Docket Management Facility (M-30)
U.S. Department of Transportation
West Building Ground Floor
Room W12-140
1200 New Jersey Avenue SE
Washington, DC 20590-0001

Submitted via e-docket to
www.regulations.gov
and LT Jeffrey J. Brooks, USCG
Jeffrey.j.brooks@uscg.mil

Re: Riverkeeper, Inc. and Scenic Hudson Comments on USCG-2014-0602, Review and Update of the New York/New Jersey Area Contingency Plan[1]

Dear LT Brooks,

Please accept the following comments on behalf of Riverkeeper, Inc. ("Riverkeeper") and Scenic Hudson ("Scenic Hudson")(collectively "Commenters") regarding the update of the Area Contingency Plan ("ACP") for the New York/New Jersey, Sector New York area. Commenters appreciate and support the Coast Guard's decision to solicit public comment early in the process of revising and updating the ACP.[2] In order to continue the process of robust public participation, Commenters urge the Coast Guard to release a Draft revised ACP for public comment, prior to finalizing the update and issuing a new ACP to replace the current 2011 version. While Commenters readily acknowledge the need to complete the ACP revision process expeditiously, there is a countervailing need for the public and stakeholder groups like the Commenters, to be able to review and provide feedback not only at the current "scoping" stage, but also on a draft ACP that contains the actual proposed changes to the Plan.

Riverkeeper is a member-supported environmental watchdog organization dedicated to defending the Hudson River and its tributaries and to protecting the drinking water supply of nine million New York City and Hudson Valley residents.[3] Through enforcement and litigation,

[1] The public notice soliciting comments on the review and update of the ACP can be found in the Federal Register, 79 FR 46866, August 11, 2014.
[2] Riverkeeper looks forward to our continued participation as a stakeholder on the Area Committee for Sector New York.

[3] For more details on Riverkeeper's mission and campaigns, go to www.riverkeeper.org

policy and legislation, as well as educational outreach, Riverkeeper works with the support of our 4300 members and 30,000 supporters to stop polluters, champion public access to the river and restore habitat, benefiting the natural and human communities of the Hudson River and its watershed. As part of its mission, Riverkeeper is focused on assessing the potential impacts of a crude oil spill on or near the Hudson River and working cooperatively with state and federal agencies to improve spill response planning while working toward more effective spill prevention.

Scenic Hudson works to protect and restore the Hudson River as an irreplaceable national treasure and a vital resource for residents and visitors.[4] A crusader for the valley since 1963, today we are the largest environmental group focused on the Hudson River Valley. Scenic Hudson combines land conservation, support for agriculture, citizen-based advocacy and sophisticated planning tools to create environmentally healthy communities, champion smart economic growth, open up riverfronts to the public and preserve the valley's inspiring beauty and natural resources.

The Hudson River is an irreplaceable natural resource, a globally significant tidal estuary that's home to over 200 species of fish[5] and myriad riverine habitats, including tidal and freshwater wetlands, shallow bays and deep channels that provide critical spawning and feeding habitat for a diverse range of aquatic life, from striped bass to American shad and blue crabs. Its waters are home to two federally endangered fish species, the Atlantic and shortnose sturgeon. The River anchors the Hudson Valley, a historic and cultural treasure for residents and visitors alike that drives a $4 billion dollar tourism and recreation-based economy. Eighty-four waterfront communities are situated along the River's shorelines, many of which rely on the River's cleanliness for drinking water, and all of which rely on a clean river for recreation.

The Hudson Valley, including the entire Hudson River Estuary and New York Harbor, are currently at the epicenter of a North American boom in oil production that has transformed the River transportation corridor and Harbor into a virtual pipeline for the transport of crude oil from North Dakota, and likely soon from Canadian tar sands fields, down the Hudson River by rail, tanker and barge to refineries in New Jersey, Pennsylvania, Nova Scotia and beyond. While the Hudson River and adjacent rail lines have long been used for the transport of refined fuels, the advent and sheer volume of crude oil being shipped through this region is a relatively new phenomenon, one that brings with it significant new risks and threats to public safety, the environment and our regional economy. Riverkeeper, Scenic Hudson, Clearwater and other environmental organizations, our supporters and a broad range of community groups and elected officials have worked for decades to reclaim the Hudson River and New York Harbor from a shared legacy of industrial and sewage pollution, unsustainable development and poorly regulated resource extraction that resulted in fouled waters, habitat loss and depleted fish populations. Our work has led to improved water quality, protected habitat and a renewed interest in recreating and living on the Hudson River. The risk and threat of a crude oil spill that could devastate the Hudson Estuary is real, and must be fully addressed through this and other regulatory and legislative processes. Apart from the ACP update process, Commenters are

[4] More information on Scenic Hudson's mission and history can be found at www.scenichudson.org
[5] http://www.dec.ny.gov/lands/74069.html

actively engaged on a range of initiatives to ensure that accident prevention is prioritized along with spill response.

Within the context of the review and update of the ACP, Commenters' goal is to ensure that the Plan is updated and revised to improve the level of preparedness, and increase the resources available for the Coast Guard, NOAA and state agencies and oil shippers/transporters to respond to a spill of crude oil into our waterways from a rail or marine shipping accident. Maximizing the recovery of spilled oil and protecting sensitive ecological resources should be central tenets of the updated ACP, particularly in light of the grave environmental risk posed by a spill of heavy, sinking oils such as tar sands crude, or diluted bitumen ("dilbit") into the Hudson Estuary.[6]

The following is a brief summary of our key comments and recommendations for the ACP.

- The vast increase in shipping of Bakken crude currently underway, and the pending shipping of heavy sinking oils, including tar sands and dilbit, present significant new environmental and public safety risks that must be addressed throughout the revised ACP in order to better prepare and respond to a crude oil spill.
- The ACP must be updated to increase preparedness and response capabilities for a spill of explosive Bakken crude oil or heavy sinking oils from a rail accident.[7] Sections of the ACP requiring revision in this regard include, but are not limited to, the Risk Assessment and Hazards Analysis, Discharge Scenarios, annual spill exercises, and pre-spill planning for Endangered Species Act ("ESA") consultation.
- The updated ACP should include planning requirements to facilitate the pre-positioning of response equipment, e.g. hard boom and sorbent materials, in key locations throughout the Estuary, but particularly in the mid and Upper Hudson River area, to better protect Sensitive Areas (Annex G) and critical infrastructure such as public drinking water intakes and power plant cooling water intakes.
- Annual spill exercises, including pre-planned NPREP drills as well as unscheduled exercises, should be updated to include spill scenarios from vessels underway on the Mid and Upper Hudson River, rail accidents on the CSX line that result into discharges into the Hudson River or its tributaries, and the use of simulants in order to increase the effectiveness of spill response.
- The use of Alternative Response Technologies must be better integrated into the ACP and related Vessel ("VRP") and Facility Response Plans ("FRP"), in order to facilitate the utilization of the best available response technologies by the Federal On Scene Coordinator ("FOSC") and Oil Spill Removal Organizations ("OSRO").
- Pre – spill planning for ESA and Magnuson Stevens Act Essential Fish Habitat ("EFH") Consultation must be updated to include better coordination with NOAA's National

[6] These goals are of course in addition to the need to prioritize the protection of human life during any response operation, which Riverkeeper understands as the initial and overarching priority in response situations.

[7] Riverkeeper and Scenic Hudson submitted detailed comments on September 30, 2014 in response to the Pipeline and Hazardous Materials Safety Administration ("PHMSA") proposed rulemakings on Enhanced Tank Car Standards and Oil Spill Response Plans, Dockets PHMSA-2012-0082 (HM-251) and PHMSA-2014-0105 (HM-251B), respectively, appended hereto as Attachment A. This submission contains detailed background on the increase in shipping of Bakken crude oil by rail across the U.S. and in New York.

Marine Fisheries Service, given the fact that Atlantic and shortnose sturgeon, two of the Hudson Estuary's iconic and ecologically important fish species, are currently listed as Endangered under the ESA, and extremely vulnerable to the adverse effects of a crude oil spill in the Hudson.

