Federal Region V Regional Response Team

Oil Spill Solidifier Preapproval- Contained within socks, booms, pillows

Under the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300) the Regional Response Team (RRT) may authorize the use of oil spill control agents that are on the National Product Schedule. Pursuant to various presentations on the products, and the additional written materials that the Science and Technology Sub-Committee of the RRT has reviewed, the Region V RRT will allow the use of the following products under limited approval and specific conditions explained below:

ALSOCUP

Aqua N-CAP Polymer

ClAgent

WASTE-SET #3200

WASTE-SET #3400

The Region V RRT has approved the use, in Region V, of socks, booms, pads, pillows or other device which completely surrounds and contains one of the solidifier products listed above subject to the following conditions:

a. Application of the solidifier product must be done in a manner that does not allow the solidifier product to be released from the sock, boom, pad, or pillow; and

b. The sock, boom, pad, or pillow is not left in the environment for more than one week after contact with oil; and

c. The sock, boom, or pillow must be recovered from the water within one week of contact with oil or depletion of solidifying capacity and properly disposed of.

d. This preapproval does not include preapproved use in tribal or Department of Interior managed lands.

Customers must be advised of these conditions to the approval of the solidifier products.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Bishop Henry Whipple Federal Building
1 Federal Drive
Fort Snelling, MN 55111-4056

IN REPLY REFER TO:

FWS-AES/TE

NOV 17 2010

Jason H. El-Zein
U. S. Environmental Protection Agency
Region 5, Emergency Response Branch 1
Superfund Division
77 West Jackson, SE-5J
Chicago, Illinois 60604

Dear Mr. El-Zein,

An identical letter is being sent to Captain Stephen Torpey, U. S. Coast Guard.

This replies to your letter dated May 5, 2010, requesting our concurrence on your determination that the proposed preauthorized use with conditions of five solidifier products in emergency oil spill response throughout Regional Response Team Region V (RRTV) "is not likely to adversely affect" listed species or critical habitat pursuant to the Endangered Species Act of 1973, amended (ESA). Preauthorization is defined here as approval by the RRTV to use the selected chemical countermeasures from the Subpart J National Product Schedule of the National Contingency Plan. This chemical countermeasure approval does not eliminate the need for the responders to consult with our agency on the potential for adverse effects to federally listed species or the potential for adverse modification to federally designated critical habitat from the emergency oil spill response as a whole. We have reviewed the materials forwarded to this office on the solidifier products and conducted some independent literature review. We concur with your determination that federally listed species, candidate species, and critical habitat are not likely to be adversely affected by the conditional preauthorization to use solidifier products within RRTV.

The action under review is the preauthorization for use of enclosed or contained solidifier products in responding to oil spills within the geographic area of RRTV. The federally listed endangered, threatened, and candidate species considered for this review include the aquatic and aquatic dependent species that occur in States of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin (see attached list). The conditions for the preauthorized use require that the solidifier product be enclosed or contained within socks, booms, or pillows that does not allow the free product to be released into the environment, that the enclosed products be removed from the water after use, and that the enclosed products are not be left in the water for more than one week. The five solidifier products under consideration include ALSOCUP, Aqua N-CAP Polymer, CIAgent, WASTE-SET #3200, and WASTE-SET #3400. There are two aspects

germane to our section 7 review: direct toxicity due to exposure to the solidifier product should it be accidently released into the environment from the enclosed products and indirect effects due to changed environmental conditions resulting from an accidental release of solidifier products.

First, to assess the effects of toxicity from direct exposure, we relied upon the freshwater fish toxicity test results available through the RRT and a review of the scientific literature. Our analysis indicates that the selected solidifier products are acutely toxic at high concentrations, but only at levels above what would be encountered from the prescribed application during an emergency response (Fingas 2008). The endpoints used in the toxicological tests were various species of fish. Although we do not know if fish are among the most sensitive organism, we did not find any contradictory data or information to suggest that aquatic invertebrates or aquatic dependent wildlife are toxicologically more sensitive than fish. Therefore, we concur that direct exposure and ingestion of the subject solidifier products are unlikely to adversely affect listed species.

