

## EXECUTIVE SUMMARY

The Health and Safety (H&S) Task Force of the NWAC/RRT10 was one of eight task forces chartered by the RRT Executive Committee on February 3, 2023. **The H&S Task Force was assigned four tasks:**

1. Review the Northwest Regional Contingency Plan (NWRCP) health and safety sections to identify the need (and how) to incorporate the NRT Emergency Responder Health Monitoring and Surveillance (ERHMS) System into the plan;
2. Create health and safety messaging for responders and public regarding oil-chemical exposures;
3. Create a list of health subject matter experts to be called upon during a spill response; and
4. Evaluate the need for development/use of Public Health Assessment Units in responses under the NWRCP.

The work of the H&S Task force, assigned tasks, and deliverables are described generally in this summary, and in detail within the formal report which is still under preparation at this time.

### Task Force Operations

A total of 4 people originally signed up for the H&S Task Force, and a total of twenty-two calls were convened between March and August 2023 to accomplish the work. In addition, one special session was held June 8 with the California Dept. of Fish and Wildlife OSPR and RRT 9 Public Health Assessment Unit (PHA Unit) “working group” (participants listed below) to coordinate and discuss parallel efforts to address potential public health exposures during oil spills by RRT Regions 9 and 10. The H&S Task Force facilitator briefed the group’s progress to the NWAC and the RRT 10 steering committee on 29 May and 27 July, 2023, respectively.

### Basis for Task Force Establishment and Organization of Work

In chartering the H&S Task Force, the RRT 10/NWAC recognized the potential for oil spill exposures to cause long-term harm in workers and the public even when exposed to low (below action levels in some cases) concentrations of contaminants. Because the implications of this are profound, the two main sections of this report, **Protecting Worker Health** (Task 1) and **Protecting Public Health** (Task 4) are introduced with a synopsis of the science to lay a foundation for our reviews and evaluations. Key to understanding this long-term harm is:

- the role of hypersensitivity with early warning signs and symptoms of potential over exposure as an assessment tool (which first appears in the March 2012 revisions to OSHA 1910.1200 Appendix A);
- the recognition of complex mixtures of chemicals as health hazards for which PELs are unreliable indicators of health risk (which also first appears in the March 2012 revisions);
- the realizations/admissions in the NRT ERHMS guidance that not all exposure assessments require collection of quantitative data, but most assessments include some element of environmental monitoring—and that worker exposures to hazardous substances may often go undocumented and unreported; and
- a 2022 court ruling that employers do not have a legal duty to initiate a health monitoring and surveillance program such as an ERHMS Unit (*Fairley v BP*).

## Summary of Work Completed to Date

### *Protecting Worker Health (Task 1)*

The NRT ERHMS framework was first reviewed to understand the persistent gaps/deficiencies and the NRT remedies, critical elements, and pathways to integrate an ERHMS Unit into the ICS structure, and new terms such as “uncertain exposures” and “complex mixtures of chemicals” (which were given working definitions for this report). The NRT ERHMS guide for key decision makers is an excellent concise summary and is provided in **Appendix A**. Since the “signs and symptoms” of potential over exposure are key to assessing health risk from uncertain exposures and presence of complex mixtures of chemicals, the discovery of the mechanism of hypersensitivity and the corresponding reliable new tools for assessing environmental exposure sensitivities were examined closely (provided in **Appendix B**), of which chemical sensitivities/intolerances are part, and the need for the ERHMS Unit to be led by Occupational and Environmental medicine professionals.

Next, after considering several reasons to justify establishing a separate ERHMS Unit and where to site it within the ICS structure, the NWRCP was reviewed to determine if it supported key elements of the ERHMS System to conduct and track worker health monitoring from pre-through post-deployment and to track population trends with medical surveillance to intervene early in real-time during illness outbreaks. Review results are summarized in Table 1 below (also in **Appendix C**) and show where an ERHMS Unit could be integrated into the NWRCP. A sample ERHMS decision matrix was also developed to aid in implementation (**Appendix D**).