Background

As the federal Clean Water Act ("CWA") provides, "it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone…."[8] As part of the development of a National Planning and Response System for carrying out this prohibition, Area Contingency Plans ("ACPs") are required under Section 311(j)(4)(C) of the CWA.[9] An ACP is written in conjunction with the National Oil and Hazardous Substance Pollution Contingency Plan ("NCP"), 40 CFR Part 300, to verify threats (spill potential) and risks (resources that might be harmed in a spill) and to establish the strategies necessary to prepare for and respond to a pollution incident or event.[10]

The ACP must be "adequate to remove a worst case discharge" and must also be "adequate…to mitigate or prevent a substantial threat of such discharge from a vessel, offshore facility, or onshore facility operating in or near the area."[11] The ACP must describe the area covered by the plan, including "the areas of special economic or environmental importance that might be damaged by a discharge,"[12] as well as describe in detail the responsibilities of all parties (i.e., the owner or operator, and federal, state, and local agencies), "to ensure an effective and immediate removal of a discharge, and to ensure mitigation or prevention of a substantial threat of a discharge."[13] The ACP must also be updated periodically.[14]

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[8] CWA § 311(b)(1); 33 U.S.C. § 1321(b)(1). In 1990, the Oil Pollution Act ("OPA") amended the CWA to, among other things, "expand federal authority over, and responsibility for, oil spill responses. For all spills, regardless of size or character, the CWA now requires that '[t]he President shall, in accordance with the National Contingency Plan and any appropriate Area Contingency Plan, ensure effective and immediate removal of a discharge . . . of oil . . . .'". *In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010*, 2012 U.S. Dist. LEXIS 168755, at *6 (E.D. La. Nov. 28, 2012) (emphasis and alterations in original) (quoting 33 U.S.C. § 1321(c)(1)(A)). "[W]hen there is a Substantial Spill, the [post-OPA version of the] CWA deletes the option of monitoring removal efforts. Instead, '[t]he President shall direct all Federal, State, and private actions to remove' a Substantial Spill." *Id.* (emphasis and alterations in original) (quoting 33 U.S.C. § 1321(c)(2)(A)). "Legislative history states that this provision was 'designed to eliminate the confusion evident in recent spills where the lack of clear delineation of command and management responsibility impeded prompt and effective response.'" *Id.* (quoting H.R. CONF. REP. NO. 101-653, at 45 (1990), reprinted in 1990 U.S.C.C.A.N. 779, 825 (1990), 1990 WL 132747).

[9] 33 USC § 1321(j)(4)(C); *see also* 40 CFR § 300.210(c).

[10] *See* US Coast Guard, Notice of Review and Update of the New York/New Jersey Area Contingency Plan, 79 Fed. Reg. 46,866, 46,867 (Aug. 11, 2014).

[11] CWA § 311(j)(4)(C)(i); 33 USC § 1321(j)(4)(C)(i).

[12] CWA § 311(j)(4)(C)(ii); 33 USC § 1321(j)(4)(C)(ii).

[13] CWA § 311(j)(4)(C)(iii); 33 USC § 1321(j)(4)(C)(iii). The ACP must also do the following:

- "list the equipment (including firefighting equipment), dispersants or other mitigating substances and devices, and personnel available to an owner or operator and Federal, State, and local agencies, to ensure an effective and immediate removal of a discharge, and to ensure mitigation or prevention of a substantial threat of a discharge" (CWA § 311(j)(4)(C)(iv); 33 USC § 1321(j)(4)(C)(iv));
- "compile a list of local scientists, both inside and outside Federal Government service, with expertise in the environmental effects of spills of the types of oil typically transported in the area, who may be

The purpose of the ACP is "to provide for coordinated, immediate and effective protection, rescue, and rehabilitation of, and minimization of risk of injury to, fish and wildlife resources and habitat."[15] As mentioned above, the ACP must be adequate to remove a "worst case discharge" which means (1) in the case of a vessel, "a discharge in adverse weather conditions of its entire cargo;"[16] and (2) in the case of an onshore facility, "the largest foreseeable discharge in adverse weather conditions."[17] "Removal," as defined by CWA § 311(a)(8), means "containment and removal of the oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines and beaches."[18] Moreover, the federal regulations incorporate the definition from CERLCA § 101(23), which defines "removal" to mean, *inter alia*, the "cleanup or removal of released hazardous substances from the environment; [and] such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment."[19] Thus, "removal" includes not only the actual containment and removal of oil and hazardous substances, but also such other such actions as are necessary to prevent, minimize, or mitigate damage to the public health or welfare.[20] Indeed, the federal regulations include a more expansive definition than the CWA which also includes "monitoring" as part of "removal";[21] a broad definition which courts consistently uphold in cases which challenge the recovery of "removal costs."[22]

As noted above, Commenters are extremely concerned about the increased risk of a crude oil spill from rail or marine transport into the Hudson River Estuary, and the potentially catastrophic environmental and public safety impacts that could result. The current ACP for Sector New York was completed in 2011, prior to the onset of the current North American oil boom that is driving the enormous increase in Bakken oil shipping through New York, as well as the pending shipping of heavy crude and dilbit, including tar sands crude, through the region. As a result, the current ACP requires significant revision and updating in order to prepare for these new risks and spill scenarios.

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contacted to provide information or, where appropriate, participate in meetings of the scientific support team convened in response to a spill, and describe the procedures to be followed for obtaining an expedited decision regarding the use of dispersants" (CWA § 311(j)(4)(C)(v); 33 USC § 1321(j)(4)(C)(v));

- "describe in detail how the plan is integrated into other Area Contingency Plans and vessel, offshore facility, and onshore facility response plans approved under this subsection, and into operating procedures of the National Response Unit" (CWA § 311(j)(4)(C)(vi); 33 USC § 1321(j)(4)(C)(vi)); and
- "include any other information the President requires" (CWA § 311(j)(4)(C)(vii); 33 USC § 1321(j)(4)(C)(vii)).

[14] CWA § 311(j)(4)(C)(viii); 33 USC § 1321(j)(4)(C)(viii).
[15] 40 CFR § 300.210(c)(4)(i).
[16] CWA § 311(a)(24)(A); 33 USC § 1321(a)(24)(A).
[17] CWA § 311(a)(24)(B); 33 USC § 1321(a)(24)(B).
[18] 33 USC § 1231(a)(8).
[19] 40 CFR 300.5.
[20] 33 USC § 1231(a)(8); *see also United States v. Conoco, Inc.*, 916 F. Supp. 581, 583 (E.D. La. 1996).
[21] *See* 40 CFR 300.5.
[22] *See, e.g., United States v. Hyundai Merchant Marine Co*., 172 F.3d 1187, 1189-1190 (9th Cir. 1999)*; United States v. Conoco, Inc*., 916 F. Supp. 581, 583 (E.D. La. 1996); *United States v. Murphy Exploration & Prod. Co.*, 939 F. Supp. 489, 491 (E.D. La. 1996).

For example, the current ACP is focused almost exclusively on responding to a spill in the lower Hudson or New York Harbor. Discharge scenarios, including the Worst Case Discharge, are all premised on spills occurring in the Harbor area, and resulting from tanker vessel collision, tank vessel grounding or related reasons.[23] None of the scenarios involves a tanker accident and spill on the Mid or Upper Hudson, or a rail accident that results in railcars falling into the river and exploding and discharging crude oil. However, a key aspect of the current crude oil boom is the fact that the hub of much of the oil shipping is now Albany, at the north end of the Hudson Estuary, rather than facilities in the industrialized areas of New York Harbor. One hundred car unit trains of Bakken crude oil are coming into Albany to transfer the oil to barges, or are transiting just south of Albany and continuing down the CSX rail line on the west side of the Hudson River south into New Jersey. The end result is a continuous virtual pipeline of dangerous Bakken crude being shipped by rail and marine transport down the Hudson River valley, spreading the risk and impacts of an oil spill throughout the Hudson Estuary, from Albany to the Harbor, and dramatically increasing the risk of a crude spill in the Mid or Upper Hudson. In short, the ACP must be revised to reflect the new geographic scope of risk and impacts that flow from crude oil being moved through the region, and updated to require that the maximum amount of spilled oil is contained and removed, and ecological resources protected to the greatest extent possible from the effects of the spill.

The Shipping of Bakken Crude Oil by Rail and Marine Transport Poses an Imminent Risk of Significant Public Safety and Environmental Impacts that must be Assessed in the Updated ACP.

At present, the ongoing shipping of explosive Bakken crude down the Hudson River by rail, barge and tanker presents an imminent risk to communities along the rail line on the West side of the river, and sensitive ecological resources in the river that could be affected by a rail accident that resulted in a discharge to the Hudson or one of its tributaries. Commenters urge the Coast Guard to respond to this risk by revising the ACP to include additional planning requirements and analysis, detailed in this letter, that will ensure an effective response should such an incident occur.