Second, we assessed the indirect effects to listed species and critical habitat as a result of changing the baseline conditions. The baseline condition for this action is the oiled environment without the controlled application of enclosed or contained solidifier products. The application of solidifier products in oiled environments is expected to change the baseline condition should there be an accidental release by a tear or rupture in the socks, pillows, or booms containing the solidifier product. The change to the baseline condition includes creating thicker solid deposits of oil that float and are contained to a smaller area plus any of the incidentally released free solidifier product within the immediate area. Organisms including federally listed aquatic and aquatic dependent species are less likely to be exposed as the area containing oil and the solidifier products will be reduced. However, short term exposure to the thicker floating oil deposits and free solidifier product, although not likely to be more toxic than the oil itself, may present new physical barriers for the federally listed and candidate species, which could alter the normal behavior of organisms. We believe, based on the best available information, that exposure to thicker oil deposits and any free solidifier product will not elicit, a detectable negative response in listed species beyond the response expected from exposure or contact with the oil without the use of solidifier products. This includes for example, free solidifier product from controlled uses is not expected to adhere to the skin, fur, or feathers of animals to the extent that it affects thermal regulation by altering natural oils of the exposed organisms beyond the exposure to the untreated oil.

The new condition resulting from an accidental release with the proper use of solidifier products may also modify the baseline conditions within designated critical habitat and potentially affect associated primary constituent elements (see attached matrix). We believe, based on the best available information, that any potentially exposed primary constituent elements will not be further adversely affected. That is, we do not anticipate any further detectable adverse impacts to critical habitat from the application of contained solidifier products in an oiled environment.

Note, activities such as clearing vegetation for roads, construction of boat ramps, access to the oiled environment, physical disturbance to shorelines, construction of groundwater wells, or

discharge of wastewaters during the response effort is not part of the proposed action, and thus, was not contemplated in this section 7 review. To comply with the ESA, further section 7 review is necessary before such actions are undertaken. The request for preauthorized use of solidifier products in waters part of the National Wildlife Refuge System within RRTV is under review. The results of Refuge preauthorized use of solidifier products will be transmitted under a separate letter. This precludes the need for further consultation on this action (preauthorization of use of solidifiers) as required under Section 7 of the Endangered Species Act of 1973, as amended. Should the project be modified or new information indicate endangered species may be affected, consultation should be initiated.

Thank you for the opportunity to consult with you on this matter. Please feel free to call Jennifer Szymanski (608-783-8455) for endangered species related questions or Mike Coffey (309-757-5800 x206) for oil response related questions.

Sincerely,

T. J. Miller
Chief, Endangered Species

References:

Fingas, M. 2008. A review of the literature related to oil spill solidifiers 1990 – 2008. Report for Prince William Sound Regional Citizens' Advisory Council, Anchorage, AK by Merv Fingas, Spill Science, Edmonton, Alberta. Contract number 955.08.03

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Bishop Henry Whipple Federal Building
1 Federal Drive
Fort Snelling, MN 55111-4056

IN REPLY REFER TO:

FWS-AES/TE

NOV 17 2010

Captain Stephen Torpey
Chief, Office of Incident Management
U.S. Coast Guard, Ninth District (drm)
1240 E. 9th Street, Room 2007C
Cleveland, Ohio 44199-2060

Dear Captain Torpey,

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be accidently released into the environment from the enclosed products and indirect effects due to changed environmental conditions resulting from an accidental release of solidifier products.

