BY CERTIFIED MAIL & EMAIL June 23, 2022

U.S. Environmental Protection Agency
EPA Administrator Michael S. Regan, Mail code 1101A
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PETITION to Supplement Proposed Rule
for National Oil and Hazardous Substances Pollution Contingency Plan, Subpart J
proposed on 1/22/2015
Docket ID No. EPA-HQ-OPA-2006-0090

Dear EPA Administrator Regan,

We, the undersigned, hereby petition the EPA, pursuant to the Administrative Procedure Act, 5 U.S.C. § 553(e), to update its 2015 Proposed Rule for the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Subpart J, based on current science – specifically, the science from January 2015 to May 2022.

We feel this update is necessary, given the federal district court ruling in *Earth Island Institute/ ALERT v. EPA* that EPA has a mandatory duty under the Clean Water Act to update the NCP based on current science. Specifically, the court ruled that EPA now has a mandatory "duty to update the NCP when there is new information that shows that the current standards for efficient, coordinated, and effective action to minimize damage from oil and hazardous substance pollution are insufficient to safely provide for mitigation of any pollution." *See* Order at 6, Aug. 9, 2021, referring to Order on June 2, 2020, *Earth Island Inst. v. EPA, Case No.* 20-cv-00670-WHO (N.D. Ca., filed Jan 30, 2020); see also 33 U.S.C.§ 1321(d)(2).

The current science meets this threshold for new information. There has been a sea change in scientific understanding of fate and effects of chemically-dispersed oil since the rule was proposed in early January 2015. This calls for a radical rethinking of dispersant use on the surface *and in the deep sea*. We offer five examples on 1) subsea dispersant use, 2) aerial and surface spraying of dispersants in general, 3) spraying of dispersants in state waters, 4) dispersant effects on sinking oil and biodegradation, and 5) toxicity of chemically-dispersed oil to humans, wildlife, and the environment.

First, on the matter of subsurface dispersant injection, we ask EPA to reconsider this use in light of known well blowout dynamics and to give more weight to studies based on *actual measurements* from field samples rather than the numerous model-based studies on deepsea dispersant use. In particular, two such *measurement-based* studies focused on whether subsea dispersant use influenced oil distribution and human health risk: one used BP's Gulf Science Data (Paris et al., 2018) and the other used the National Oceanographic and Atmospheric Administration's (NOAA) offshore water samples (Payne and Driskell, 2018; Driskell and Payne, 2018, Parts 1 and 2, respectively). The studies deepened the understanding of well blowout dynamics and confirmed that turbulent blowout dynamics mechanically dispersed the oil by atomizing it into micro-droplets at depth and by dissolving a substantial portion of the water-soluble gases (VOCs/BTEX) into the seawater, along with semi-soluble PAHs and some of the lighter alkanes (saturated hydrocarbons). These processes occurred almost instantaneously and were completely independent of subsea dispersant injection. Rather than rising to the surface, the mechanically-dispersed micro-droplets and the dissolved oil phase became part of a stable, neutrally buoyant oil-contaminated deepwater infusion layer that was transported horizontally at depth.

The forensic chemistry work of Driskell and Payne found that dispersants had only limited ability to accelerate dissolution of PAHs at depth (11% of the samples), and may have *simultaneously* either inhibited or delayed biodegradation of the soluble alkanes (possibly due to the ionic nature of dispersant surfactants interfering with microbial attachments). But in the end, since less than 5% of the liquid oil was trapped at depth as micro-droplets (Gros et al., 2017, a *model-based* study), even the industry-sponsored National Academy of Sciences review on dispersant functionality found that *the overall contribution of dispersant-mediated weathering and biodegradation at depth was minor* (National Academy of Sciences, 2020).

Further, in contrast to earlier theories that dispersants degrade rapidly in the environment, Driskell and Payne also found that dispersants persisted over time and were widely distributed at depth like the mechanically-dispersed oil. To restate this: *dispersant released at depth, stayed at depth.* Therefore, subsea dispersant use did not prevent or mitigate shoreline oiling. An earlier measurement-based study (Kujawinski et al., 2011), upon finding similar results, suggested that their findings should "provide important constraints on accurate modeling of the deepwater plume," a direct challenge to the overtly pro-dispersant *modeling* studies.

We ask the EPA to reconsider subsea dispersant use because current *measurement-based* studies have failed to show that such use mitigates shoreline oiling, which is one of the key arguments made for *any* dispersant use.

