juveniles stay in rivers for at least one year, reach maturity in 10-15 years
- older juveniles/adults annually migrate between Gulf of Mexico (fall and winter) and large rivers (spring and summer), spawn in rivers
- mainly bottom-oriented but may occur throughout the water column, even breaking the surface during aerial leaps

Mallard (dabbling duck)
- recreational/managed species, most hunted duck in North America
- primarily occurs inshore and in coastal fresh and brackish waters
- some are present nearly year-round in Louisiana, others winter along Texas and Louisiana coasts, breeds in spring in Louisiana, nesting in uplands and marshes near water
- floats and swims on the water surface, feeds on marsh and aquatic vegetation

Whooping crane (shorebird)
- protected (endangered) species
- occurs around tidal flats and marshes
- all individuals (110 total) winter along Texas coast (November-April)
- feeds on bottom invertebrates

Piping plover (shorebird)
- protected species
- primarily occurs around intertidal sand flats, beaches, and river mouths
- winters on Gulf Coast, Texas is most important wintering area
- may occur in large flocks of shorebirds during peak migration periods

Bald eagle (raptor)
- protected (threatened) species
- occurs in vicinity of nearshore coastal zone
- present year round, breeds in winter and spring
- feeds on fish mainly, also on waterfowl, shorebirds, and carrion, may be attracted to dying or injured prey

Resources at **Medium Risk** of Being Directly Affected by Dispersant Use
(because of deep-water preference or low numbers likely to be offshore)

Red snapper (benthic-spawning fish)

- commercial and recreational species, major fishing grounds between the 100- 200 m contours
- adults occur to the 200 m contour, possibly up to 1200 m, juvenile nursery areas occur from the shoreline to the 40 m contour
- eggs/larvae are planktonic in offshore waters from June-October
- juveniles are bottom-oriented in estuaries and nearshore waters, moving deeper with age
- adults occur offshore, are bottom/structure oriented displaying some site fidelity

Brown pelican (diving bird)

- protected species
- rarely ventures more than 20 miles offshore
- present year-round, colonial breeder in winter, nests on small coastal islands near salt/brackish water
- may form large flocks while resting on water surface or feeding, feeds by diving from the air for fish

Herring gull (seabird)

- common species
- generally found nearshore, common in harbors
- winters along Gulf coast, may be present in all seasons except summer
- scavenger, also feeds on intertidal invertebrates, may be attracted to concentrations of dead/dying fishes or invertebrates

Sea turtles (marine reptiles)

- protected species (includes Kemp's Ridley, green, loggerhead, hawksbill, and leatherback sea turtles)
- occur in nearshore and offshore waters, generally inside the 100 m contour
- present year-round, may sporadically nest on sand beaches in Louisiana and Texas
- juveniles may be more common within the 20 m contour, possibly associated with drifting rafts of marine algae at the water surface
- feed on variety of bottom organisms and marine plants, and/or jellyfish in the water column
- must surface regularly to breathe

Fin whale (baleen whale)

- protected species, occurring in offshore waters generally outside of the 200 m contour
- winters in Gulf of Mexico, including waters offshore of Texas and Louisiana, resident populations may exist but have not been verified
- feeds with baleen on crustaceans and fish at or near the water surface
- surfaces to breathe

Sperm whale (toothed whale)

- protected species
- inhabits deep waters at the edge of or beyond the continental shelf, generally outside the 200 m contour
- some evidence of a Gulf of Mexico population, little migration
- feeds on giant squid and deep-water fishes
- surfaces to breathe

Bottlenose dolphin (toothed whale)

- protected species (marine mammal conservation act)
- occurs to the 200 m contour, more common in nearshore waters

- present year-round, breeds year-round
- feeds on fish and surfaces to breathe

Resources at **High Risk** of Being Directly Affected by Dispersant Use
(because of water surface or upper water column preference in offshore waters)

Brown shrimp (free-swimming shellfish)