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T. J. Miller
Chief, Endangered Species

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RRTV Solidifier Product PreAuthorization
Critical Habitat Aquatic and Aquatic Dependent Species
Adverse Modification Analysis Matrix

Hines Emerald Dragonfly Critical Habitat (Illinois Units)

Primary Constituent Element	*Baseline Condition*	*Action Condition*	*Baseline Modified*	*Adverse Effects*	*Comments*
HINES EMERALD DRAGONFLY					
Organic soils (histosols, or with organic surface horizon) overlying calcareous substrate predominantly dolomite and limestone bedrock)	Liquid oil	Solid oil	No	No	
Calcareous water from intermittent seeps and springs and associated shallow, small, slow flowing streamlet channels, rivulets, and/or sheet flow within fens	Liquid oil	Solid oil	Yes	No	Temporary plugging of shallow groundwater recharge pathways
Emergent herbaceous and woody vegetation for emergence facilitation and refugia	Liquid oil	Solid oil	No	No	
Occupied burrows maintained by crayfish for refugia	Liquid oil	Solid oil	Yes	No	Temporary plugging up of chimney openings
Prey base of aquatic macroinvertebrates, including mayflies, aquatic isopods, caddisflies, midge larvae, and aquatic worms	Liquid oil	Solid oil	No	No	
Natural plant communities near the breeding/larval habitat which may include fen, marsh, sedge meadow, dolomite prairie, and the fringe (up to 100meters) of bordering shrubby and forested areas with open corridors for movement and dispersal	Liquid oil	Solid oil	No	No	
Prey base of small flying insect species (e.g., dipterans)	Liquid oil	Solid oil	No	No	

RRTV Solidifier Product PreAuthorization
Critical Habitat Aquatic and Aquatic Dependent Species
Adverse Modification Analysis Matrix

Piping Plover Critical Habitat (Illinois, Indiana, Michigan, Minnesota Units)

Primary Constituent Element	*Baseline Condition*	*Action Condition*	*Baseline Modified*	*Adverse Effects*	*Comments*
PIPING PLOVER					
Sand, gravel, or cobble beaches or spits	Liquid oil	Solid oil	No	No	
Shoreline length ≥ 0.2 kilometers of gently sloping sand beach	Liquid oil	Solid oil	No	No	
Sand beach area of ≥ 2 hectares	Liquid oil	Solid oil	No	No	
≥ 50 meters where beach width is ≥ 7 meters or ≥ 7 meters sand and cobble between dune and treeline	Liquid oil	Solid oil	No	No	
Distance from waterline to treeline ≥ 50 meters	Liquid oil	Solid oil	No	No	
Sparse vegetation with ≤ 50% herbaceous or woody cover	Liquid oil	Solid oil	No	No	
Protective cover - small herbaceous patches, cobble, gravel, or debris (driftwood, wrack, root masses, dead shrubs)	Liquid oil	Solid oil	No	No	
Potential for the dynamic ecological processes that create and maintain habitat (*e.g.*, erosion, accretion, plant succession, lake-level fluctuations; episodic storm events)	Liquid oil	Solid oil	Yes	No	Not a significant change to natural erosion or accretion processes
Low level of disturbance from human activities or domestic animals	Liquid oil	Solid oil	No	No	

RRTV Solidifier Product PreAuthorization
Critical Habitat Aquatic and Aquatic Dependent Species
Adverse Modification Analysis Matrix

Topeka Shiner Critical Habitat (Minnesota Units)

