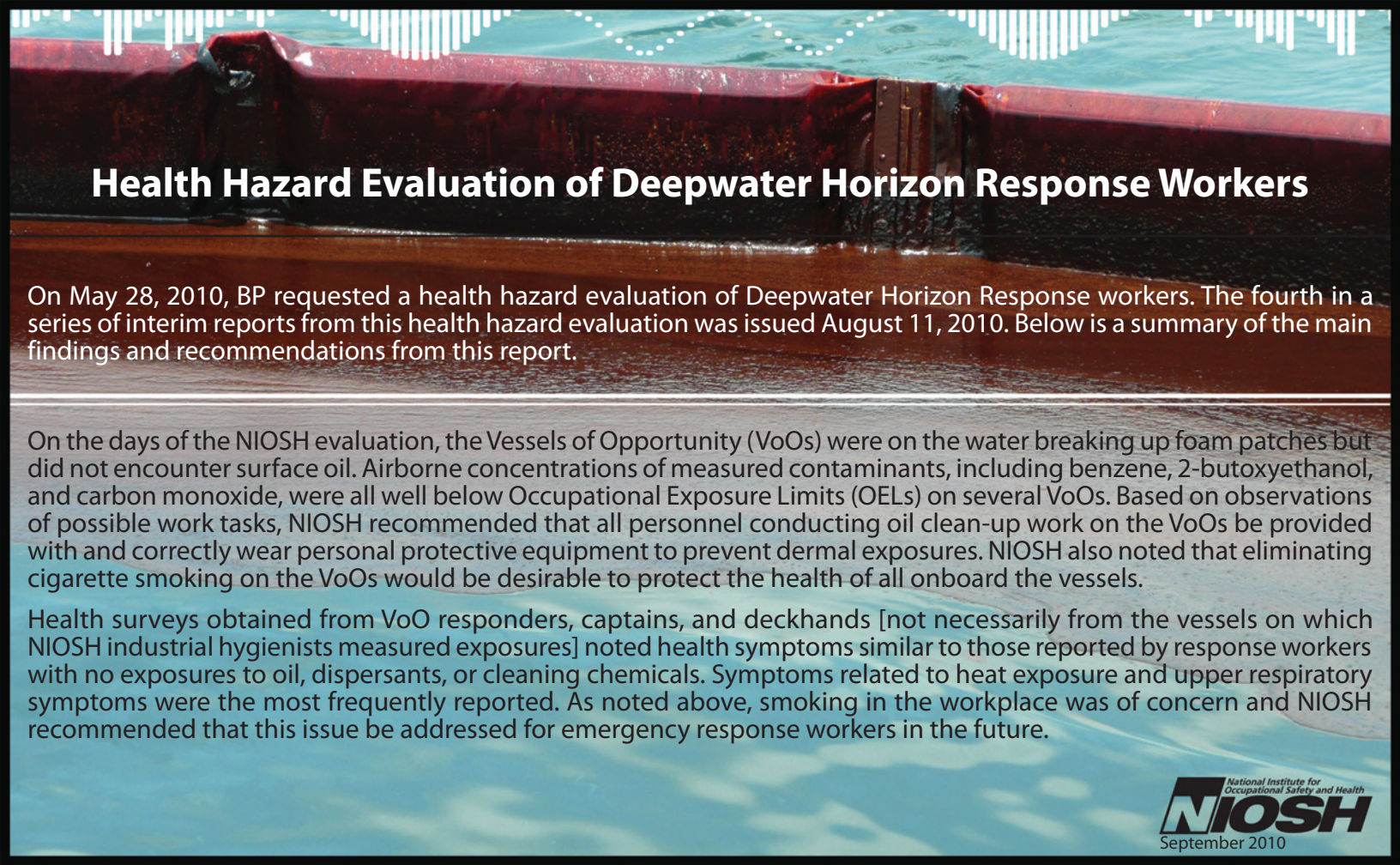


Health Hazard Evaluation of Deepwater Horizon Response Workers

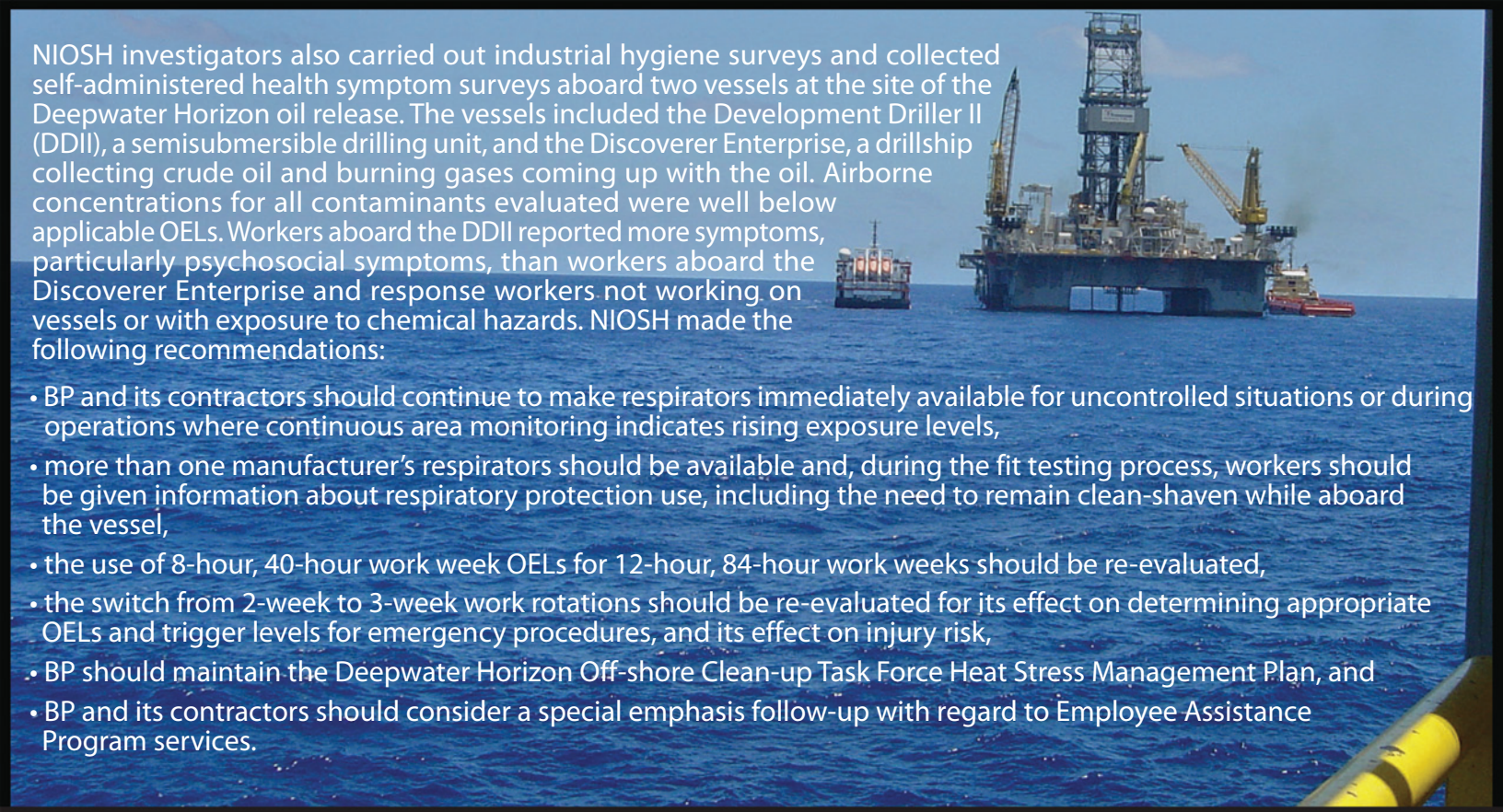
On May 28, 2010, BP requested a health hazard evaluation of Deepwater Horizon Response workers. The fourth in a series of interim reports from this health hazard evaluation was issued August 11, 2010. Below is a summary of the main findings and recommendations from this report.

On the days of the NIOSH evaluation, the Vessels of Opportunity (VoOs) were on the water breaking up foam patches but did not encounter surface oil. Airborne concentrations of measured contaminants, including benzene, 2-butoxyethanol, and carbon monoxide, were all well below Occupational Exposure Limits (OELs) on several VoOs. Based on observations of possible work tasks, NIOSH recommended that all personnel conducting oil clean-up work on the VoOs be provided with and correctly wear personal protective equipment to prevent dermal exposures. NIOSH also noted that eliminating cigarette smoking on the VoOs would be desirable to protect the health of all onboard the vessels.

Health surveys obtained from VoO responders, captains, and deckhands [not necessarily from the vessels on which NIOSH industrial hygienists measured exposures] noted health symptoms similar to those reported by response workers with no exposures to oil, dispersants, or cleaning chemicals. Symptoms related to heat exposure and upper respiratory symptoms were the most frequently reported. As noted above, smoking in the workplace was of concern and NIOSH recommended that this issue be addressed for emergency response workers in the future.

National Institute for Occupational Safety and Health
NIOSH

September 2010