- commercial species, composes 60% of the Gulf of Mexico shrimp fishery, which is the most valuable commercial fishery in the continental U.S. (total $)
- major fishing grounds are within the 100 m contour east of the Mississippi River and between the 60-100 m contours west of the river
- a seasonal fishing ground during spring, summer, and fall occurs within the 20 m contour west of the Mississippi River
- eggs/larvae are planktonic, mainly occur in offshore waters during September-June, perhaps year-round
- post-larvae are planktonic, migrating toward estuaries where they become bottom-oriented; peak recruitment to estuaries occurs during February-April
- juveniles are bottom-oriented in estuaries, migrating offshore towards the 20m contour and beyond during May-August, becoming adults enroute
- during offshore migration juvenile/adults concentrate near the bottom during day and near the water surface at night

White shrimp (free-swimming shellfish)

- commercial species, compose 27% of the Gulf of Mexico shrimp fishery
- fishing grounds in Louisiana and Texas are within the 20 m contour during spring, summer, and fall, offshore life stages may occur as far as the 40 m contour
- eggs sink to the bottom, larvae are planktonic, mainly in offshore water during April-September
- post-larvae are planktonic, migrating toward estuaries, becoming bottom-oriented when recruited to estuaries during May-November
- juveniles occur mainly in low salinity marshes, migrate offshore during August-December, becoming adults as they reach deeper waters
- juveniles occur near the water surface during offshore migrations

Blue crab (free-swimming shellfish)

- commercial species, mainly fished in inshore waters (bay, estuaries, rivers)
- generally occur to the 100 m contour, adult concentration areas and juvenile nursery grounds mainly within the 30 m contour
- eggs attached to females, larvae are planktonic in open ocean waters, later stages move toward estuaries and shallow nearshore waters, year round
- juveniles are bottom-oriented in estuaries and shallow nearshore waters
- adults are bottom-oriented from estuaries to offshore waters

Gulf menhaden (water column-spawning fish)

- commercial species, largest commercial fishery in the U.S. (by weight)
- mainly found within the 120 m contour and throughout the water column
- eggs/larvae/post-larvae are planktonic in offshore waters from September to May
- juveniles in estuaries and shallow nearshore waters, schooling in the water column, juveniles migrate offshore during October-January becoming adults
- adults spawn in the water column offshore (to 120 m contour), may migrate back into estuaries during March-April following spawning

Lesser scaup (diving duck)

- recreational/managed species
- occurs on nearshore waters at least 10 miles offshore and 12 m depth

- winters in coastal Texas and Louisiana
- can aggregate in large rafts, floats and swims on water surface feeds by diving for bottom invertebrates

IMPACT ASSESSMENT

For those resources likely to be present in the proposed pre-approval zone, an assessment of the likely impacts resulting from the application of dispersants to an oil slick is made. Key to this assessment is evaluating the exposure pathway and dose to the resource. For resources present in the water column, the primary exposure pathway is via oil dispersed into the water column, and the dose can be calculated using the concept of the toxicity index reported in ppm-hours. For resources present on the water surface, the primary exposure pathway is via direct exposure to treated oil slicks. The appropriate assessment approach is to compare likely impacts from exposure to treated versus untreated slicks.

The primary ecological concerns with the use of dispersants are:

- Effects of dispersed oil on marine life in the upper water column; and
- Effects on water-surface organisms (direct contact with the dispersant and effects of expanded oil slicks).

Impacts to Marine Life in the Upper Water Column

A comparison of the relative toxicity of crude oil versus dispersant by the NRC (1989) showed that the acute lethal toxicity of most dispersants is low compared to the constituents and fractions of crude oils and refined products. It was considered unlikely that, at the recommended application rates, dispersants would contribute significantly to the lethal or sublethal toxicities of dispersed oils. Thus, toxicity test results for petroleum oils should be used to assess impacts to water-column organisms. Table 1 lists toxicity test results for select crude oils (South Louisiana, Nigerian, Arabian light, Prudhoe Bay, and Cook Inlet) for fish and shellfish species, with emphasis on those species present in the Gulf of Mexico and tests for which the actual exposure concentration in the water over the exposure period was measured rather than calculated based on the volume of oil added (referred to as nominal concentrations).