Primary Constituent Element	*Baseline Condition*	*Action Condition*	*Baseline Modified*	*Adverse Effects*	*Comments*
TOPEKA SHINER					
Streams most often with permanent flow, but that can become intermittent during dry periods	Liquid oil	Solid oil	Yes	No	Temporary blockage of water table recharge through stream bed during dry periods
Side-channel pools and oxbows either seasonally connected to a stream or maintained by groundwater inputs, at a surface elevation equal to or lower than the bankfull discharge stream elevation. The bankfull discharge is the flow at which water begins leaving the channel and flowing into the floodplain; this level is generally attained every 1 to 2 years. Bankfull discharge, while a function of the size of the stream, is a fairly constant feature related to the formation, maintenance, and dimensions of the stream channel	Liquid oil	Solid oil	No	No	
Streams and side-channel pools with water quality necessary for unimpaired behavior, growth, and viability of all life stages. The water quality components can vary seasonally and include—temperature (1 to 30°Centigrade), total suspended solids (0 to 2000 ppm), conductivity (100 to 800 mhos), dissolved oxygen (4 ppm or greater), pH (7.0 to 9.0), and other chemical characteristics	Liquid oil	Solid oil	No	No	
Living and spawning areas for adult Topeka shiner with pools or runs with water velocities less than 0.5 meters/second (approx. 20 inches/second) and depths ranging from 0.1 to 2.0 meters (approximately 4 to 80 inches)	Liquid oil	Solid oil	No	No	
Living areas for juvenile Topeka shiners with water velocities less than 0.5 meters/second (approx. 20 inches/second) with depths less than 0.25 meters (approx. 10 inches) and moderate amounts of instream aquatic cover, such as woody debris, overhanging terrestrial vegetation, and aquatic plants	Liquid oil	Solid oil	No	No	

Sand, gravel, cobble, and silt substrates with amounts of fine sediment and substrate embeddedness that allows for nest building and maintenance of nests and eggs by native *Lepomis* sunfishes (green sunfish, orangespotted sunfish, longear sunfish) and Topeka shiner as necessary for reproduction, unimpaired behavior, growth, and viability of all life stages	Liquid oil	Solid oil	No	No	
An adequate terrestrial, semiaquatic, and aquatic invertebrate food base that allows for unimpaired growth, reproduction, and survival of all life stages	Liquid oil	Solid oil	No	No	
A hydrologic regime capable of forming, maintaining, or restoring the flow periodicity, channel morphology, fish community composition, offchannel habitats, and habitat components described in the other primary constituent elements	Liquid oil	Solid oil	Yes	No	Temporary obstruction for stream channel connectivity
Few or no nonnative predatory or nonnative competitive species present	Liquid oil	Solid oil	No	No	

AQUATIC AND AQUATIC DEPENDENT
ENDANGERED, THREATENED, PROPOSED, AND CANDIDATE SPECIES
PARTS OF U.S. FISH AND WILDLIFE SERVICE REGION 3
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
October 2010

MAMMALS

Gray bat (*Myotis grisescens*) Status: Endangered, Habitat: Caves, Range in RRTV: Illinois, Indiana, Missouri

Indiana bat (*Myotis sodalis*) Status: Endangered, Habitat: Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula. Range in RRTV: Illinois, Indiana, Iowa, Michigan, Missouri, Ohio

BIRDS

Least tern (*Sterna antillarum*) Status: Endangered, Habitat: Bare alluvial islands and dredged spoil islands, Range in RRTV: Illinois, Indiana, Iowa, Missouri

Piping plover (*Charadrius melodus*) - Great Lakes population Status: Endangered, Habitat: beaches along shorelines of the Great Lakes Range in RRTV: Michigan, Ohio, Wisconsin Great Plains population Status: Threatened Habitat: Bare alluvial and dredged spoil islands; sand and gravel areas around fly ash ponds, beaches, Range in RRTV: Iowa, Missouri, and Lake of the Woods, Minnesota

Whooping Crane (*Grus americana*) Status: nonessential, experimental population, Habitat: open wetlands and lakeshores, Range in RRTV: Iowa, Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin are within the Nonessential, Experimental Population area

REPTILES

Copperbelly water snake (*Nerodia erythrogaster neglecta*) Status: Threatened, Habitat: wooded and permanently wet areas such as oxbows, sloughs, brushy ditches and floodplain woods Range in RRTV: Indiana, Michigan, Ohio

Eastern massasauga (*Sistrurus catenatus catenatus*) Status: Candidate, Habitat: wetlands and uplands, Range in RRTV: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio,Wisconsin

Lake Erie water snake (*Nerodia sipedon insularum*) Status: Threatened, Habitat: shorelines of islands in western Lake Erie Range in RRTV: Ohio