There are several aspects of the Bakken oil boom that are fundamental to understanding the risk; volume of oil shipped, the volatility of the oil, and the demonstrated inadequacy of rail shipping methods that have resulted in multiple accidents, one involving dozens of casualties. Federal data indicates that the rail transportation of crude oil is growing at an alarming rate. In 2008, U.S. freight railroads were estimated to have carried 9,500 carloads of crude oil. In 2013, "more than 400,000 carloads of crude oil, or roughly 280 million barrels," were carried by rail, a more than forty-fold increase.[24] Between 2011 and 2012, the volume of crude oil transported by rail increased 423%.[25] As the volume of crude oil transported by rail increases, the associated risks have become increasingly more apparent. Alarmingly, more crude oil was spilled from railcars

[23] See Sections 9430.1 – 9430.4 of the ACP. The Worst Case Discharge Scenario involves a tank vessel collision south of the Verrazano Narrows bridge, resulting in a release of 8.4 million gallons of No. 6 fuel oil.
[24] John Frittelli et al., Cong. Research Serv. R43390, U.S. Rail Transportation of Crude Oil: Background and Issues for Congress 1 (2014) [hereinafter CRS Report].
[25] CRS Report at 4.

in 2013 (1.15 million gallons) than spilled during the 37 years prior (800,000 gallons).[26] Indeed, nationwide incidents involving crude oil transportation by rail have increased annually in the past five years.[27]

The Hudson River rail corridor has become a key destination for roughly one fifth of all oil produced from the Bakken shale deposits in North Dakota.[28] The oil is shipped cross country by rail to railyards south of Albany, and terminals in Albany for transfer to barges and tankers that carry it downriver to refineries in the mid-Atlantic and Canadian Maritimes. Global Companies owns trans-shipping terminals in Albany and New Windsor, New York, and is currently proposing to modify both facilities to be able to handle heavy tar sands crude.[29]
The Buckeye terminal in Albany receives Bakken crude and transfers it to the tanker *Afrodite,* which carries approximately 7 million gallons of crude downriver weekly. Buckeye is also reportedly planning to bring heavy tar sands crude by rail through New York to its facilities in New Jersey, which would involve shipping the crude in dangerous DOT-111 tank cars down the CSX line on the West side of the Hudson River.[30]

DOT Specification-111 rail tank cars ("DOT-111s") have been and continue to be at the center of oil spill disasters and their subsequent accident reports. DOT-111 rail cars were designed for general-purpose liquid transport, not for use with hazardous cargoes. Unsurprisingly, these tank cars are known to lack important safety features (such as shields, pressure vents, or thicker hulls), which make them more susceptible to punctures, spills, and explosions when used to transport oil. For over three decades, the United States National Transportation Safety Board ("NTSB") has recommended that DOT-111s not be used for hazardous material transport such as crude oil. In 1991, NTSB determined that 54% of the DOT-111 rail cars involved in accidents in a one-year period punctured, spilling their contents.[31] Rail cars of other types, with additional safety features, punctured at a rate of 23%.[32]

On July 6, 2013, 47 people were killed by fires and explosions in Lac Mégantic, Quebec resulting from a derailed unit train of DOT-111 railcars carrying volatile, explosive Bakken crude. An estimated 1.6 million gallons of crude were ignited and the damage is estimated to cost between $500 million and $1 billion to remediate.[33] In response to the disaster, Transport Canada created a new standard for the transportation of crude oil by rail. Specifically, about 7% of Canada's DOT-111 railcar fleet was immediately banned from carrying crude oil; remaining unsafe tank cars will become subject to this crude transport ban over the course of the next three

[26] PHMSA, *Hazardous Materials Incident Reports*, http://www.phmsa.dot.gov/hazmat/library/datastats/incidents (last visited July 18, 2014).
[27] PHMSA, *Hazardous Materials Incident Reports*, http://www.phmsa.dot.gov/hazmat/library/datastats/incidents (last visited July 18, 2014).
[28] Jad Mouawad, *Bakken Crude, Rolling Through Albany*, The N.Y. Times, http://www.nytimes.com/2014/02/28/business/energy-environment/bakkan-crude-rolling-through-albany.html (last visited July 21, 2014).
[29] For information on permitting related to these proposed terminal expansions, see http://www.dec.ny.gov/permits/95614.html, last accessed October 10, 2014.
[30] http://www.timesunion.com/business/article/Tar-sands-oil-Albany-bound-5773
[31] Nat'l Transp. Safety Bd., Safety Recommendations R-91-19 (July 1, 1991).
[32] Nat'l Transp. Safety Bd., Safety Recommendations R-91-19 (July 1, 1991).
[33] Oil Change International, Analysis of the Potential Costs of Accidents/Spills Related to Crude by Rail 1, 5-6, 9-10 (2013) [hereinafter Oil Change International].

years, through 2017.[34] The new Canadian standard for tank cars includes, at minimum, thicker steel and "additional top fitting and head shield protection."[35]

In the United States, a recent series of crude oil train derailments has led to significant economic and environmental damage. Of the three major spills this past year, two resulted directly from the use of DOT-111s:

- **November 8, 2013 – *Aliceville, Alabama***: approximately 630,000 gallons of Bakken crude oil spilled from derailed DOT-111 tank cars.[36] A series of explosions followed; the wetland adjacent to the rail tracks burned for three days. Clean-up costs have been estimated at approximately $3.9 million.[37]

- **December 30, 2013 – *Casselton, North Dakota***: DOT-111 railcars carrying crude oil collided with railcars carrying grain, causing 18 crude tank cars to derail and explode. An estimated 400,000 gallons of oil was spilled; cleanup efforts continue.[38]

The third major oil spill from U.S. railcars this year occurred on April 30, 2014 in Lynchburg, Virginia, where, of 17 derailed cars, three rolled into the James River, spilling approximately 80,000 gallons of crude oil into the waterbody.[39] This spill did not involve DOT-111s, but instead occurred when newer-model tank cars (CPC-1232s) were punctured. On August 1, 2014, in response to massive public and political pressure, the PHMSA issued two notices of proposed rulemaking intended to address the continued use of deficient DOT-111 rail cars for shipping Bakken crude and other hazardous materials which make up High Hazard Flammable Trains ("HHFT"). The draft regulations propose a range of new tank car designs intended to improve safety of rail shipping, as well as other measures, but the multi-year phase in period allows DOT -111 cars to continue to be used in the meantime for shipping Bakken crude, and would place no restrictions on their use for shipping heavy tar sands crude. Commenters submitted joint comments on the proposed safety regulations, pointing out numerous failings and omissions that, if finalized, would likely result in further reductions in safety and response preparedness rather than real improvements.[40]

One critical issue from Commenters' PHMSA comments that is particularly relevant for the ACP update relates to the USDOT's decision to issue an Emergency Order, requiring rail shippers of Bakken crude to provide information on train cargoes and routes to state emergency management officials, with the intent of distributing the information to local first responders. Due to rail shippers' reluctance to publicly disclose this information, there has been an inconsistent and arbitrary response to the Order, resulting in inconsistent dissemination to first responders and public disclosure. If the Coast Guard is going to assume responsibility as the FOSC under the

[34] Press Release, Gov't of Canada, Addressing the Safety of DOT-111 Tank Cars Carrying Dangerous Goods (Apr. 4, 2014), available at http://news.gc.ca/web/article-en.do?nid=841119 [hereinafter Canadian Press Release].
[35] Canadian Press Release.
[36] U.S. Dep't of Transp., Emergency Restriction/Prohibition Order DOT-OST-2014-0067 (May 7, 2014).
[37] U.S. Dep't of Transp., Emergency Restriction/Prohibition Order DOT-OST-2014-0067 (May 7, 2014).
[38] U.S. Dep't of Transp., Emergency Restriction/Prohibition Order DOT-OST-2014-0067 (May 7, 2014).
[39] CRS Report, at
[40] Please see Attachment A.

ACP to respond to a spill of Bakken or heavy crude from a train accident, it is critically important that the FOSC, state and federal response agencies and local first responders coordinate to share information on the content of crude oil trains transiting through the region. Effective response, and protection of first responders, demands that the best information available on the type of oil, whether it's dilbit or Bakken, be accurately reported and shared with all responders.

New York State has recently seen its own spate of rail accidents that bear out Commenters' concerns regarding the inherent risks of rail shipping along the Hudson River corridor. Derailments and accidents have occurred in West Nyack, the town of Ulster, Selkirk, and near Fort Montgomery, just north of the Bear Mountain Bridge. Fortunately, at least in terms of oil spills or explosions, none of these accidents resulted in oil spills, fires or other immediate safety hazards, but this was primarily a matter of sheer luck in at least one case.[41] In the wake of these derailments, FRA and NYSDOT performed two joint federal-state "inspection blitzes" which resulted in dozens of safety violations, highlighting the chronic, widespread and very real risks facing local communities and the environment.[42]

In addition to the risks posed by rail shipping of Bakken, Commenters urge the Coast Guard to carefully consider the potential impacts of a Bakken spill from a barge or tanker accident in the Hudson Estuary. As noted above, millions of gallons of volatile, explosive Bakken crude are shipped daily downriver from terminals in Albany to refineries inside and outside the Sector New York Area. The low flash point of Bakken differentiates it from other light crudes, and adds a safety risk related to shipping of light crude oil that was not considered in the current version of the ACP. As a result, the ACP should be updated to address this new type of risk, as noted in more detail in the comments that follow.