Second, on the matter of surface spraying of dispersant by plane or boat, the full consequences of this broadscale application – and the relevance to people, wildlife, and the environment – are just now being understood. This controversial addition to surface oil slicks is known to increase the creation of micro-droplets *in the water* by reducing the interfacial tension of the oil-water interface, but the subsequent creation and emission of nano- and micro-aerosols from surface oil slicks *into the air* was not previously tested. BP's air monitoring dataset provided *no direct measurements* of volatiles in or near the surface hot zone including VOCs or benzene levels or of vapor or aerosol concentrations of dispersants during and after spraying the water surface (Stewart et al., 2018).

Model-based studies, however, found that use of chemical dispersants created a human health hazard – a dramatic increase in ultrafine particles – when mixed with oil by wave energy, as is required for aerial and surface spraying to be effective. Afshar-Mohajer et al., 2018 found that dispersants altered the ratio of nano-to-micro oil droplets in air emissions *without altering the concentration of particle-bound PAHs* (pPAHs), a particular fraction of 4- and 5-ring PAHs considered to be very hazardous to human health (WHO, 2010). By increasing the number of airborne particles by 10 to 100 times across the entire *nano*-scale range, dispersants increased the total mass of aerosolized particles by 2–3 times compared to that of crude oil, consistent with findings for aerosols generated by bursting bubbles. Dispersant-mediated, aerosolized oil nano-particles emitting from oil slicks were most similar to soot, aqueous haze, or smoke particles, all considered hazardous to humans. Such ultrafine particles are known to travel long distances and to penetrate deeply into the alveoli region of the human respiratory system. In a follow up study, inhalation of dispersant-mediated particulate emissions were subsequently found to increase the total mass burden of *nano*-particles inhaled and deposited in upper respiratory regions (upper respiratory tract and tracheobronchial region) of humans about 10 times, compared to slicks of crude oil without dispersants (Afshar-Mohajer et al., 2019). The 2019 study also found that while dispersant-mediated gaseous emissions reduced the *overall* hazard risk for some gaseous oil components, like benzene, the hazard quotient for non-carcinogenic VOCs remained unacceptably high *after dispersant use*. This indicated serious concerns about increased health risks, especially for workers in close proximity to seawater or for long or daily exposure periods (4 and 8 hours).

Another *modeled* study (Arnold et al., 2022) contended that the exposure risk was minimal during application because it was localized to the area physically sprayed, ~182 nmi^2, "a small fraction [<0.5%] of the peak oil slick coverage of 40,000 nmi^2, but did not consider the far greater danger from dispersant use that, like pesticide use, lies in the broadcast application and the resulting exposure of non-target species, including humans – especially when spraying occurs coastal waters near urban areas.

We ask the EPA to reconsider spraying of dispersants on surface waters because current studies have found that such use *creates* a human health hazard and a potential for widescale harm from broadcast application. It is EPA's job is to protect human health and the environment, and EPA should err on the side of caution.

Third, on the specific use of dispersants in *state waters*, we find this matter has been ignored in official reports and academic studies, yet it is extremely relevant to this petition. For example, one GuLF study (Arnold et al., 2022) incorrectly assumed that aerial and surface dispersant spraying was limited to offshore use and that it stopped by mid-July 2010. While aerial and surface spraying of dispersants *may* have stopped in *federal waters* by mid-July (although at least one vessel sprayed dispersant in federal waters on July 28 and September 4, 2010; Arnold et al., 2022), those of us who were there know that surface spraying of both Corexit 9500 and Corexit 9527 occurred *in state waters into fall 2010*, as evidenced from photo-documentation by coastal residents (Ott, 2018, included in this petition as Appendix A) and testimonies (GAP, 2015, 2020).

For example, state operations in Alabama and Mississippi used fleets of shallow, flat-bottom "mud boats", which were moored in public marinas (Ott, p. 6, Bayou La Batre, AL, Aug. 2010) or staged in other coastal areas that were accessible to loading dispersant from tanks staged on land (Ott, p. 5 near Pass Christian, MS, 8/21/10) like neighborhoods (Ott, p. 5 on Dauphin Island, AL, 8/21/10). Workers who single-handedly operated these boats and sprayed dispersants did so without respiratory protection from a deck height only slightly higher than the spray release point, which would have greatly increased the risk of exposure to oil aerosols (Ott, p. 5 near Pass Christian, MS, 8/21/10). Residents who lived near these impromptu industrial staging and decontamination areas for dispersant-spraying boats and equipment were at risk of exposure to fugitive vapors and/or aerosol spray drift (Ott, p. 6 near Coden, AL, 8/21/20).

