UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1995 Wynkoop Street
Denver, Colorado 80202-1129

Mr. Geoffrey A. Craft
Southern Operations Manager
ExxonMobil Pipeline Company
800 Bell Street
Houston, TX 77002

July 29, 2011

re: ExxonMobil Silvertip Pipeline Spill (CWA-08-2011-0020)

Dear Mr. Craft:

On July 6, 2011, the U.S. Environmental Protection Agency (EPA) On-Scene Coordinator (OSC) issued an Administrative Order (Docket # CWA-08-2011-0020) to ExxonMobil Pipeline Company (Respondent) requiring performance of removal actions stemming from a discharge of oil into the Yellowstone River near Laurel, Montana. Among other things, the Administrative Order (Order) required the development and submittal of a Work Plan to address certain tasks specified in Section VI of the Order. In response to comments from EPA, considering those from other response-related agencies, and a deadline requested by the EPA OSC, Respondent submitted revised Work Plan documents directly to the OSC in Unified Command in Billings, Montana, on July 19, 2011. This correspondence notifies Respondent of approval of the Work Plan subject to the requirements and information contained herein or attached. EPA, in its discussion with Respondent and observance of ongoing operations believes that Respondent is conducting appropriate response actions relating to removal of oil to enable such approval.

EPA and Respondent have organized and participate in a Unified Command in Billings, Montana through which the response to the discharge of oil is being managed. The State of Montana also participates in key planning and operational activities. The federal OSC is part of the Unified Command and within the routine process of response planning, e.g., development of the Incident Action Plan (IAP), and approval of the response-related sub-plans, directs the removal of oil resultant from the discharge. The OSC also participates in the development of sampling and assessment efforts to achieve endpoints for the response within the context of the Order. EPA recognizes that specific tactics and requirements and plans relating to the removal, containment, or assessment of the oil may be approved by the Unified Command and the OSC as the cleanup progresses. These tactics, requirements, and plans are considered appropriate for implementation of the Work Plan required by the Order. As such, Work Plan components and specificity may be adjusted as the cleanup progresses. Additionally, minor adjustments to field activities may be required simply due to safety, access restrictions, and field conditions, e.g., high or low water conditions requiring field adjustment to a sample location.

EPA accepts the Work Plan required by Section VI of the Order and agrees that Respondent has met this requirement of the Order. Since response work is progressing concurrent with the proposed actions in the Work Plan, EPA proposes the following procedures for implementation of the Work Plan:

1. Respondent maintain the Unified Command organization, scaled to the response, until such time as the OSC agrees that such Unified Command is no longer required or additional work requirements under the Order are fully defined by the Work Plan such that ongoing planning processes in the Unified Command are no longer required.
2. Unified Command meetings with ExxonMobil Pipeline Company (or their representative) and EPA (including the OSC), and which include Montana DEQ, will be scheduled to discuss proposed actions for the upcoming operational period. Respondent should routinely assure that applicable portions and requirements of the Work Plan are considered or entered into the planning process for the Unified Command.
3. The decisions of the Unified Command meetings will be used to prepare Incident Action Plans and specific sampling, assessment, cleanup, or other sub-plans relating to the recovery, containment, and remediation of the oil and the effects thereof (collectively, "incident-specific plans") applicable to the Order. As appropriate, these incident-specific plans will be used to direct response activities and to justify necessary modifications to the Work Plan. Revised portions of the Work Plan may be included as an attachment to the Progress Reports required under Section VII, Paragraph 17, of the Order.

The attachments to this correspondence contain final comments on the Work Plan and requests certain changes to the Work Plan as specified. Please advise me, through the UC or by other means, in writing by August 1, 2011, that Respondent agrees with all required changes and make all requested changes to documents by August 8, 2011. All ongoing and planned work is expected to proceed in accordance with UC approval and the Work Plan, as revised herein.

Sincerely,

Steven Merritt
Federal On-Scene Coordinator
USEPA Region VIII

cc: James, J – RPIC, EMPCO

Attachment #1 – General Comments
Attachment #2 – Work Plan Comments
Attachment #3 – SAP and QAPP Comments

ATTACHMENT #1 – General Comments

REVIEW/APPROVAL of July 19, 2011 Work Plan

1. Based upon existing Site progress and oil removal activities planned and approved under the Unified Command considering safety and other constraints, provide EPA with a proposed schedule for initiating a) surface water, b) sediment sampling c) soil sampling, and d) water supply activities required under the Work Plan. This proposed schedule, once approved by the OSC, will substitute for other date requirements of the Order relating to such sampling at Section V, Paragraph 14, Item g.