The Shipping of Heavy Crude Oil through the Hudson Estuary by Rail and Marine Shippers will Present New Risks and Threats of Significant, Potentially Catastrophic Impact that must be Assessed and Prepared for in the Updated ACP

Of the ten largest oil spills in American history, five involved marine vessels – most notably the *Exxon Valdez* oil spill in the Prince William Sound on March 24, 1989.[43] A spill of heavy crude oil in the Hudson River has the potential to cause devastating damage to sensitive habitats, endangered species and numerous aquatic species already stressed by climate change, habitat loss, pollution and other stressors. The Hudson narrowly avoided a similar fate in December 2012, when the first tanker to carry crude oil down the Hudson, the *Stena Primorsk*, ran aground just six miles downstream of the Port of Albany carrying 12 million gallons of crude. [44]

[41] The West Nyack derailment involved an empty, northbound crude oil unit train striking a semi-truck stalled on the tracks. Had the accident involved a fully loaded unit train heading southbound, the results could have been catastrophic. See http://www.nydailynews.com/news/national/freight-train-collides-car-carrier-west-nyack-reports-article-1.1540080, last accessed October 10, 2014.
[42] See https://www.governor.ny.gov/press/02282014-volatile-crude-oil
[43] James Conca, Pick Your Poison for Crude – Pipeline, Rail, Truck or Boat, Forbes, available at http://www.forbes.com/sites/jamesconca/2014/04/26/pick-your-poison-for-crude-pipeline-rail-truck-or-boat/.
[44] Paul Grondahl et al., Tanker's Outer Hull Pierced, Albany Times-Union, http://www.timesunion.com/local/article/Tanker-s-outer-pierced-4134866.php (last visited July 24, 2014).

Although the outer hull of the double hulled ship was pierced, the inner hull held and no oil was spilled.

Barges are smaller than tankers (one river barge "can hold 10,000 to 30,000 barrels of oil"[45]) but no less dangerous. In fact, the risk of spill from a barge is actually greater than that from a ship; from 1991-1996 the spill rate, expressed in barrels per ton-mile, was 10 times higher for barges than tankers.[46] A selection of major ship and barge accidents illustrates the risk of spills, even when precautions like double-hulls are taken:

- **November 26, 2004 – *Paulsboro, New Jersey***: The *Athos I*, travelling along the Delaware River, "struck a large, submerged anchor while preparing to dock at a refinery."[47] With the bottom of the vessel punctured, approximately 265,000 gallons of crude oil spilled in the Delaware River and its tributaries. Cleanup continued until 2011.

- **January 27, 2013 – *Vicksburg, Mississippi***: A barge carrying 668,000 gallons of crude oil on the Mississippi River crashed into a railroad bridge.[48] An 80,000 gallon tank on the vessel was damaged; the resulting spill necessitated the closure of the Mississippi River to any other vessels for eight miles upstream and downstream of the site.

- **March 22, 2013 – *Galveston Bay, Texas***: A barge carrying 924,000 gallons of crude oil collided with a ship in Galveston Bay, spilling almost 20% of its cargo, 168,000 gallons, into the Bay and surrounding wetlands.[49]

Port facilities in and around Albany and along the Hudson River already transfer over a million gallons of crude oil (from railcar to barges and vessels) each day.[50] With more capacity in development, including this proposed expansion of Global's Albany Terminal heating and storage capacity, as well as the repurposing of Global's Newburgh and New Windsor facilities, the waterborne transport of crude oil along the Hudson continues to rise. Between 2011 and 2012, while the volume of crude oil carried by rail in the United States increased by 423%, the volume moving by barge on inland waterways as well as along intra-coastal routes increased by 53%.[51] Individually, a spill from a single barge or vessel could decimate the Hudson; collectively

[45] CRS Report at 8.
[46] Jacqueline Michel, Malcolm L. Spaulding, Keith Michel, Malcolm MacKinnon, James O'Brien, and Stephen Palmer, Spills of Nonfloating Oils: Findings, Conclusions, and Recommendations to Improve Preparedness and Response 3 (2001).
[47] Case: Athos Spill, PA, NJ, and DE, National Oceanic and Atmospheric Administration's Damage Assessment Remediation and Restoration Program, http://www.darrp.noaa.gov/northeast/athos/ (last visited July 21, 2014).
[48] Janet McConnaughey, Mississippi River Barge Crash: Barge Carrying 80,000 Gallons of Oil Hits Railroad Bridge, Leaks, Huffington Post Green, http://www.huffingtonpost.com/2013/01/27/mississippi-river-barge-crash_n_2564418.html (last visited July 21, 2014).
[49] Oil Spills into Galveston Bay After Ships Collide, Fox News, http://www.foxnews.com/us/2014/03/23/oil-spills-into-galveston-bay-after-ships-collide/ (last visited July 21, 2014).
[50] Joshua Schneyer, Dozens of Trains Haul Volatile Bakken Oil to New York Weekly: Railroads, Business Insider, http://www.businessinsider.com/r-dozens-of-trains-haul-volatile-bakken-oil-to-ny-weekly-railroads-2014-15 (last visited July 24, 2014).
[51] CRS Report at 4.

and cumulatively, increased river traffic exacerbates the potential for an accident involving multiple vessels.

Unlike many petroleum products which float, heavy crudes sink or become suspended in the water column, making recovery much more difficult, costly and time consuming.[52] The Department of Homeland Security warns that although federal law "requires facilities or vessels storing or transporting heavy and sinking oils in American waters to identify response organizations and strategies for responding to spills," planning for heavy crude oil spills can be difficult.[53] Spill response professionals working for the National Oceanic and Atmospheric Administration ("NOAA") agree; they note that, once spilled, finding pockets of heavy crude oil can be impossible, as "[e]xisting methods for tracking spills are not effective for tracking nonfloating oils."[54] Even if found, NOAA warns that containment can also be problematic:

> "The options for effectively containing and recovering nonfloating oils are limited. Even the most promising methods have not been effective for containing and recovering oils mixed in the water column, except under ideal conditions (e.g., small spills of emulsified oils in areas with very low currents and little wave activity). Generally, oil in the water column disperses quickly over large areas and volumes, becoming unavailable for effective recovery."[55]

The Coast Guard has also weighed in on these difficulties:

> "The containment and recovery of oil dispersed in the water column or deposited on the seabed are very difficult. The problem begins with locating the oil and determining its status. The success of current methods varies greatly but is usually limited because the oil, which is mixed with sediments and water, is usually widely dispersed."[56]

Because the recovery technology is currently so lacking, "[i]f oil is suspended in the water column, little can be done besides detect[ion]"—a task, as NOAA noted, which is difficult in its own right.[57] James Elliott, a spill response expert with decades of experience, agrees, noting that recovery rates for heavy, nonfloating oils is lower than that for typical floating crudes – particularly with conditions such as those found on the Hudson:

> "[T]he effectiveness of on-water oil recovery technology remains only at about a 10 to 25% recovery rate. The effective oil recovery rates for submerged oil recovery operations are typically lower than 25%, as evidenced by the Tank Barge DBL 152 and Deepwater Horizon oil spill incidents in the Gulf of Mexico. . . . Based on this discussion of the complexities of oil spills in riverine environments, and given the current state of oil spill recovery technology at about a 10 to 25% recovery rate, it is likely that

[52] Great Lakes Report, at ii.
[53] Great Lakes Tar Sands Report, at 10 (citing U.S. Dep't of Homeland Sec., Development of Bottom Oil Recovery Systems Final Report, at v (2013)).
[54] NRC Spills of Nonfloating Oils Report, at 53.
[55] NRC Spills of Nonfloating Oils Report, at 54, 58.
[56] ACP Annex, at 13.
[57] NRC Spills of Nonfloating Oils Report.

oil spill responders in the Hudson River could potentially achieve a lower than average spill recovery rate."[58]

The many difficulties associated with planning for, finding and tracking—and ultimately recovering—heavy crude oil were recently borne out in Michigan, where, more than three years after the spill of heavy crude oil into Talmadge Creek and the Kalamazoo River, the river's bottom sediment remains contaminated; an estimated 20% of the 877,000 gallons of spilled oil remains unrecovered.[59] Responders faced difficult and dangerous conditions created by the constituents in the spilled heavy crude: "[d]uring the response to the Kalamazoo River spill, elevated benzene levels were measured in the air."[60] "After the Kalamazoo River spill, 331 people reported adverse [health] effects, including nausea, respiratory distress, and headaches—although none required hospitalization."[61]