These examples are not unique, nor were they limited to airborne exposures. Chemically-dispersed oil with a fluorescent signature was found in tarry masses in the swash zone of coastal beaches and onshore, coating beach sand from Cape San Blas, Florida, to Waveland, Mississippi, with PAH concentrations consistently in excess of the Immediately Dangerous to Life or Health limit of 80 mg/m_3 in the National Institute of Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards, published by Dept. Health and Human Services (Ott, p. 4 near Pennsacola, FL; see also Kirby, 2012). One likely source of this chemically-dispersed oil was from surface spraying in coastal waters.

Dispersant use in shallow waters <10 m and within 3 miles of the coast is restricted in Area Contingency Plans for the simple concern that these products may not be mixed and diluted sufficiently in shallow waters to reduce the health risk to people, wildlife, and the environment. However, Standing Letters of Agreement of EPA, USCG, DOI (Dept. of Interior), DOC (Dept. of Commerce) and the coastal states preempt the ban on dispersant use in state waters (*see* for example, USCG AL, MS, Northwest FL Area C-Plan , 2202, Region 4 Response Team, Annex J, p. 59).

We ask EPA to reconsider dispersant use in state waters because the known hazards of such use within 3 miles of coasts is irrefutable to people and wildlife, documented by residents, and validated by current science that shows exposure to chemically-dispersed oil is more harmful than to oil alone. Please consider that we live with the long-term consequences of such short-sighted use.

Fourth, on the matter of dispersant effects on sinking of oil and biodegradation, new findings disprove old theories. For example, studies found that chemically-dispersed oil greatly enhanced the formation of marine snow "with efficiency by up to 80–100%" (Chiu et al., 2019), resulting in an "unexpected, and exceptional, accumulation of oil on the seafloor…" from sinking of biologically-derived marine snow and oil-sediment aggregations (Francis and Passow, 2020). Yet, sinking agents are expressly prohibited under the NCP (40 CFR 300.910(e)(1)).

Additionally, dispersant use hinders biodegradation instead of assisting it. In contrast to past assumptions and theories, current studies found that chemically-dispersed oil caused rapid shifts in microbial community structure (numbers and succession) from selective toxicity of some species, while other species were more tolerant like *Vibrio*, a bacteria that eats human flesh. Most studies concluded that such shifts suppressed biodegradation – with the exception of industry-sponsored studies (Fingas, 2017, Table 1). For a succinct yet thorough discussion on the matter, please refer to Driskell and Payne (2018). Dispersant use is also linked indirectly with red tides as it is toxic to the grazers that control the population of dinoflagellates that cause the red tides (Almeda et al., 2018), that harm people and cause economic disruptions.

We ask EPA to reconsider dispersant use in light of the current scientific findings of *direct consequences and harm* caused by such use. For example, the current definition of "sinking agent" ignores the fact that dispersant use causes oil to break apart *and sink*.

Fifth, on the matter of toxicity of chemically-dispersed oil to humans, wildlife and the environment, the current science is extensive, and it conclusively completes the picture that has been emerging since earlier studies (pre 2015) on the BP DWH oil spill first suggested that oil is more toxic when treated with oil-chemical dispersants.

Of particular interest are the current findings of the two *model-based* epidemiology studies that were conducted on workers in the wake of the BP DWH oil spill. The National Institute of Health (NIH) Gulf Long-Term Follow Up (GuLF) study *modeled* exposure levels by a *quantitative* process using BP's air monitoring and inhalation exposure datasets. The U.S. Coast Guard Cohort (USCG) study *inferred* exposure levels by a *semiquantitative* process through cohort questionnaires that asked about the presence of chemical hazards. In previous oil spills, long-term studies of occupational and/or public health have demonstrated that the *semiquantitative* method for a complex mix of exposures occurring in a broad geographical setting is as valid as specific measures for a single chemical hazard (Palinkas et al., 1993).