NIOSH investigators also carried out industrial hygiene surveys and collected self-administered health symptom surveys aboard two vessels at the site of the Deepwater Horizon oil release. The vessels included the Development Driller II (DDII), a semisubmersible drilling unit, and the Discoverer Enterprise, a drillship collecting crude oil and burning gases coming up with the oil. Airborne concentrations for all contaminants evaluated were well below applicable OELs. Workers aboard the DDII reported more symptoms, particularly psychosocial symptoms, than workers aboard the Discoverer Enterprise and response workers not working on vessels or with exposure to chemical hazards. NIOSH made the following recommendations:

- BP and its contractors should continue to make respirators immediately available for uncontrolled situations or during operations where continuous area monitoring indicates rising exposure levels,
- more than one manufacturer's respirators should be available and, during the fit testing process, workers should be given information about respiratory protection use, including the need to remain clean-shaven while aboard the vessel,
- the use of 8-hour, 40-hour work week OELs for 12-hour, 84-hour work weeks should be re-evaluated,
- the switch from 2-week to 3-week work rotations should be re-evaluated for its effect on determining appropriate OELs and trigger levels for emergency procedures, and its effect on injury risk,
- BP should maintain the Deepwater Horizon Off-shore Clean-up Task Force Heat Stress Management Plan, and
- BP and its contractors should consider a special emphasis follow-up with regard to Employee Assistance Program services.

To read Interim Report #4 and view updates on this health hazard evaluation visit **http://www.cdc.gov/niosh/topics/oilspillresponse/gulfspillhhe.html.**

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