The current ACP also notes that cleaning up heavy oil spills would be particularly difficult and dangerous.[62] As noted above, the characteristics of the Hudson—from heavy tidal exchange to shifting shoals and narrow navigational channels—make any spill response, particularly one involving heavy crude oil, extremely challenging. Barges on the Hudson are capable of transporting nearly 12 million gallons, over 15 times the volume that spilled into the Kalamazoo.[63] If spilled,

- With the tidal nature of the river, surface and subsurface oil recovery becomes extremely difficult, if not impossible, typically resulting in very low recovery rates.[64]
- With strong, multi-directional currents, heavy oils are more likely to remain suspended in the water column or sink to the bottom of the River.[65]

In any scenario, cleaning up heavy, sinking crude oil is much more difficult than responding to light oils on the surface of a stagnant water body.[66]

Stretching over 153 miles, the Hudson River Estuary "includes a wide range of wetland habitats, from the brackish marshes of Piermont to the slightly brackish wetlands of Iona Island, and the

[58] Affidavit of James Elliott, appended hereto as Attachment B. This affidavit was submitted in support of litigation filed in New York state court by Riverkeeper and other parties, challenging a permit related determination by the New York Department of Environmental Conservation ("NYSDEC"). Its purpose here is to provide specific factual support from a technical expert as to the difficulties of recovering heavy crude oil.
[59] U.S. Environmental Protection Agency, Dredging Begins on Kalamazoo River (Aug. 2013), available at http://www.epa.gov/region05/enbridgespill/pdfs/enbridge_fs_201308.pdf ; CBC News, Enbridge's Kalamazoo cleanup dredges up 3-year-old oil spill (Sept. 6, 2013), available at http://www.cbc.ca/news/politics/enbridge-s-kalamazoo-cleanup-dredges-up-3-year-old-oil-spill-1.1327268.
[60] NOAA Tar Sands Report at 6.
[61] NOAA Tar Sands Report at 6.
[62] ACP Annex, supra note at 4, t.1.
[63] Marisol H. Stokes, Crude Oil Ships Imperil the Hudson, The Journal News, http://www.lohud.com/opinion/readers/2014/04/19/crude-oil-ships-imperils-hudson-7920249/ (last visited July 24, 2014).
[64] Attachment B, Affidavit of James E. Elliot, ¶ 8(c)(ii).
[65] Id. at ¶ 11.
[66] Id. at ¶ 11.

freshwater tidal mudflats and marshes of the Tivoli Bays and Stockport Flats."[67] This habitat diversity "would complicate oil spill response operations, likely reducing the effective recovery."[68] Finally, the Hudson River often freezes in patches during the winter. Due to snow and ice on the water, "winter spills may be harder to detect and, when found, more difficult to contain and clean up."[69]

According to the U.S. Department of State ("DOS"):

> "An oil spill that results in oil reaching waterbodies during either freeze-up or breakup may be difficult to contain, remove and cleanup. The ice may not be strong enough to support people or equipment. In rivers, the oil may be transported several miles under the ice or in broken ice before it can be contained. Once the ice is strong enough to support people and equipment, it may be more difficult to detect the oil under the ice and to implement measures to affect rapid containment/cleanup at and near the spill site."[70]

It is important to note that there is a greater volume of oil transported through New York in the cold weather season.[71] Accordingly, "the operating conditions for recovering oil are often the most complex during the seasonal period of largest volume of oil transits within and near the Hudson River."[72]

The environmental impacts of a heavy crude spill could be significant, particularly due to the specific nature and toxicity of heavy crude oil. Global Companies' proposal to expand its Albany terminal to allow for transfer of heavy crude from rail cars to barges includes the possibility of storing, handling and shipping crude oil or bitumen derived from Western Canadian tar sands.[73] According to the U.S. Coast Guard, "oils with densities higher than the receiving water (above the line) will sink."[74] This unique characteristic, coupled with evidence

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[67] Id. at ¶ 4.
[68] Id. *See* ACP.
[69] Final Environmental Impact Statement for the Proposed Keystone XL Project, Section 3, Environmental Analysis, at 3.13-52. (hereafter "*Keystone FEIS*"), available at http://keystonepipeline-xl.state.gov/archive/dos_docs/feis/.
[70] Keystone FEIS at § 3.13-52.
[71] See Attachment B.
[72] *Id.* at Note 71.
[73] Global has already prepared for the possibility that the array of heavy crudes transported on the Hudson may include Alberta tar sands crude. "[A]s part of the overall evaluation related to heavy oil characteristics and spill response," Global has reviewed a 2013 NOAA report entitled *Transporting Alberta Oil Sands Products; Defining the Issues and Assessing Risks* as well as a 2013 Natural Resources Canada report entitled *Federal Government Technical Report: Properties, Composition and Marine Spill Behaviors, Fate and Transport of two Diluted Bitumen Products from the Canadian Oil Sands* Letter from Dean S. Sommer, Partner, Young Sommer Ward Ritzenberg Baker & Moore LLC, to William Clark, Reg'p Permit Adm'r, N.Y. State Dep't of Envtl. Conservation, at 22-23 (May 15, 2014).
[74] ACP Annex at 2 (the ACP continues by noting that oils "with densities lower than the receiving water (below the line) will initially float," but eventually sink); Jeffrey W. Short Ph.D, Susceptibility of Diluted Bitumen Products from the Alberta Tar Sands to Sinking in Water, 13 (2013) (". . . it is clear that accidental spills of diluted bitumen products from the Alberta tar sands would often eventually sink in fresh water solely on account of evaporative weathering, and would also sink in brackish marine waters under plausible circumstances"); Attachment B, Jim Elliot Aff. at ¶ 6 (citing National Research ("Group IV oil, which has a specific gravity of slightly less than 1.0, 'might mix into the water column and sink to the seabed after weathering and interaction with sediments.'" (National Research Council, 1999).

that its chemical makeup may be more toxic than other types of crude, makes heavy, sinking crude oil significantly more dangerous to human health, water quality, environmental function, and sensitive ecological resources than other types of crude.

The chemical makeup of heavy crudes differs significantly from other forms of crudes, presenting new and potentially more significant risks to the Hudson River Estuary. First, heavy crudes may contain higher concentrations of toxic pollutants than others. "Nonfloating [heavy] oils are often high in polynuclear aromatic hydrocarbons (PAHs), which are the primary source of both acute and chronic toxicity to aquatic organisms."[75] According to a 2007 U.S. Geological Survey report, the oil extracted from Alberta tar sands, a type of heavy crude, contains uniquely high levels of numerous potentially harmful pollutants—11 times more sulfur, six times more nitrogen, 11 times more nickel, and five times more lead than conventional oil.[76]

Unlike oil from other sources, tar sands oil often arrives into the United States from Canada as diluted bitumen, "a highly corrosive, acidic, and potentially unstable blend of thick raw bitumen and volatile natural gas liquid condensate."[77] The chemicals used to dilute the bitumen are hazardous and more likely to ignite or explode than conventional crude. An explosion of diluted bitumen may produce hydrogen sulfide, a highly toxic gas which can cause suffocation.[78] Taken together, these heightened toxicity exposure risks increase dramatically once heavy crudes are introduced into marine environments, where they emulsify and persist longer than more conventional crude oils, lengthening the exposure window:

> "All water-column and benthic habitats are at increased risks from spills of nonfloating [heavy] oils. Oils that quickly sink or are suspended in the water column have greater impacts on organisms in the water column because more of the water-soluble fraction of the oil dissolves rather than evaporates. Oil on the surface is primarily weathered by evaporation to the atmosphere and, to a lesser degree, to the water column by dissolution. Oils suspended in the water column or deposited on the bottom are less likely to evaporate but more likely to dissolve, although the water-soluble fraction of heavy oils is usually very low. Consequently, the water column can have higher concentrations of toxic fractions from nonfloating [heavy] oils than from floating oils. Dissolution tends to be a slower process than evaporation, thus increasing potential exposure times."[79]

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[75] National Research Council Committee on Marine Transportation of Heavy Oils, Marine Board Commission on Engineering and Technical Systems, Spills of Nonfloating Oils; Risks and Response 32 (1999) (internal citations omitted) [hereinafter NRC Spills of Nonfloating Oils Report].

[76] Alliance for the Great Lakes, Oil and Water: Tar Sands Crude Shipping Meets the Great Lakes?, 8 (2013) [hereinafter Great Lakes Tar Sands Report]. (citing U.S. Geological Survey (USGS), Heavy Oil and Natural Bitumen Resources in Geological Basins of the World (2007), available at http://pubs.usgs.gov/of/2007/1084/OF2007-1084v1.pdf

[77] Natural Resources Defense Council, Tar Sands Pipelines Safety Risks 5 (Feb. 2011).