We ask the EPA to give more weight to studies that used semiquantitative methods to define oil spill exposure for the following general reasons. Oil spill exposures are not simply from a single chemical in a defined setting, but rather from complex, multi-phase mixtures of oil-chemical hazards in constantly variable physical and environmental settings. Studies that use a group of oil components like VOCs, THCs, PAHs, etc. as a proxy for oil spill exposure underestimate exposure because traditional analytical methods do not detect all the oil components. For example, only 1.3–4% of the PAHs in fresh oil are captured by traditional methods (Payne and Driskell, 2018)! Of particular concern are the inhalable oil mists, chemically-dispersed oil aerosols, and secondary organic aerosols which are not accounted for at all with traditional analytical methods. A semiquantitative approach is thus likely to be more helpful in detecting and understanding human health effects than a quantitative approach with traditional methods, which creates a low-biased impression of the true scale and nature of the spill.

There are also more specific reasons to give more weight to the USCG study. *Modeling* studies are only as dependable as the datasets on which they are based. In this case, BP's datasets, though extensive, had severe limitations. For example, BP's air monitoring dataset lacked measurements for high-end sources of *particulate matter* from *soot* from offshore burning and oil/gas flaring operations and from *secondary organic aerosols* (Stewart et al., 2018 and 2022). Also, this dataset provided no direct measurements of *volatiles* in or near the surface hot zone like VOC or benzene levels, or of *vapor or aerosol concentrations of dispersants* during and after spraying the water surface (Stewart et al., 2018 and 2022). BP's inhalation exposure dataset under-sampled dispersant aerosol and surface spraying operations (Stewart et al., 2018), was highly censored (82% of the measurements were *below* the limits of detection), and provided no link between the exposure data and jobs. All BP's limitations served to bias low or under-represent environmental and human exposure levels, and this bias would have carried over into any models based on the dataset.

The GuLF studies, which used the BP datasets, applied *modeling* to overcome some of the limitations for the missing high-end data (Pratt et al., 2020), censored data (Huynh et al., 2016), and no linkage between jobs and exposure by using jobs as a proxy for exposure (Stenzel et al., 2020b; Stenzel et al., 2020c; Stewart et al., 2022). However, the resulting job-exposure *model*, based on BP's THC measurements, introduced its own set of limitations. For example, there was high variability within the six different exposure categories such that even the high-end exposure *estimates* for workers on rig vessels and support vessels in the hot zone overlapped with the low-end estimates for land workers (Huynh et al., 2020; Huynh et al., 2021a; Huynh et al., 2021b). Further, there was a problem with misclassification of job categories. For example, the GuLF study classified certain jobs, such as burning oil on the water and decontamination on land (involving spray washing, which created aerosols), as "low" particulate exposure. In contrast, the USCG study classified these jobs as "a high likelihood of exposure" to crude oil, along with booming/skimming operations (Rusiecki et al., 2018). Misclassification, like high variability, would obscure exposure-health relationships.

With these model limitations and systemic biases from the BP datasets, the ability of the GuLF job-exposure *model* to discern exposure-health relationships drifted ever further from reality. For example, the high-end exposure *estimate* of 15 ppm THC for workers on rigs and support vessels is *six to thirteen times lower* than the full-shift airborne exposure *measurements* of ≥100 ppm and 200 ppm THC (Stewart et al., 2018, p. 9). Authors concluded from their *model*s that airborne "THC levels were low compared to the occupational standards." In reality, the airborne levels were deadly, as demonstrated by the call on May 26, 2010, to Medi-Vac by helicopter seven *in situ* burn team workers who were treated for acute respiratory failure in a local hospital.

Besides using *semiquantitative* methods to define oil spill exposure, the USCG study had another design advantage over the GuLF study: The USCG cohort was uniformly young and healthy, pre- and post-spill medical records and archived biological samples were available for all participants, and recall bias was minimal as participants completed exit surveys shortly after completing oil spill response work (Rusiecki et al., 2018). In comparison, the GuLF study cohort was a unique population of culturally, ethnically, and linguistically diverse peoples with some of the highest rates of unemployment and poverty and the lowest rates of access to healthcare in the United States (Kwok et al., 2017; Resnik DB et al., 2015; Lawrence et al., 2021), despite living in or near oil-chemical industrialized areas and surviving multiple natural disasters (Onyije et al., 2021; Lowe et al., 2019). The GuLF study was "unable to collect pre- and post-exposure biological samples," the biological samples that were collected at study enrollment were "of limited use for characterization of exposures during the… [response] activities," and there was "possible information loss and recall bias" from the 1–3 years between completing spill work and the exit survey (Gwok et al., 2017). These differences alone put the USCG study in a better position to detect potential short- and long-term health effects from oil spill exposures.