2. Where additional Work Plan specificity is required, e.g., identification of soil or sediment sampling locations, EPA will require more specificity in subordinate plans, or Work Plan attachments, which will guide those tasks. Sub-plans, specificity, figures and additional information may be required by UC (e.g., sediment sampling plan) as implementation of sampling and analytical efforts progress. Additionally, resolution of changes to SOPs, etc. may be accomplished within UC. Finally, field conditions which affect the safety of responders or assessment personnel or access restrictions which limit responders or assessment personnel shall allow for minor field-based revision of the Plan implementation. Such revision shall be documented.

3. Certain EPA activities may not fall under the SAP or QAPP.

4. Please check all plans to verify consistency in discussion of screening, sampling, and analytical information.

5. The Work Plan provides conceptual site model (CSM) information to generally guide development of a framework for characterization efforts. The Plan further indicates that additional iterations of the Plan, based upon its findings, will be needed to provide for a full characterization effort. As such, while the CSM information provided in the Plan is reasonable, the efforts of the SCAT process, the fate and transport information developed by EPA (through NOAA), and the field observation and sampling efforts directed or conducted by the UC or future iterations of this Plan, will ultimately define the extent of the characterization effort and allow for its modification. EPA believes that the CSM for the Site includes a release of oil into the River which, with flood water, did or may extend to areas throughout the shoreline, riparian, overbank, upland, side channel, or backwater areas of the Yellowstone River. EPA believes that appropriate assessment efforts (e.g., SCAT) are now underway and that sampling of surface water, wells, sediments, and soil will ultimately identify the oil-impacted area. Additionally, longer-term monitoring activities may be a component of the effort and information from the monitoring may lead to additional sampling. EPA agrees that while some of the content or language of the CSM may be accurate (e.g., certain amounts of oil may not threaten the environment) and that such information is useful for the development of response endpoints, EPA believes that the CSM alone is not a factor for limiting the characterization effort currently contemplated in the Plan. For example, as the River

level drops, land may be exposed both within the banks (island) and beyond the banks (upland).

6. Certain oil spill removal or treatment techniques mentioned in the Work Plan may or may not be approved through the UC planning processes already underway at the incident. The Work Plan's approval does not change the already existing decisions regarding Approved Treatment Methods, Shoreline Treatment Recommendations, or Compiled Treatment Recommendations.

7. Work Plan approval is not a requirement for achievement of any quantitative standard identified in the context of screening values in the Work Plan. Rather, the OSC determines that certain sampling and analytical information will allow for determination of the removal of the oil within the context of the Order (Clean Water Act).

8. Unified Command must be advised of the procedures for release of analytical information to residences.

ATTACHMENT #2 – Work Plan Comments

REVIEW/APPROVAL of July 19, 2011 Work Plan

This document summarizes EPA review of the Administrative Order Work Plan documents of July 19, 2011, considering the comments of other agencies reviewing the documents and comments previously submitted on the July 13, 2011, Work Plan.

The July 13, 2011, Work Plan documents, submitted by ExxonMobil pursuant to the Administrative Order, were distributed for review by USEPA to MT DEQ, MT FWP, BLM, USFWS, BIA, and the Crow Nation EPA. In addition to EPA comment, comments were received from MT DEQ, MT FWP, BLM, and USFWS.

On July 19, 2011, ExxonMobil submitted revised Work Plan documents. These documents were reviewed and previous comments were again considered to determine if previous comments were reasonably incorporated. EPA in this document, among other things, has evaluated whether the Work Plan documents have been reasonably revised, in the context of the Order, or if the requested comments would/could be addressed through the normal planning and approval processes conducted in UC.

Consideration of past comments, and review of the revised documents, by personnel on the incident as well as within the Region VIII office, have lead to the creation of this summary document and recommendation for approval/contingent approval/disapproval of the AO Work Plan documents.