Exposures to dispersed oil in open water are characterized by rapidly changing concentrations as the dispersed oil mixes laterally and vertically in the water column. Mackay and Wells (1983) have modeled the concentrations of dispersed oil in the water column at selected depths, for an oil slick 0.15 mm thick (many spills of varying size tend to reach a similar average thickness of about 0.1 mm within the first several hours, so this amount of oil is slightly conservative), assuming that the dispersion was 65 percent effective (although the actual range of optimal effectiveness under operational conditions is 30-60 percent, so the model is again conservative).

TABLE 1 LC50 toxicities and toxicity indices of crude oils for marine organisms.

Organism	Life History Stage	Crude Oil Type[1]	LC50 (ppm)	Time (hrs)	Toxicity Index[2] (ppm-hr)	Ref[3]
Bivalves						
Am. Oyster	eggs	C. Gulf of Mexico (CD)	4.0	96	92	1
	eggs	W. Gulf of Mexico (CD)	11.2	96	288	1
Quahog clam	eggs	S. Louisiana (WSF)	5.7	48	96	2
	eggs	various crude oils (WSF)	0.23-12	48	4-202	2
	larvae	S. Louisiana (WSF)	6.0	48	101	2
	larvae	various crude oils (WSF)	0.25->25	48	4->420	3
Gulf of Mex. Bivalves	adults	Arabian light (CD)	>2,500	--	--	3
Decapods						
Brown shrimp	post-larvae	W. Gulf of Mexico (WAF)	59.9	96	291	1
	post-larvae	W. Gulf of Mexico (CD)	52.7	96	222	1
	post-larvae	S. Louisiana (OWD)	>1,000	24	>8,400	4
	post-larvae	S. Louisiana (WSF)	>20	24	>168	4
	post-larvae	S. Louisiana (WSF)	>19.8	96	>665	4
	juveniles	S. Louisiana	19.8	48	333	5
	adults	S. Louisiana	19.8	48	333	4
	adults	Arabian light (CD)	>18.8	96	>632	3
White shrimp	post-larvae	C. Gulf of Mexico (WAF)	30.2	96	10	1
	post-larvae	C. Gulf of Mexico (CD)	13.8	96	147	1
	post larvae	W. Gulf of Mexico (WAF)	>100	96	>486	1
	post-larvae	W. Gulf of Mexico (CD)	18.6	96	78	1
	adults	Arabian Light (CD)	>16	96	>537	3
Blue crab	late-larvae	C. Gulf of Mexico (WAF)	70.7	96	24	1
	late-larvae	C. Gulf of Mexico (CD)	19.8	96	210	1
	late-larvae	W. Gulf of Mexico (WAF)	>100	96	>486	1
	late-larvae	W. Gulf of Mexico (CD)	90.8	96	383	1
	adults	Arabian light (CD)	49	96	1,643	3
Fish						
Atlantic menhaden	eggs/larvae	C. Gulf of Mexico (WAF)	42.1	96	163	1
	eggs/larvae	C. Gulf of Mexico (CD)	64.6	96	1,014	1
	eggs/larvae	W. Gulf of Mexico (WAF)	64.1	96	267	1
	eggs/larvae	W. Gulf of Mexico (CD)	90.8	96	341	1
Pacific herring	adults	Cook Inlet (WSF)	1.22	96	22-41	6
Spot	eggs/larvae	C. Gulf of Mexico (WAF)	70.7	96	273	1
	eggs/larvae	C. Gulf of Mexico (CD)	50.3	96	790	1
	eggs/larvae	W. Gulf of Mexico (WAF)	>100	96	>417	1
	eggs/larvae	W. Gulf of Mexico (CD)	68.2	96	1,046	1

[1] WAF = water accommodated fraction, OWD = oil in water dispersion, WSF = water soluble fraction, CD = chemically dispersed oil or oil and dispersant mixture

[2] Toxicity index calculated by multiplying ppm-hrs by 0.35, a conservative correction factor which accounts for evaporative loss (McAuliffe, 1987), except for index values reported for reference 1, where ppm-hrs were calculated by integration over time (Fucik et al., 1994).