FISHES

Pallid sturgeon (*Scaphirhynchus albus*) Status: Endangered, Habitat: Mississippi River downstream of its confluence with the Missouri River; Ohio River below Dam #53; Missouri River Range in RRTV: Illinois, Iowa, Missouri

Scioto madtom (*Noturus trautmani*) Status: Endangered, Habitat: stream riffles of moderate flow over sandy gravel bottom; may be extinct, Range in RRTV: Ohio

Topeka shiner (*Notropis topeka*) Status: Endangered, Critical Habitat designated in Minnesota and Iowa, Habitat: Small prairie streams, Range in RRTV: Minnesota, Iowa, Missouri

MUSSELS

Clubshell (*Pleurobema clava*) Status: Endangered, Habitat: Found in coarse sand and gravel areas of runs and riffles within streams and small rivers, Range in RRTV: Indiana, Michigan, Ohio

Cracking pearlymussel (*Hemistena lata) (=Lastena l.*) Status: Endangered, Habitat: Medium to large rivers in mud, sand, or gravel, Range in RRTV: Indiana (possibly extirpated)

Fanshell (*Cyprogenia stegaria) (=C. irrorata*) Status: Endangered, Habitat: Found in areas of packed sand and gravel at locations in a good current Range in RRTV: Illinois, Indiana, Ohio

Fat pocketbook (*Potamilus capax) (=Proptera c.*) Status: Endangered, Habitat: Large rivers in slow-flowing water Range in RRTV: Illinois, Indiana, Missouri

Higgins eye pearly mussel (*Lampsilis higginsii*) Status: Endangered, Habitat: Mississippi River and some of its larger northern tributaries (*i.e.,* St. Croix and Wisconsin Rivers) in gravel or sand, Range in RRTV: Illinois, Iowa, Minnesota, Missouri, Wisconsin

Northern riffleshell (*Epioblasma torulosa rangiana*) Status: Endangered, Habitat: Large streams and small rivers in firm sand of riffle areas; also occurs in Lake Erie, Range in RRTV: Indiana, Michigan, Ohio, reintroduced into Illinois

Orange-foot pimpleback pearlymussel (*Plethobasus cooperianus*) Status: Endangered, Habitat: Gravel bars with strong currents in large rivers, Range in RRTV: Illinois, Indiana (possibly extirpated)

Pink mucket pearlymussel (*Lampsilis abrupta) (=L. orbiculata*) Status: Endangered, Habitat: The lower Mississippi and Ohio Rivers and their larger tributaries, Range in RRTV: Illinois, Indiana, Missouri, Ohio

Purple cat's paw pearlymussel (*Epioblasma (=Dysnomia) obliquata obliquata) (=E. sulcata sulcata*) Status: Endangered, Habitat: Gravel riffles of medium to large rivers, Range in RRTV: Ohio

Rabbitsfoot (*Quadrula cylindrica cylindrica*) Status: Candidate, Habitat: Rivers, Range in RRTV: Illinois, Indiana, Missouri, Ohio

Rayed Bean (*Villosa fabalis*) Status: Candidate, Habitat: Large rivers, Range in RRTV: Indiana, Michgian, Ohio

Ring pink mussel (=golf stick pearly) (*Obovaria retusa*) Status: Endangered, Habitat: Large rivers in sand or gravel, Range in RRTV: Indiana (possibly extirpated)

Rough pigtoe (*Pleurobema plenum*) Status: Endangered, Habitat: Medium to large rivers in sand or gravel, Range in RRTV: Indiana

Sheepnose (*Plethobasus cyphyus*) Status: Candidate, Habitat: Large rivers, Range in RRTV: Illinois, Indiana, Iowa, Minnesota, Missouri, Ohio, and Wisconsin

Spectaclecase (*Cumberlandia monodonta*) Status: Candidate, Habitat: Large rivers, Range in RRTV: Illinois, Iowa, Minnesota, Missouri, and Wisconsin