[78] For first responders and communities, these constituents present significant potential risks; diluted bitumen, in addition to the contents discussed above, also contains benzene, PAHs, and other toxins that can affect the human central nervous system. A leak or spill of any of these chemicals presents an elevated risk to the environment and public safety, especially to first responders on scene immediately after spills, often before a full assessment of a spill's contents is completed.

[79] NRC Spills of Nonfloating Oils Report at 32; U.S. Coast Guard, New York and New Jersey Area Contingency Plan; ANNEX W Contingency Planning Annex for Group V Oil (Non-Floating) 4 (2011) ("When submerged, slow weathering of the more toxic components can be a chronic source of risk.") [hereinafter ACP Annex].

The elevated toxicity levels and longer exposure windows pose significant new and adverse dangers for aquatic biota, and "especially [for] benthic or territorial fish, and to early life stages (i.e., eggs, fry) in areas where oil has accumulated on the bottom."[80] Fish eggs laid on bitumen-contaminated sediments in lab studies "showed frequent death or physical abnormalities, including spinal deformities, lesions, hematomas, and eye defects … if a spill involving sunken oil occurs during spawning periods, fish eggs and larvae may be adversely affected."[81] Viscous smothering and coating risks are "increased to all shellfish, especially species that spend most of their time on the sediment surface (e.g., mussels, lobsters, crabs) … [and] risk of chronic exposure from bulk oil, as well as the slow release of water soluble PAHs (polynuclear aromatic hydrocarbons), is high."[82]

In an April 2013 Report prepared for New York State Governor Cuomo—co-authored by DEC and four other state agencies—DEC admits that transport of heavy "tar sands" oil via rail, terminal, barge and ship would present new and "different" potential environmental impacts:

> "Canadian Tar Sands oil presents a different set of challenges to effective prevention and response. Tar Sand oil is less volatile than Bakken crude oil, but is so heavy that it will sink if released over water. *Given that much of the crude oil transported through New York State travels along or on major waterways, that is a significant concern and one that must be addressed if Canadian Tar Sands crude oil begins to be transported through New York State."*[83]

The Following Sections of the ACP Must Be Updated and Revised to Reflect the Increased Threat and Risk Posed by the Shipping of Crude Oil by Rail and Marine Transport within the Coastal Zone Served by Sector New York

1. **The Risk Assessment and Hazard Analysis must be updated and expanded beyond the Port of New York/New Jersey to address rail and marine transport of Bakken and heavy/tar sands crude throughout the Hudson River Estuary**

Section 9420 of the ACP contains a Risk Assessment for the Port of New York/New Jersey which includes an overview of petroleum activity in the Port, and a brief summary of oil transport which is primarily focused on ship traffic in the Port. The Oil Transport section also mentions that "5% [of the oil transported] is destined up the Hudson River."[84] However, this section does not discuss the shipping of crude oil by rail and marine transport down the Hudson River to facilities in the Harbor, and transport out of the New York Bight to refineries outside Sector New York. The Risk Assessment Section also briefly mentions major anchorages in the

[80] ACP Annex W at 4.
[81] Nat'l Oceanic and Atmospheric Administration, NOAA Technical Memorandum NOS OR&R 44; Transporting Alberta Oil Sands Products: Defining the Issues and Assessing the Risks 63 (2013) (citations omitted) [hereinafter NOAA Tar Sands Report].
[82] NRC Spills of Nonfloating Oils Report, at 31.
[83] N.Y. State Div. of Homeland Sec. and Emergency Servs. et al., Transporting Crude Oil in New York State; Review of Incident Prevention and Response Capacity 14 (2014)
[84] ACP Section 9420.1.

Upper and Lower Harbor and Upper New York Bay, but no anchorages in the Mid or Upper Hudson.

In its description of potential hazards, the ACP describes a range of potential accidents, from vessel groundings to collisions and facility fires.[85] In a subsection on Transportation Accidents, there is a brief description of rail or tanker truck spills, which are classified as medium spills, but there is no discussion of whether a derailment and spill of crude from a 100 car unit train would qualify as a major spill necessitating a broader response.[86] This section of the Risk Assessment should be revised to include a brief discussion of the risks and potential impacts of a large unit train derailment and spill of multiple cars' cargo into the Hudson River, in order to capture this new type of oil shipping in the region.

The Transportation Accident section also specifically notes the response challenges of a rail accident, noting that "Environmental concerns could be substantial in some of the more sensitive areas, areas where the remote location could cause *substantial delays* in the deployment of containment boom and generally slow cleanup operations."[87] In light of this conclusion, Commenters urge the Coast Guard to consider our recommendations regarding the pre-positioning of response technologies in the Mid and Upper Hudson, which would enable quicker, more effective response and ensure better protection of sensitive areas.

In order to provide an up to date risk assessment that will fully inform spill response planning, this section needs to be expanded beyond the Port of New York/New Jersey to include the upper portions of the Hudson River Estuary, an area which now experiences very high volumes of oil shipping by rail and marine transport throughout the year.

2. Discharge Scenarios must be updated to include scenarios on the mid and Upper Hudson River, as well as a rail accident scenario

Sections 9430.1 – 9430.4 include descriptions of Area Spill Scenarios, ranging from the Average Most Probable Discharge to the Worst Case Discharge. The ACP notes that scenario planning is a key element of the response planning process, noting that "Preparing for where spills occur and what decisions will have to be made is critical to effective contingency planning."

All of the current scenarios involve accidents in the Harbor or vicinity, and none involve a rail accident leading to an explosion, fire and/or discharge of crude oil into navigable waters. In order to better plan for the new risks and threats posed by crude oil shipping from the upper Estuary through the Harbor, Commenters urge the Coast Guard to revise the Discharge Scenario sections, to include, but not be limited to, the following types of scenarios;

- The derailment of a unit train carrying Bakken crude oil on the CSX line on the west shore of the Hudson River, leading to significant to complete loss of cargo (unit trains typically are comprised of app. 100 tanker cars, 30,000 gallons each. Complete cargo loss would be app. 3 million gallons.), multiple car derailments and ruptures that result in

[85] ACP Section 9420.11.
[86] *Id.*
[87] *Id.*

explosion, fire, tanker car debris and oil discharged into the river that threatens Sensitive Areas. An analog to this scenario would be the Lynchburg, Virginia accident, which spilled at least 80,000 gallons of crude oil, sent damaged tanker cars into the James River, set the river ablaze, and threatened nearby public drinking water intakes.[88]

- A Worst Case Discharge Scenario that involves a tank vessel collision or grounding on the Upper Hudson near Stuyvesant, leading to a complete loss of cargo of 8 million gallons of heavy or light crude, in winter conditions involving floating ice and current greater than 1 knot.

3. Annual spill exercises must be revised to include spill scenarios involving spills from vessels underway on the Hudson, and train derailments that result in spills and fire or explosion in or near the Hudson River Estuary

While Commenters note that spill response drills and exercises are not specifically described or included in the ACP itself, they are an integral part of the regulatory framework that establishes the need to develop and update the National Contingency Plan, and related ACPs. Section 1321(j)(7) of the Clean Water Act states that

> The President shall periodically conduct drills of removal capability, without prior notice, in areas for which Area Contingency Plans are required under this subsection and under relevant tank vessel, nontank vessel, and facility response plans. The drills may include participation by Federal, State, and local agencies, the owners and operators of vessels and facilities in the area, and private industry. The President may publish annual reports on these drills, including assessments of the effectiveness of the plans and a list of amendments made to improve plans.[89]

Implementing regulations also spell out the requirement to conduct drills, specifically stating that "The OSC periodically shall conduct drills of removal capability (including fish and wildlife response capability), without prior notice, in areas for which ACPs are required by § 300.210(c) and under relevant tank vessel and facility response plans."[90]

Commenters are aware that a range of drills and exercises are required to be conducted on an annual basis, ranging from complex tabletop NPREP exercises to unannounced "GUI" inspections to test response times. Due to the new risks posed by shipping of Bakken and heavy crude oil by rail and marine transport, Commenters recommend that the Coast Guard refine and update its drill regime, to include drills that involve rail and barge/tanker accidents that result in discharges of Bakken and heavy crude oil into the Hudson Estuary. The annual drill schedule should include at least one drill on the Mid and Upper Hudson each year, and multiple GUI

[88] See http://news.nationalgeographic.com/news/energy/2014/04/140430-oil-train-derails-in-lynchburg-virginia/ , last accessed October 10, 2014.
[89] 33 USC §1321(j)(7).
[90] 40 CFR §300.212.

inspections of both facilities and tank vessels underway on the river, in order to test their response capabilities and ensure compliance and consistency with the individual Facility Response Plans ("FRP") and Vessel Response Plans ("VRP"). Response times for tank vessels carrying crude are particularly critical to verify, given the geographic range and high number of Sensitive Areas of the Hudson River traversed by vessels carrying crude oil, but are required by the statute and regulations.