[3] References:

1 Fucik *et al.,* 1994
2 Byrne and Calder, 1977
3 Shuba and Heikamp, 1989
4 Anderson *et al.,* 1974
5 Neff et al., 1976
6 Rice *et al.,* 1979

Figure 1 shows the predicted concentrations for selected depths over time based on their calculations. The plot shows that dispersed oil concentrations are not predicted to exceed I ppm at depths greater than 10 m. This calculation is the basis for the guideline that dispersants are not to be applied in waters less than 10 m, with I ppm selected as the threshold oil concentration above which effects to bottom organisms may be of concern.

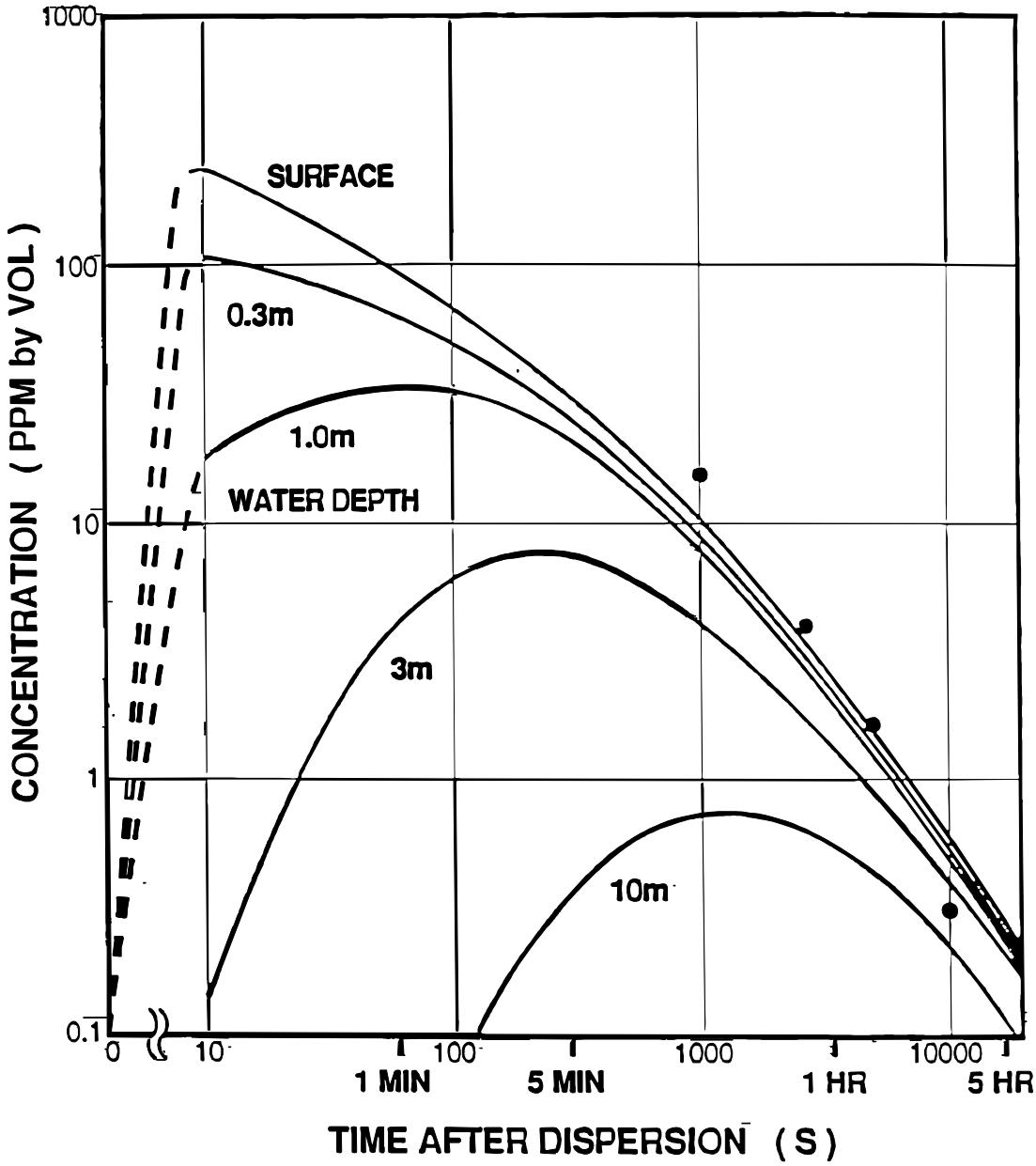

FIGURE 1: Predicted concentrations of dispersed oil under a slick 0.15mm thick, with a 65% dispersant effectiveness, for selected water depths and times after dispersant application. The dots are actual values from the California sea trial in 1979 (after Mackey and Wells, 1983).