Tubercled-blossom pearlymussel (*Epioblasma (=Dysnomia) torulosa torulosa*) Status: Endangered, Habitat: Gravel riffles in medium to large rivers, Range in RRTV: Indiana (possibly extirpated)

White cat's paw pearlymussel (*Epioblasma obliquata perobliqua*) Status: Endangered, Habitat: Firm sand or gravel riffles in small streams and medium to large rivers, Range in RRTV: Ohio, Indiana (possibly extirpated)

White wartyback pearlymussel (Plethobasus cicatricosus) Lead: Region 4 Status: Endangered Habitat: Large rivers in gravel Range in RRTV: Indiana (possibly extirpated)

Winged mapleleaf (*Quadrula fragosa*) Status: Endangered, Habitat: Medium to large rivers in mud, sand, or gravel, Range in RRTV: Minnesota, Missouri, Wisconsin

INSECTS

Hines emerald dragonfly (*Somatochlora hineana*) Status: Endangered, Habitat: Spring fed wetlands, wet meadows and marshes; calcareous streams & associated wetlands overlying dolomite bedrock, Range in RRTV: Illinois, Michigan, Missouri, Wisconsin

Hungerford's crawling water beetle (*Brychius hungerfordi*) Status: Endangered, Habitat: Cool riffles of clean, slightly alkaline streams; known to occur in only 3 isolated locations, Range in RRTV: Michigan

Mitchell's satyr butterfly (*Noenympha mitchelli mitchelli*) Status: Endangered Habitat: Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs, Range in RRTV: Indiana, Michigan, Ohio

CRUSTACEANS

Illinois cave amphipod (*Gammarus acherondytes*) Status: Endangered, Habitat: cave streams, Range in RRTV: Illinois (currently found in 3 caves)

PLANTS

Decurrent false aster (*Boltonia decurrens*) Status: Threatened, Habitat: Disturbed alluvial soils (Mississippi and Illinois River alluvial floodplain), Range in RRTV: Illinois, Missouri

Dwarf lake iris (*Iris lacustris*) Status: Threatened, Habitat: Partially shaded sandy-gravelly soils on lakeshores, Range in RRTV: Michigan, Wisconsin

Eastern prairie fringed orchid (*Platanthera leucophaea*) Status: Threatened, Habitat: Mesic to wet prairies and meadows, Range in RRTV: Illinois, Iowa, Michigan, Ohio, Wisconsin

Fassett's locoweed (*Oxytropis campestris* var. *chartaceae*) Status: Threatened, Habitat: Open sandy lakeshores, Range in RRTV: Wisconsin

Houghton's goldenrod (*Solidago houghtonii*) Status: Threatened, Habitat: Sandy flats along Great Lakes shores, Range in RRTV: Michigan

Michigan monkey-flower (*Mimulus glabratus* var. *michiganensis*) Status: Endangered, Habitat: Soils saturated with cold flowing spring water; found along seepages, streams and lakeshores, Range in RRTV: Michigan

Minnesota dwarf trout lily (*Erythronium propullans*) Status: Endangered, Habitat: North facing slopes & floodplains in deciduous forests, Range in RRTV: Minnesota

Price=s potato-bean (*Apios priceana*) Status: Threatened, Habitat: Wet floodplain forests, shrubby swamps, Range in RRTV: Illinois (possibly extirpated)

Running buffalo clover (*Trifolium stoloniferum*) Status: Endangered, Habitat: Disturbed bottomland meadows; disturbed sites that have shade during part of each day, Range in RRTV: Indiana, Missouri, Ohio

Virginia spiraea (*Spiraea virginiana*) Status: Threatened, Habitat: Stream banks and floodplains, Range in RRTV: Ohio

Western prairie fringed orchid (*Platanthera praeclara*) Status: Threatened, Habitat: Wet prairies & sedge meadows, Range in RRTV: Iowa, Minnesota, Missouri