Drills and exercises should also be developed that utilize environmentally benign "simulants" that can released into waterways to test actual response times and recovery capability under varying current, tide and meteorological conditions. The Coast Guard should work proactively with EPA, NYSDEC and other agencies to develop a short list of simulants and scenarios for their use that could be permitted and carried out on an annual basis. Given the new and complex risks posed to the Hudson Estuary and Sector New York by the increase in crude oil shipping, it is essential that the Coast Guard develop and implement the most realistic, robust and challenging drill regime possible, so that the FOSC, responding state and federal agencies and OSROs are as well prepared as possible for an actual incident.

4. ACP should establish and identify areas for pre-positioning response assets in proximity to Sensitive Areas, and require pre-positioning, to ensure timely deployment and protection of environment

In consideration of the large number of sensitive ecological resources at risk in the Hudson River Estuary from an oil spill, Commenters urge the Coast Guard to include the need to pre-position response assets in certain areas of the Estuary that would allow responders to quickly and effectively deploy boom, sorbents and other response technologies to contain and recover spilled oil, and protect sensitive ecological resources. This could be added to Section 5200 of the ACP.

The Hudson River estuary north of NYC has many narrow reaches with significant tidal current. North of NY Harbor effective response *and recovery* in the event of a vessel spill or train derailment/spill will hinge on the speed of response. No drills or past experience have demonstrated that sufficient assets could be deployed in time to prevent damage to critical natural resources. Prepositioning spill response boom, equipment and materials (possibly sorbent booms and pads, solidifiers, etc. as appropriate)at strategic locations and training local first responders could greatly increase the efficacy of a response and protection for communities and the environment.

Just as we have local fire department to enable fast response to fires in our communities we need local spill response asset depots and local crews.

The following is a list of areas where response assets should be deployed. These are listed south to north from the Bronx/Yonkers line. Also note that only significant marshes, wetlands and community waterfront resources are listed, not all.

1) Piermont Marsh and Sparkill Creek – boom and materials sufficient to protect entire marsh and close creek mouth

2) Piermont – boom and materials sufficient to protect several marinas, community waterfront and public beach.

3) Tarrytown – boom and materials sufficient to close off two marinas

4) Croton Bay – boom and materials sufficient to protect marsh south of Croton Point and seal off the Croton River and its tidal wetland

5) Haverstraw – boom and materials sufficient to seal off Bowline power plant intake lagoon.

6) Haverstraw - boom and materials sufficient to close the mouth of Haverstraw Marina

7) Stony Point - boom and materials sufficient to seal off Cedar Pond Brook and its tidal wetland

8) Stony Point Bay - boom and materials sufficient to protect 5 marinas and yacht clubs

9 Indian Point - boom and materials sufficient to protect intakes and prevent damage to cooling system

10) Peekskill - boom and materials sufficient to seal off Annsville Creek and its tidal wetland.

11) Iona Marsh - boom and materials sufficient to seal off both north and south openings to the marsh

12) Popolopen Creek - boom and materials sufficient to seal off creek and wetland

13) Manitou Marsh, Garrison - boom and materials sufficient to seal all opening to wetland

14) Constitution Marsh, Cold Spring - boom and materials sufficient to seal off north and south openings to wetland

15) Moodna Creek, New Windsor - boom and materials sufficient to seal off creek and wetland

16) Fishkill Creek, Beacon - boom and materials sufficient to seal off creek and wetland

17) Newburgh - boom and materials sufficient to protect several marinas, community waterfront.

18) Wappinger Creek - boom and materials sufficient to seal off creek and tidal wetland

19) Marlboro - boom and materials sufficient to seal off creek and wetland. Also a marina and yacht club

20) Crum Elbow - boom and materials sufficient to seal off wetland on east side

21) Black Creek, West Park - boom and materials sufficient to seal off creek and tidal wetland

22) Norrie Yacht Basin, Staatsburg - boom and materials sufficient to seal off marina, creek and tidal wetland

23) Vanderburgh Cove, Staatsburg - boom and materials sufficient to seal off tidal wetland

24) Rondout Creek – boom and materials sufficient to seal off creek, tidal wetlands, community waterfront assets and numerous marinas

25) Tivoli Bays - boom and materials sufficient to seal off north and south bays, tidal wetland and Cruger and Magdalen Islands
26) Esopus Creek - boom and materials sufficient to seal off creek, tidal wetlands, community waterfront assets and numerous marinas
27) Ramshorn Marsh, Catskill - boom and materials sufficient to seal off creek, nature preserve and tidal wetland
28) Roeliff Jansen Kill, North Germantown - boom and materials sufficient to seal off creek and tidal wetland
29) Catskill Creek - boom and materials sufficient to seal off creek, tidal wetlands, community waterfront assets and numerous marinas
30) Rogers Island, Hudson - boom and materials sufficient to seal off north and south channels and east side wetland
31) Hudson, north and south bay - boom and materials sufficient to seal off inlets and two tidal wetlands
32) Hudson to Stuyvesant – state parks, preserves and extensive globally rare fresh water tidal wetlands which will require large amounts of boom to protect – sites too numerous to name individually. The mouth of Stockport Creek is also in this reach, east side.
38) Mill Creek - boom and materials sufficient to seal off creek, nature preserve and tidal wetland
39) Schodack Creek - boom and materials sufficient to seal off large tidal creek and extensive tidal wetland area
40) Coeymans - boom and materials sufficient to seal off community waterfront, marinas, creek and tidal wetland
42) Coeymans - boom and materials sufficient to seal off marina, creek and tidal wetland
43) Vloman Kill, Bethlehem - Coeymans - boom and materials sufficient to seal off creek and tidal wetland
44) Papscanee Creek - boom and materials sufficient to seal off creek and extensive tidal wetland
45) Island creek, Albany - boom and materials sufficient to seal off creek
46) Tidal marsh, Rensselaer - boom and materials sufficient to seal off creek and tidal wetland

On a related but equally important note, a large number of unit trains carrying up to 3 million gallons each of crude oil are traveling down the Mohawk River corridor from Buffalo. To protect

the Hudson from a derailment and spill the Coast Guard must have a plan and require that assets be in place to prevent/minimize/capture any oil entering the Hudson from the Mohawk River which meets the Hudson just above the Federal Dam at Troy. Prior planning and coordination with inland spill response (EPA) to capture oil while it's still in the Mohawk will be essential as currents generally increase at Troy and regions south.

5. **Use of Alternative Response Technologies should be better integrated into the ACP**

Commenters recommend that the Coast Guard integrate the regular review, verification and use of alternative response technologies into the ACP, in order to increase the likelihood that these new technologies are available to OSROs and familiar enough to the FOSC that they would be used in appropriate situations. The need for consideration of alternative technologies is clearly demonstrated by the growing likelihood that in addition to Bakken crude, heavy crude oil, including dilbit and tar sands crude, will be transported in large volumes on the Hudson Estuary, thereby increasing the risk of a spill that could wreak severe damage on protected habitat, endangered species and other sensitive natural resources. Given the near impossibility of recovering significant amounts of a heavy/sinking oil spill, and the toxic effects such oil can have on riverine and shoreline habitats, it is critical that all means of containing and recovering the oil, and protecting these resources, are explored and verified for us. Commenters are primarily referring to technologies that are already approved and on the Product List. However, we also note the need to regularly update the Product List, and encourage OSROs through review and approval of their VRPs and FRPs, to maintain inventories of response technologies that are best suited to an effective spill response in the Hudson Estuary.

Commenters also recommend that at least one annual spill exercise or drill include the use of alternative technologies, in order to build familiarity and test efficacy, to the extent possible.

6. **Section 9720.3 should be revised to include an accurate description of areas within Sector NY where use of Dispersants is pre-authorized, allowed on a case-by-case basis, or prohibited.**

The need to prioritize the protection of the large number and geographic range of sensitive ecological resources in the Hudson River Estuary requires that the use of chemical dispersants be thoroughly vetted, and certain areas of the Estuary that contain critical spawning habitat for endangered species, rare habitat (saltwater marshes, tributaries that support spawning river herring or shad) or other ecological resources be categorized as Red Zones, where use of dispersants is prohibited. The risk of dispersant use that inadvertently causes more environmental harm than good, in terms of preventing oil contamination of those same areas, is a valid concern that must be an integral part of the ACP review and update process. This is particularly important in light of the fact, oft noted in these comments, that natural conditions in the Hudson River make the recovery and containment of an oil spill, and protection of sensitive resources, especially difficult.