The curves in Figure 1 show the speed at which dispersed oil concentrations are likely to decrease in open water, dropping to concentrations below I ppm after five hours. It is obvious that comparing laboratory toxicity test results based on a 24- or 96-hour test period to field conditions of exposure is a very difficult procedure. Anderson et al. (1982) used the concept of a toxicity index in ppm-hours as a means to express the exposure to water-column organisms. The ppm-hours are calculated using the mean exposure oil concentration in ppm multiplied by the test duration in hours. This same approach can be used to represent oil concentrations in the water column under a dispersed slick by integrating the oil concentrations over time. Thus, for the I m depth curve in Figure 1, the average concentration over the first minute is about 50 ppm, which would be about I ppm-hour (see Table 2). For the first 24 hours, the exposure is about 20 ppm-hours. Beyond 24 hours, there is little additional exposure because the concentrations are estimated to be much less than 0.1 ppm. Expressed in this manner (ppm-hours), exposure can then be compared with toxicity test results.

TABLE 2 Estimated exposure in the water column under a dispersed slick, based on the model results in Mackay and Wells (1983).

Time Interval	Oil Concentration (ppm)	Oil Exposure (ppm-hours)	Cumulative Oil Exposure (ppm-hours)
Water Depth 1.0 m			
1 minute	50	1.0	1.0
1-5 minutes	35	2.5	3.5
5-16.6 minutes	15	3	6.5
16.6-60 minutes	7	5	11.5
1-5 hours	1	4	15.5
5-24 hours	0.1	2	17.5
Water Depth 10 m			
1 minute	0	0	0
1-5 minutes	0.4	0.03	0.03
5-16.6 minutes	1.0	0.2	0.2
16.6-60	1.0	0.7	0.9
1-5 hours	0.4	1.6	2.5
5-24 hours	0.1	2.0	4.5

Based on the distribution and life history profiles of representative species, the organisms at greatest risk from the use of dispersants in waters greater than 10 m or at least 3 miles offshore are: young life stages of brown shrimp and white shrimp because their planktonic larvae occur in offshore waters; and blue crab and menhaden because of their planktonic larvae. Toxicity tests results for these species can be used as a guideline for the likely impacts to water-column organisms.

There are many problems associated with how toxicity tests are conducted for minimally soluble products such as petroleum, and the standard toxicity test conditions (static bioassays using nominal initial exposures) are not realistic in either the exposure concentration or duration of exposure. In spite of these problems, it is still useful to compare short-term toxicity data with likely exposures if both are expressed in ppm-hours. Table 1 lists LC50 data for oils and species of concern, reported in both ppm for a specific for a specific exposure period and as ppm-hours. The ppm-hours values have been multiplied by 0.35 (for 96-hour tests) or 0.75 (for 24-hour tests) following the suggestion of McAuliffe (1987) to correct for loss of the lighter components by evaporation. This correction factor increases the toxicity index for the 96- hour test by a factor of three. Nearly all of the values for the LC50 reported are much greater than 30-ppm-hours, the likely exposure in the top 1 m over the first 24 hours after dispersion. Essentially, the 24-hour

LC50 would have to be about 1.5 ppm to be equal to the calculated exposure I m under a treated slick over the first 24 hours.