And finally, even though the RRT 10/NWAC could integrate an ERHMS Unit into responses conducted under the NWRCP without any law changes, some changes would be necessary to create a legal duty for employers to initiate and conduct health monitoring and surveillance of employees. To understand what this would entail, the following seven areas of persistent gaps and deficiencies in federal and state HAZWOPER standards were identified—definitions; elements of an emergency response plan; skilled support personnel; training; a medical monitoring and surveillance program; recordkeeping; and post-emergency response workers—to determine what changes may be needed to support an ERHMS Unit. Results of this regulatory gap analysis are presented in summary form (Table 2) with suggested language in detail for federal (and Idaho and Oregon) standards in **Appendix E** and for Washington standards in **Appendix F**. Even in the absence of regulatory changes to state and federal occupational safety regulations, a clear policy on the use of available tools within incident command responses would provide clear support for the protection of responder health.

### Recommendations for Protecting Worker Health

In general, support of the ERHMS use in the NW should be increased. To mark a foundational change in the approach of protecting worker and public health, a clear statement is needed in the NWRCP, repeated in all ACPs, that recognizes the potential for oil spill exposures to cause long-term harm to workers and the public even when exposed to low action levels and that further states a preference for long-term health monitoring and surveillance of people who work in an on-

site field capacity during oil spills and for community health monitoring and surveillance during oil spills.

To make this actionable, the H&S Task Force recommends that the RRT 10/NWAC develop a streamlined process (procedures and tools) to integrate the ERHMS System (and a preference to do so) into responses in the NW Region, starting with the following steps:

1. Create an ICS position under the Safety Officer dedicated to creating an ERHMS Unit.
2. Add a determination of whether chemical mixtures are or are likely to be present as part of initial hazard assessment in the 96-hour tool kit for major incidents (9220).
3. Add the ERHMS decision matrix to the 96-hour tool kit (9220) for Day 1 as part of the initial hazard assessment and site-specific safety plan.
4. Incorporate the ERHMS System with environmental exposure sensitivity screening tools BREESI and QEESI as a BMP (Best Management Practice) in the NWRCP (see Next Steps).
5. Utilize and maintain a secure online, cloud-based, government-owned, HIPPA-approved information management system for the ERHMS medical monitoring and surveillance data.

And finally, the RRT 10/NWAC should request the NRT to:

6. Work with OSHA to update the federal HAZWOPER standard to create a duty for employers to initiate and conduct health monitoring and surveillance of employees during oil-chemical responses that will support the ERHMS System and ERHMS Unit.
7. Actively promote the ERHMS System among the RRTs and update the tools for the modern workforce.

#### *Protecting Public Health (Task 4)*

Four key reasons are provided to justify establishing a PHA Unit (PHAU), including:

- consolidating all aspects of public health into one place;
- retaining local authority over public health;
- creating quality information (by tracking and recording signs and symptoms of potential over exposure) to make evidence-based decisions about health risk and actions in real-time; and
- alleviating some of the public's mental health stress associated with the disaster by interfacing regularly with the public.

In the “how to” section, siting the PHA Unit in various places within the ICS framework are considered, but ultimately the decision was to align with the California OSPR approach of creating two positions for its new PHA Unit, i.e., a PHA Unit leader (EPA) familiar with the ICS and a PHA Unit Coordinator for the state and local public health entities. Also considered were ways to scale a PHA Unit and how to trigger an effort with a PHA Unit decision matrix (**Appendix D**), ways for public health entities to get informed of a health threat, the need for a centralized database to track long-term harm until no longer deemed necessary, and the need to

communicate health risk and health and safety messaging in real-time. Last, possible funding sources are discussed.