7. **Endangered Species: Pre-spill planning for ESA Consultation needs to be improved and updated**

Commenters recommend that pre-spill planning for ESA consultation be reviewed and updated, to reflect the most current status of listed endangered and threatened species, including the recently listed Atlantic sturgeon. For example, unlike the clearly designated Fish and Wildlife Service representative, the ACP does not require or specify that an individual representative of NOAA's National Marine Fisheries Service be identified as a point of contact for consultation on Atlantic and shortnose sturgeon, iconic and ecologically valuable Hudson River fish which are both listed as Endangered. As described in detail below, these species are particularly vulnerable to the effects of a heavy crude oil spill that involves sinking oil, or oil that becomes suspended in the water column through attachment to sediment particles. It is critically important to have a comprehensive pre-spill planning consultation completed in the next iteration of the ACP, one that includes clearly identified experts who can assist and advise the FOSC of the best approach to protecting these already stressed populations from the adverse effects of an oil spill, and any potential effects from the response technologies employed.

Both Atlantic[91] and shortnose[92] sturgeon, two of the most iconic Hudson River fish species, are known to spawn and feed in, and migrate through different areas of the Estuary throughout their lifespan.[93] While shortnose species numbers are thought to be increasing, Atlantic sturgeon numbers are extremely low, with less than 1000 spawning age adult Atlantics remaining in the Hudson River Bight Distinct Population Segment ("DPS").[94] Impacts to either species from a heavy crude spill in the Hudson would be long lasting and extremely deleterious to individuals of the species. Dr. Isaac Wirgin, Associate Professor in the Department of Environmental Medicine of the New York University, explains how a spill of heavy crude oil into the Hudson River would severely impact the Hudson's ecosystem and endangered species that inhabit the river:

> "Hudson River sturgeon species would be particularly vulnerable to the toxic effects of heavy, sinking oil spilled into the river. ... [Fish, in general,] are extremely sensitive to oil-induced early life-stage toxicities and that effects of exposure can persist to the adult life-stage and significantly affect recruitment into populations. … The heavy, viscous nature of certain lipophilic contaminants, such as heavy crude oils, may cause the contaminants to sink and persist in the benthic environment, potentially increasing duration of exposure for sturgeons."[95]

Dr. Wirgin adds that spills would have long-lasting impacts to the ecosystem and endangered sturgeon:

> "Spillage of heavy crude oils into the tidal Hudson River environment will almost certainly adversely impact its ecosystem which is already burdened with unusually high levels of other damaging, sediment-borne contaminants. It is likely that these heavy

[91] See http://www.nmfs.noaa.gov/pr/species/fish/atlanticsturgeon.htm.
[92] See http://www.nmfs.noaa.gov/pr/species/fish/shortnosesturgeon.htm.
[93] See http://www.nmfs.noaa.gov/pr/species/fish/atlanticsturgeon.htm.
[94] Nat'l Marine Fisheries Serv. Northeast Reg'l Off., Endangered Species Act Section 7 Consultation; Biological Opinion [**on] Tappan Zee Bridge Replacement NER-2013-10768134**, at 134 (2014) ("There is limited information on the demographics of the Hudson River population of Atlantic sturgeon. An annual mean estimate of 863 mature adults (596 males and 267 females) was calculated for the Hudson River based on fishery-dependent data collected from 1985-1995." (citation omitted)).
[95] Affidavit of Dr. Isaac Wirgin, appended hereto as Attachment C.

> crude oils will be highly persistent in the benthic environment and will be acutely toxic to adult life stages of its fish community. … Because the developing heart in fishes, and perhaps particularly sturgeons, is an exceptionally sensitive and consistent indicator of crude oil impacts, the Hudson River population of [the] two protected [sturgeon] species will almost certainly be challenged and damaged by the spillage of heavy crude oil in the environment."[96]

8. ACP identification of Staging Areas Must be expanded to include/require new Staging Areas on the mid and Upper Hudson

Section 5220.4 of the current ACP lists staging areas exclusively in the NY Harbor area. Given the current increasing transport of large amounts of petroleum product (especially crude oil) between the Port of Albany and points south, it is essential to identify and prepare for the use of staging areas throughout the Hudson River Estuary. Note that a summer and winter list needs to be maintained, as capabilities at some sites are seasonal. Note also that petroleum handling and storage facilities are not included on this list as they are presumably well known to responder community.

Also note that Riverkeeper is available, and has offered to take Coast Guard personnel aboard for a full patrol of the Estuary to identify sites as suitable for Staging Areas.

South to north:

1) **All sites in current ACP (northernmost is the Manhattan cruise terminal at 55th street)**

and

2) Palisades Interstate Park at Ross Dock, Englewood and Alpine BB

3) JFK Marina, Yonkers

4) Piermont Pier

5) Tarrytown Marina, Washington Irving Boat Club, Ichabod's Landing ramp – Tarrytown

6) Public launch ramps and Memorial Park – Nyack

7) Westerly Marina, two boat clubs, launch ramp and park – Ossining

8) Haverstraw Marina

9) Georges Island ramp and park – Montrose

10) Viking Boatyard – Verplanck

11) Marinas, multiple, in Stony Point Bay

12) The Lovett power plant site, now TZ Constructors – Tompkins Cove

13) King Marine – Verplanck

14) Riverfront park and ramp – Peekskill

[96] Appendix C at 26.

15) Public landing, Mine Dock Road - Fort Montgomery

16) West Point Military Academy

17) Garrison Yacht Club

18) Cold Spring Yacht Club

19) Cornwall Yacht Club, public park and ramp - Cornwall

20) Kowawese Park, Plum Point – new Windsor

21) Steel Style Shipyard – New Windsor

22) Public ramp, community rowing dock and multiple Marinas – Newburgh

23) Beacon riverfront park

24) Yacht Club and public launch ramp – Chelsea

25) Danskammer power plant

26) White's Marina and New Hamburg Yacht Club

27) West Shore marina and Yacht Club - Marlboro

28) Tilcon quarry at Clinton Point – Poughkeepsie

29) Shadows Marina, riverfront park and school team rowing facilities - Poughkeepsie

30) Public park with ramp - Highland

31) Roger's Point Marina – Hyde Park

32) Poughkeepsie Yacht Club – Hyde Park

33) Norrie Point Marina - Staatsburg

34) Riverfront park with ramp – Rhinecliff

35) Rondout Creek – numerous marinas, ramps and boat clubs

36) Kingston Point Beach with park and ramp

37) Charles G Ryder ramp – Ulster

38) Bridge Authority ramp at west end of Kingston Rhinecliff Bridge

39) Red Hook Boat Club

40) Town landing – Glasco

41) USCG base and two marinas in Esopus Creek – Saugerties

42) Riverfront park and ramp – Malden on Hudson

43) Lehigh Portland Cement facility – Cementon

44) West Germantown launch ramp

45) Two marinas in Catskill Creek and riverfront park with ramp – Catskill

46) Bridge Authority ramp at west end of Rip van Winkle Bridge

47) Riverfront Park, two marinas – Athens

48) Saint Lawrence cement facility, riverfront park, boat club and ramp – Hudson

49) Riverfront park, ramp and boat club – Coxsackie

50) Riverfront park and ramp – Stuyvesant

52) Hook Yacht Club – Stuyvesant

53) Shady harbor Marina and New Baltimore Yacht Club – New Baltimore

54)Coeymans Landing Marina and Yacht Club – Coeymans

55) P & M Terminal – Coeymans

56) Schodack Island ramp and state park – Schodack Landing

57) Yacht Club – Castleton on Hudson

58) Bethlehem riverfront park and ramp – Bethlehem

59) Scarano's Shipyard – at island Creek – Albany

60) **NUMEROUS FACILITIES in the PORT OF ALBANY – east bank and west bank**

61) Albany yacht Club – Rensselaer

62) Albany rowing dock – at RR bridge – Albany

63) Public park and ramp – north of RR bridge – Rensselaer

64) Troy public docks – Troy

64) Dirt ramp immediately south of Federal Lock at Troy

65) USACE base with crane, ramp and facility immediately north of the Federal lock at Troy

9. The ACP should include a thorough discussion of the need and benefit of OSRO/Contractor cooperatives for the Mid-Hudson region

Commenters note that Section 9420.4 of the current ACP briefly mentions the lack of contractor response resources in the mid-Hudson region, and notes that establishment of Cooperatives could improve this situation. Recommend that the Coast Guard expand its analysis of the use of Cooperatives, and develop plans to encourage their use among OSROs. The benefits of Cooperatives are potentially twofold; they would enable OSROs to share the cost of stocking a full range of response technologies, including alternatives that could be particularly useful in a spill response on the Hudson, and the River would potentially benefit by having additional response resources more readily available, in an area that currently suffers a shortage.

Riverkeeper and Scenic Hudson appreciate the opportunity to submit comments on the Coast Guard's revision and update of the ACP.

Respectfully,

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____/x/_____
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