There are very few toxicity tests for which the LC50 is reported for a 24-hour exposure. MMS recently completed dispersed oil toxicity tests with biological species indigenous to the Gulf of Mexico, using various test conditions (flow-through and static; acute and chronic), reporting LC50 and toxicity index data for 24- and 96-hour exposures (Fucik et al., 1994). Invertebrates have been shown to have high sensitivity to oil and oil-related compounds (NRC, 1986; Sprague et al., 1982), thus the early life stages of these organisms are likely to be the most sensitive of all water- column organisms. The toxicity indices for brown shrimp larvae and South Louisiana crude oil with a 24-hour exposure in Table I are all higher than the estimated exposure by a factor of five or more. For the toxicity tests recently sponsored by MMS, the toxicity of dispersed oils to the most sensitive life stages of shrimp and crabs, based on total hydrocarbon measured in the water, for a 24-hour exposure were all greater than 148 ppm-hours (Fucik et al., 1994). McAuliffe (1987) has compared the 24-hour exposures as measured during sea trials under actual slicks with 24-hour LC50 data (both expressed in ppm-hours), calculating the number of times that actual exposures would need to be increased to reach the LC50 value. This number ranged from a low of 115 for shrimp to a high of nearly 3,000 for herring larvae.

Figure 2 is a plot of the estimated oil exposure under a dispersed oil stick, based on the curve in Figure 1 and the data in Table 2. The cumulative oil exposure in ppm-hours was determined by summing the ppm-hours for each of the time intervals listed. Also shown on Figure 2 are the toxicity indices in ppm-hours for the 24-hour toxicity test results using dispersed oil from the MMS study, as reported in Fucik et al. (1994). This plot indicates that, for the assumptions in the Mackay and Wells (1983) model (listed above), the estimated oil exposure for the first 24 hours after dispersion at I meter under a dispersed slick is about an order of magnitude lower that the 24-hour toxicity index for the most sensitive species and life stages of concern in the Gulf of Mexico. At 10 meters, the difference is about two orders of magnitude.

Based on the comparison of the calculated and measured concentrations under a slick treated with dispersants with laboratory toxicity test results, a significant impact to water-column organisms is not expected to occur when dispersants are applied in offshore waters as specified in the pre-approval operations plan.

Effects on Water-Surface Organisms

There are two concerns with the use of dispersants related to organisms that use the water surface.- 1) effects from direct contact with the dispersant; and 2) increased risk of contact with the slick due to it's expansion after treatment. Direct contact is primarily of concern for birds because of the potential large numbers of individuals that could be Present and the preponderance of time they spend on the water surface. Of the key species listed above, brown pelican and lesser scaup are the types of birds at significant risk of direct impacts during dispersant application because they can be found in offshore waters. Regarding marine mammals and sea turtles, the National Marine Fisheries Service (NMFS) in a September 8, 1994 letter to the RRT VI in response to a request for a Section 7 consultation on dispersant use pre-approval determined that "the species under our purview are not likely to be adversely affected by the use of chemical countermeasures in response to an oil spill. Rather, the use of dispersants is expected to minimize adverse effects caused by the spill."

Most of the published data for birds were for tests conducted with oil and dispersed oil (NRC, 1989), rather than on the toxicity of dispersants alone. Thus, although the concern is always voiced that direct accidental spraying of birds with dispersants will cause negative effects, without data it is not possible to compare these effects with oil. To be accidentally sprayed, any birds would likely be in very close proximity to the targeted slick, thus they would be at a significant risk of being oiled. It is likely that being oiled would have greater consequences than being sprayed with dispersant. However, the guidelines in the pre-approval specify that dispersants are not to be applied where concentrations of birds are present.