### Recommendations for Protection of Public Health

1. Create a PHAU and recommend where to site it within the ICS structure (see chart in 4.2.B.) based on the scale of the incident.
2. Create a committee to develop criteria for a PHA, including surveys for chemical sensitivities (BREESI and QEESI).
3. Create or update Public Health educational materials about oil spill exposures.
4. Create an online, cloud-based data storage system for PHA Unit data.
5. Purchase or create a CO-HMS app for mobile phones to collect data.

### *Health and Safety Messaging (Task 2)*

For responders and the public during oil-chemical exposures, the implications of documenting and tracking exposures to hazardous substances and health hazards—based on signs and symptoms of exposure and underlying chemical sensitivities—make it necessary to do a systemic overhaul of all health and safety messaging for oil-chemical responses. Further, EPA’s final action on Subpart J governing use of dispersants and other products, which goes into effect on December 11, 2023 (88 FR 38280), also necessitates an overhaul of dispersant messaging as misleading, inaccurate, incorrect, and outdated statements can be used as grounds for product removal [40 CFR §300.970(a)(1)], as can failure to consider new and relevant information concerning impacts or potential impacts of the product to human health or the environment [40 CFR §300.970(a)(4)]. At a minimum, this will require rewriting most of the messaging on dispersant effects and how to reduce exposures, including messaging in worker safety training manuals.

The H&S Task Force recommends that this work be one focus of the continuation of this task force in 2024, along with further development of the ERHMS and PHA Units within the NWRCP if reconvened. The next steps are detailed in **Recommendations for Future Work** below.

### *List of Health Subject Matter Experts (Task 3)*

The listing of subject matter experts to be called upon during a spill response exists within the NWRCP within Section 7120 which presents response partners in public health protection for federal and state agencies within the region. As with every NWRCP update cycle, the contacts for the Health Subject Matter Experts should be reviewed per the normal plan update cycle.

### Recommendations For Future Work

The understanding of the ERHMS system for protection of responder health and the newly developed methods for incorporation of public health protection into a PH Assessment Unit required considerable time and work on the part of the small task force. Further, developing expertise in the tools available to support responder and public health were accomplished late in the process (September 2023). Accordingly, the task force did not have time to complete some of the tasks to the degree necessary to elevate their use in the Northwest Region. Some needed

changes require work in concert with the National Response Team, or even NRT-led initiatives to move forward in the improved outcomes of protecting worker and public health from exposures at hazardous materials response incidents.

It is therefore proposed that the Health & Safety Task Force be reconvened or rechartered to:

1. Complete a rewrite of health and safety messaging for responders and the general public during oil-chemical responses. This task requires a different combination of subject matter expertise that does not exist with current task force members. If moving forward, this task should draw from public health and communications experts in the NW and nationally.
2. Review available health monitoring and surveillance tools; find/develop phone apps to facilitate health monitoring and surveillance intake of workers and public health assessments. Work with the NRT to promote development of any needed tools/databases to support wider surveillance and longer-term monitoring of responders and the public exposed during incidents.
3. Develop new Annexes to NWRCP for the ERHMS Unit and PHA Unit and include or incorporate by reference (as for other annexes) a list of Subject Matter Experts in each annex.

**Table 1. Review results: Where an ERHMS Unit could be integrated into the NWRCP**

NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
2230	Safety Officer		Add section titled Safety Officer Function and Tracking of Responder Health		Only covers personnel involved in the response
2234	Safety Officer Function and Crude Oil	Identify in section that crude oils present different risks to the public and to consider standing up a PHAU	Identify in section that crude oils present different risks to the public and to consider initiating ERHMS	Identify in section that crude oils present different risks to the public and to consider initiating the use of the BREESI/ QEESI into Public Health and Responder Health tracking	
2235	Safety Officer Sampling and Monitoring Requirements	No	Yes	Yes	4) Evaluating employee exposure to hazardous substances during clean-up operations
2236	NEW: Safety Officer and Monitoring for Responder Health	No	Yes - New section	Yes - New section	Needed: new section covering use of ERHMS and BREESI/ QEESI to determine if responder health is threatened due to complex mixtures, individual sensitivities, or unknown constituents in response or cleanup; this will be complemented by a new Appendix that covers the use of the responder health tools.

NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
3310	Situation Assessment	Yes - Section covering special circumstances should reflect need to stand up PHAU	Yes - Section covering special circumstances should reflect need to stand up ERHMS	Yes - Section covering special circumstances should reflect need to stand up BREESI/ QEESI	
3320.1	Gasoline and Other Flammable Liquids	Add statement near end about need to stand up PHAU, especially if large quantities of volatile liquids will be allowed to evaporate	Add statement near end about need to stand up ERHMS, especially if large quantities of volatile liquids will be allowed to evaporate	Add statement near end about need to stand up BREESI/ QEESI, especially if large quantities of volatile liquids will be allowed to evaporate	
3320.1	Operational Safety Issues Associated with Bakken Crude Oil	Add statement about need to stand up PHAU, especially if large quantities of volatile liquids will be allowed to evaporate	Add statement about need to stand up ERHMS, especially if large quantities of volatile liquids will be allowed to evaporate	Add statement about need to stand up BREESI/ QEESI, especially if large quantities of volatile liquids will be allowed to evaporate	This section does not cover all crude oils... Consider expanding this section to cover diluted bitumen crudes or creating a second brief section covering Dilbit
4326	Use of Volunteers to Assist in Oil Spill Responses	N/A	Yes - Section covering special circumstances should reflect need to stand up ERHMS	Yes - Section covering special circumstances should reflect need to stand up BREESI/ QEESI	Policy is to use volunteers only for low-risk activities and only after appropriate safety training is received for activities to be conducted; this should be protective of volunteer worker health, but ERHMS and BREESI/ QEESI should be stood up to protect volunteer health for same reasons as other responders

NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
4619.2	During an In Situ Burning Action	N/A	Yes - Brief statement about the needs to monitor responder health beyond OSHA reqs due to the risk posed by the action	Yes - Brief statement about the needs to monitor responder health beyond OSHA reqs due to the risk posed by the action	Reference to use of Health and Safety Job Aid (9203) should be supplemented with statement about the need for responder health monitoring during ISB use
4619.2.2	Public Health/Safety and In Situ Burning Air Monitoring Program	Yes - Section covering special circumstances should reflect need to stand up PHAU	N/A	N/A	Section needs to be reviewed and edited to include standing up a PHAU at most in situ burn operations where the public may be exposed
4622	Gasoline and Other Flammable Liquids Response Policy	Yes - Section covering special circumstances should reflect need to stand up PHAU	Yes - Brief statement about the needs to monitor responder health beyond OSHA reqs due to the risk posed by the action	Yes - Brief statement about the needs to monitor responder health beyond OSHA reqs due to the risk posed by the action	Adequately characterizes the risks from complex mixtures of gasoline and crude oils and their potential to effect responder and public health, but reminder that establishing a PHAU, and/or implementing ERHMS and BREESI/ QEESI should be considered
7000	Hazardous Substances (including WMDs)				Update generally to add need for PHAU/ ERHMS/ BREESI/ QEESI; Add section about standing up a PHAU near end where special teams are discussed



NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
7120	Authorities (for Hazardous Substance Response)	N//A	N//A	N//A	This section identifies resources (agencies) that would be active in PHAU establishment, use of ERHMS/ BREESI/ QEESI
7250	Health and Safety (for Hazardous Substance Response)				References section 7700
9105	Incident Specific R10 RRT Activation Quick Response Guide	Under Type of Situation, add prompt to consider establishing a PHAU	?	?	
9203	Health and Safety Job Aid	Develop new section (brief, at ~9203.1.1) in H&S Job Aid for PHAU and reference separate PHAU Annex (TBDev)	Develop new section in H&S Job Aid for ERHMS and BREESI/ QEESI	Develop new section in H&S Job Aid for ERHMS and BREESI/ QEESI	Generally incorporate element of responder health with regard to exposures and symptoms outside of injury.
9210	Liaison Manual	Incorporate throughout annex	N/A	N/A	Issue of Public Health messaging and coordination with food safety is there but needs to be generally updated to incorporate liaison support to a Public Health Assessment Unit if stood up.
9220	96-Hour Plan for Major Incidents	Incorporate decision to stand up PHAU	Incorporate decision to initiate ERHMS (or make standard to do so)	Incorporate decision to initiate BREESI/ QEESI (or make standard to do so)	

NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
9301	Oil Spill Best Management Practices	Yes - Into each BMP as appropriate	Yes - Into each BMP as appropriate	Yes - Into each BMP as appropriate	Note that review was of 2020 plan still in effect, not updated BMP Annex; There are many components of the new BMP that could need to be updated to incorporate PHAU/ ERHMS/ BREESI/ QEESI into the response.
9407	In Situ Burning Operations Planning Tool	Update 9407.3.2 Public H&S/Air Monitoring	Update 9407.3.1 Responder H&S	Update 9407.3.1 Responder H&S	Add paragraph in 9407.3.3 that discusses standing up PHAU to incorporate the work of the Local Air and Public Health Departments
9409	Managing Impacts to Commercial, Recreational and Tribal Fisheries	See note about adding language and reference to PHAU Annex at front of the section	N/A	N/A	Add paragraph in introduction that discusses standing up PHAU to incorporate the work of the Local Public Health Departments and provides reference to PHAU Annex
9418	Emergency Response Community Air Monitoring		N/A	BREESI/ QEESI may be utilized to support public health tracking during and after the incident. Incorporate reference to annex (TBD) on ERHMS/ BREESI/ QEESI	Add paragraph in introduction that discusses standing up PHAU to incorporate the work of the Local Public Health Departments and provides reference to PHAU Annex
9418 Attachment B	Contaminants of Concern and Recommended Action Levels				What are PACs? Does not define the term.

NWRCP Section #	Title	Incorporate PHAU? How?	Incorporate ERHMS? How?	Incorporate BREESI & QEESI? How?	Notes
	Use of cleaning agents				
9418	Community Air Health Monitoring	Update to reflect utility of a PHAU			Table 9418.1 could add incorporation of a PHAU into larger responses
9701	Hazard Assessment Worksheet		Add section on ERHMS into the HAW	Add section on BREESI/QEESI into the HAW	Worksheet could be expanded to include elements of longitudinal assessment of responder health, identify whether ERHMS or BREESI/ QEESI process be incorporated into the response.

**Table 2. Regulatory gap analysis summary: Areas of concern & relevant federal/state regs**

<b>Areas of Concern</b>	<b>OSHA HAZWOPER Regs</b>	<b>Washington HAZWOPER Regs</b>
Definitions	<ul style="list-style-type: none"> <li>• 1910.120(a)(3)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-009</li> </ul>
Elements of an emergency response plan	<ul style="list-style-type: none"> <li>• 1910.120(q)(2)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-20005(1)</li> </ul>
Skilled support personnel	<ul style="list-style-type: none"> <li>• 1910.120(q)(4)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-20005(2)</li> <li>• WAC 296-824-50015</li> </ul>
First responder awareness level training	<ul style="list-style-type: none"> <li>• 1910.120(q)(6)(i)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-30005</li> </ul>
Medical monitoring and surveillance	<ul style="list-style-type: none"> <li>• 1910.120(q)(9)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-40005</li> </ul>
Recordkeeping	<ul style="list-style-type: none"> <li>• 1910.120(q)(10)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-40010</li> </ul>
Post-emergency response workers	<ul style="list-style-type: none"> <li>• 1910.120(q)(11)</li> </ul>	<ul style="list-style-type: none"> <li>• WAC 296-824-70005</li> </ul>