With this context in mind, it becomes evident how the seemingly contradictory findings of these two epidemiology studies support each other and merge into a clear pattern revealing long-term harm from oil spill exposures. For example, the USCG studies consistently delineated clear relationships between oil and chemically-dispersed oil exposures and long-term health symptoms and function of the respiratory system (Alexander et al., 2018; Rusiecki et al., 2022), cardiovascular system (Denic-Roberts et al., 2022), and neurological system (Jayasree et al., 2019; Erickson et al., 2018). In comparison, the GuLF studies consistently found exposure relationships with short-term health symptoms while long-term health health symptoms and function were ranged from unclear, to suggested (trend not statistically significant), to significant for the respiratory system (McGowan et al., 2017; Gam et al., 2018a; Gam et al., 2018b), cardiovascular system (Strelitz et al., 2018, 2019a, 2019b), and neurological system

(Quist et al., 2019), the latter relationships being the most clear perhaps since 30% of the THC air concentrations contained the more highly neurotoxic BTEX and n-hexane compounds (Quist et al., 2019).

Many of the above studies also found that oil-dispersant exposures consistently were associated with higher risk and more health effects than oil exposures alone, which was validated by a number of clinical studies (D'Andrea and Reddy, 2018) and laboratory studies with human tissue including DNA and RNA (Lui et al., 2020; Major et al., 2016; Frances et al., 2016) and with animal tissues (Lui et al., 2016). In 2010, dispersants were already known to facilitate the transfer of oil across the skin barrier and into the blood. Several studies on oil levels in blood of exposed residents, including children, and oil spill workers after the BP DWH formed a time continuum showing a progression from unusually high levels of oil in the blood during the 2010 oil spill response (Summarco et al., 2016) to near background levels 3 years later (Doherty et al., 2017; Werder et al., 2018; Werder et al., 2019). The initial high levels were predictive of end-organ damage, which after a latency period, is currently manifesting as severely compromised health, premature deaths, and a dramatic increase of clusters of rare diseases and cancers, associated with oil exposures, in children and adults in oil-impacted coastal communities (Eastern Shore Community Health Project, 2021; GAP, 2015; 2020).

We also bring to EPA's attention several studies on resident exposure and health risk and impacts. The *measurement-based* Southeast Louisiana air quality study (Nance et al., 2016) provided context and a link between earlier studies and coastal residents lived experiences. The study found that 5-month ambient air levels for benzene and $PM_{2.5}$ exceeded pre-spill background levels and protective standards for public health in regional (rural) and coastal areas. In contrast, the air quality in the urban areas was relatively normal compared to previous years, levels of benzene and $PM_{2.5}$ were *lower than* in coastal and regional areas, and the levels did not exceed public health standards. Also notably, the urban data set was statistically different from the coastal and regional data sets: It exhibited far less variance and lower absolute values of $PM_{2.5}$ than the other two datasets.

These findings illustrate three relevant points. First, there were separate airsheds and oil spill pollutants were transported both within and above the marine boundary layer to land. *Secondary organic aerosols* that formed *within* the marine boundary layer (de Gouw et al., 2011) were *predicted* to reach coastal communities downwind of the spill and over 50 miles inland (Middlebrook et al., 2012, Figure 8). The *oil mists and aerosols* carried *within* this layer were observed by coastal residents and others, as it coated seaward-facing windows of homes and vehicles and collected in folds of beach umbrellas left outside for the night. *Soot and other pollutants* from smoke plumes that lofted *above* the marine boundary layer (Perring et al., 2012; Middlebrook et al., 2012; Ryerson et al., 2012) were blown overland and returned to the earth's surface as the "oil rain" observed by coastal residents. Pollutant transport within and above the marine boundary layer is commonly seen as haze or smog and acid rain, respectively (Britannica, 2022; DeLizio and Fogarty, 2018).

Second, the oil aerosols, mists, and particles transported within and above the marine boundary layer would explain the high levels and high variability of the coastal and regional air quality data reported in Nance et al. (2016) because aerosols measurements are both high and highly variable due to the nature of the highly dispersed, yet individually highly concentrated, small droplets. This also indicates that vehicle exhaust was likely *not* the cause of air quality exceedances in coastal and regional areas.