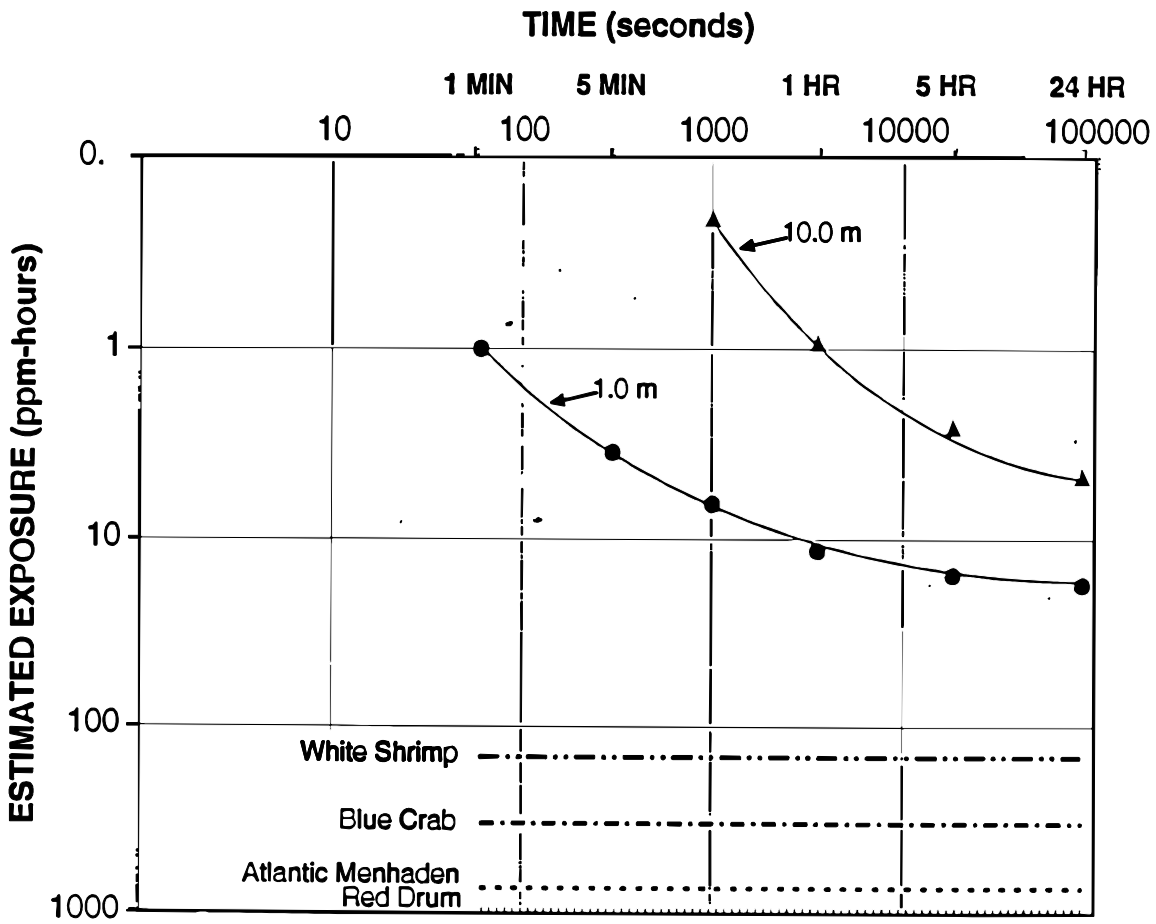

FIGURE 2: Estimated exposure in the water column under a dispersed slick, based on the data in TABLE 2. Also plotted are the toxicity indices for Gulf of Mexico species exposed to dispersed oil as reported in Fucik et al. (1994).

Increased risk of contact with expanding oil slicks after treatment is another concern. Treated slicks are likely to increase in size initially as the interfacial tension at the oil:water surface is reduced. In recent field trials in the United Kingdom, the treated slick increased in size, compared to the control slick, for the time period from 10 to 17 hours after treatment (Lunel, 1994). However, by 18 hours post- treatment, the treated slick had broken up and become smaller in area, compared to the control slick which remained as a coherent slick with thick areas of oil. This increased risk would be more of concern in enclosed bays or rivers where a large percentage of the surface area of a waterbody could be covered by an expanding slick. The actual times of expansion of a slick would be spill-specific, but the net effect of dispersant application is a reduction in the amount of oil on the water surface. Again, in an offshore setting, birds would have to be in close proximity to the oil slick with a high risk of being oiled anyway, for there to be a risk of contact with a dispersed slick.

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APPENDIX E- SECTION 7 CONSULTATION LETTER FROM THE UNITED STATES DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE

United States Department of the Interior

TAKE PRIDE IN AMERICA

JAN 9

FISH AND WILDLIFE SERVICE
Division of Ecological Services
17629 El Camino Real, Suite 211
Houston, Texas 77058

January 5, 1995

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md	
mvs	
mep	✓
mps	
moho	
mea	
ssc	✓
sec	

CDR Born, f.