And third, regarding determination of health risk levels, the study findings set a "floor" for oil exposure levels for residents *and workers* because some of workers on land and residents would have experienced similar and lower levels relative to the workers on vessels and/or near the source. It is difficult to imagine that land workers could have experienced *lower* exposure levels than residents because, like residents, contract workers were exposed 24/7 to oil spill exposures (e.g., 82% of the GuLF study cohort were residents) and these workers did not usually wear protective gear (GAP, 2015, 2020). Therefore, it can be inferred that public health standards are more appropriate for workers than occupational guidelines when determining risk levels in cases of months-long, 24/7 exposures, especially since occupational guidelines don't exist for complex mixtures of such a chronic nature. GuLF studies consistently found that *modeled* exposure levels were not usually high enough to be a health risk when compared to occupational exposure guidelines, however, the exposure levels were high enough to be of concern when compared to public health standards (Pratt et al., 2020).

The Women and Their Children's Health (WaTCH) study cohort was from southeast Louisiana, largely the same region in the Southeast Louisiana Air Quality study. The WaTCH study, based on *semiquantitative* methods, found statistically significant exposure-health associations for a characteristic suite (Laffon et al., 2016) of respiratory and neurological health symptoms, with women who were spill responders or commercial fishers significantly more likely to report symptoms (Peters et al., 2017; Peres et al., 2016). Another study found increased concentrations of $PM_{2.5}$ and secondary organic aerosols (*measured* as NO_2, SO_2, and CO in affected coastal counties) and increased incidence of low birth weight (<2500 g) and premature born infants (<37 weeks of gestation), with more pronounced adverse infant health outcomes for black, Hispanic, less educated, unmarried, and younger mothers (Beland and Oloomi, 2019).

And last, we also wish to highlight several current wildlife studies or reviews for EPA's consideration. In general, the current science on fish, birds, turtles, and marine mammals corroborates the findings of long-term harm to humans. Wildlife studies found consistency in mechanisms of action and disease pathogenesis, progressing from molecular and cellular effects, to organ dysfunction, to systemic effects that compromise fitness, growth, reproductive potential, and survival – or, in cases of high concentrations, multiple organ failure and death. The longitudinal studies on the bottlenose dolphin population of Barataria Bay, Louisiana, are particularly relevant to the human epidemiology studies (Lane et al., 2015; McDonald et al., 2017; Schwacke et al., 2017; Venn-Watson et al., 2015). One review reported that all the 27 individual toxicity studies from 2017–2021 found that chemically-dispersed oil was more toxic than mechanically-dispersed oil with the chemically-dispersed oil-water mixture ranging from 1.5 to 100 times, to as much as 500 times, more toxic than the mechanically-dispersed oil-water mixture (Fingas, 2021).

In conclusion, the Proposed Rule, issued pursuant to Clean Water Act Section 311(d)(2)(G), is already outdated. It does not consider the significant body of scientific findings and new information on chemically-dispersed oil that have become public since the rule was proposed in January 2015. Further, it allows for atypical dispersant use (i.e., subsurface dispersant use and large quantities of dispersant use in the deep sea and on the sea surface) –

uses that surely must be reconsidered based on current science as highlighted in our examples. Based on the current science, it now seems that dispersants cannot be used safely in *any waters* of the U.S., or at a minimum, dispersant use must be banned in certain waters (e.g., state waters) and drastically restricted in others. A select list of citations is provided for your convenience.

Failure by EPA to take current science into account will be a dereliction of its duties under the Clean Water Act. Further, it will frustrate the purpose of the NCP to achieve an effective and efficient response to oil spills. Therefore, we are petitioning the EPA to supplement its already outdated proposed rule based on the most current science – and to complete this rulemaking by May 31, 2023, as per the Court Order in Earth Island/ALERT et al. v. EPA. *See* Order at 18.

We also request a formal reply to our petition, either accepting or denying it – and that our request and EPA's reply are included in the second court-ordered status report in August 2022 to federal district Judge William Orrick in the matter of *Earth Island/ALERT et al. v. EPA* (3:20-cv-00670-WHO).

Most sincerely,

a coalition of Gulf Coast advocates and allies for environmental and climate justice

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Select Citations

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