Captain James W. Calhoun
Chief, Marine Safety Division
8th Coast Guard District
501 Magazine Street
New Orleans, Louisiana 70130

Dear Captain Calhoun:

Your letter dated September 2, 1994 requested a list of threatened and endangered species pursuant to Section 7 of the Endangered Species Act and our concurrence that the use of dispersants Gulf-wide to treat oil spills would not adversely affect these species. The Federal On-Scene Coordinator would be given authorization to use aerial dispersants in the pre-approval area off of Texas and Louisiana out to the Exclusive Economic Zone.

We provided you with a list of species for Texas Gulf waters on September 8, 1994. Lorna Patrick with the Panama City Field Office will provide you with a list for Louisiana.

We have coordinated the dispersant use program with Region 4, and both Region 2 (Texas) and Region 4 (Louisiana) of the U. S. Fish and Wildlife Service have reviewed RRT-6 and the bioassessment contained in this document. We concur with your finding of September 2, 1994 that use of dispersants in the manner described in RRT-6 is not likely to adversely affect threatened or endangered species in the Gulf of Mexico.

Brian Cain at this office has submitted separate comments on the RRT-6 procedures which should assist you in refining dispersant use decision-making for multiple applications of dispersants.

Thank you for the opportunity to comment on this program.

Sincerely,

Frederick T. Werner
Chief, Regulatory Activities

cc (with copy of September 2, 1994 request from CG):
G. Sekavec, DOI-Ofc of Environmental Policy & Compliance, POB 649, Albuquerque, NM 87103
Regional Director, FWS (ES-EC), ATTN: Rick Dawson, Region IV, Atlanta, GA
Lorna Patrick, Panama City FO, 1612 June Ave, Panama City, FL 32405
T. Schultz, Corpus Christi FO, CC St. Univ, Campus Bx 338, 6300 Ocean Dr Corpus Christ, TX
Russ Watson, Lafayette FO, 825 Kaliste Saloom Rd, Bldg 2, Ste 102, Lafayette, LA 70508

APPENDIX F - CONCURRENCE LETTER FROM THE NATIONAL MARINE FISHERIES SERVICE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive
St. Petersburg, FL 33702

SEP 15

September 8, 1994 F/SE013:CCC

Captain J.W. Calhoun
U.S. Coast Guard
RRT VI Co-Chair
Eight Coast Guard District
Hale Boggs Federal Building
501 Magazine St.
New Orleans, LA 70130-3396

Dear Captain Calhoun:

This responds to your September 1, 1994, letter regarding issuance of pre-spill authorization to Federal On-Scene Coordinators to use chemical countermeasures against oil spill within Region VI in the Gulf of Mexico. The area includes waters "from the ten meter isobath or three nautical miles, whichever is farthest from shore, to 200 nautical miles offshore; beginning from the Texas-Mexico border and extending through the state of Texas and Louisiana until the boundary between federal Regions VI and IV; excluding the areas off Galveston Texas referred to as "the Flower Gardens" and the "Stetson Bank"." Chemical countermeasures (dispersants) would be employed only when existing conditions precluded the physical removal of oil from the environment.

NMFS has previously (September 8, 1994) considered the effects of the use of dispersants as authorized under the National Contingency Plan for specified areas in the Gulf of Mexico. That informal consultation concluded that listed species under our purview are not likely to be adversely affected by the use of chemical countermeasures in response to an oil spill. Rather, the use of dispersants is expected to minimize adverse effects caused by the spill. There is no new information to change the basis for that conclusion. Therefore we concur with your assessment that the use of chemical countermeasures against oil spills in the designated area within Region VI is not likely to adversely affect threatened and endangered species under our jurisdiction. A list of the species that may be present in the area is enclosed for your information.

This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species or their critical habitat, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

If you have any questions please contact Colleen Coogan, Fishery Biologist, at 813/570-5312.

Sincerely,

Charles A. Oravetz

for Andrew J. Kemmerer
Regional Director

Enclosure
cc: F/SE02
F/PR8