Comments which must be addressed in the Work Plan are presented in **bold** text, including those in **bold** text within other attachments.

I. Administrative Order Section VI; Paragraph 15, Item (a).
Health and Safety Plan

The Health and Safety Plan has been submitted and reviewed and amended a number of times by the Unified Command. Updates and safety messages are routinely incorporated into the planning process within the Unified Command and are documented in the Incident Action Plans and sub-plans thereto which are approved by, among others, the OSC. The current Health and Safety Plan submittal satisfies paragraph 15, Item (a) of the Order.

II. Administrative Order Section VI; Paragraph 15, Item (b).
Sampling and Analysis Plan (SAP)

The Sampling and Analysis Plan, dated July 19, 2011, generally satisfies paragraph 15, Item (b) of the Order. Prior comments to the appropriate version of Sampling and Analysis Plan have been reasonably addressed. Additional comments to the Sampling and Analysis Plan are attached and presented in **bold** text. Comments on the July 19, 2011, Sampling and Analysis Plan can be reasonably accomplished throughout the routine planning and approval processes of

the Unified Command. Revision to the Sampling and Analysis Plan is requested as a condition of approval of the Work Plan.

III. Administrative Order Section VI; Paragraph 15, Item (c).
Quality Assurance Project Plan (QAPP)

The Quality Assurance Project Plan, dated July 19, 2011, generally satisfies paragraph 15, Item (c) of the Order. Prior Comments to the appropriate version of the Quality Assurance Project Plan have been reasonably addressed. Additional comments to the Quality Assurance Project Plan are attached and presented in **bold** text. Comments on the July 19, 2011, Quality Assurance Project Plan can be reasonably accomplished throughout the routine planning and approval processes of the Unified Command. Revision to the Sampling and Analysis Plan is requested as a condition of approval of the Work Plan.

IV. Administrative Order Section VI; Paragraph 15, Item (d).
Oil Recovery and Containment Plan
Prior Title: Oil Containment and Recovery Plan (July 13, 2011)

The Oil Recovery and Containment Plan, dated July 19, 2011, satisfies paragraph 15, Item (d) of the Order subject to inclusion and revision as indicated in the **bold** comments below. Prior Comments to the appropriate version of the Plan have been reasonably addressed unless otherwise noted in **bold** text. Comments on the July 19, 2011, Oil Recovery and Containment Plan can be reasonably accomplished throughout the routine planning and approval processes of the Unified Command. Revision to the Oil Containment and Recovery Plan is required as a condition of approval of the Work Plan.

COMMENTS on the July 19, 2011, Oil Recovery and Containment Plan:

1. **Section 1 (Preamble), Section 2 (Introduction), and Section 3 (Objectives) of the Oil Recovery and Containment Plan refer to the River and its shoreline. Other sections refer to the River, its shoreline, upland areas, riparian zones, etc. There is no request for Work Plan revision, but EPA requires that oil from the Silvertip incident be removed, as specified by the processes within the Work Plan and as approved or limited by the direction of the OSC through the Unified Command, wherever it is located.**
2. **Section 2 (Introduction), last sentence on page: There are several qualitative endpoints, please change "Qualitative Endpoint has..." to "Qualitative Endpoints have".**
3. **Section 3.0 of the Oil Recovery and Containment Plan should include language indicating that oil recovery activities are conducted in consideration of natural resources, property ownership, and other factors that require coordination within the Unified Command. EPA believes that Respondent is currently conducting appropriate activities, but requests this statement in the Plan.**
4. **Section 7.1 of the Oil Recovery and Containment Plan should also include the following bullet in the list of steps: "Follow the Approved Treatment Methodologies as recommended by SCAT."**

5. Section 7.1, bullet list, the bullet considering vacuum trucks should consider other tools to address oily water if the area is not accessible by truck. A final bullet including "other actions approved by UC" should be added.
6. In Section 7.2 within the discussion of Qualitative Endpoints, include discussion regarding the potential for collection of environmental samples and analytical data as a means to assess the benefits for continued oil removal versus natural attention.
7. In Section 11, reference is made to Qualitative Endpoints in Section 6.2. The reference should be Section 7.2. Revise language.
8. In Section 11, include discussion regarding the potential for implementation of monitoring or consideration of sample/analytical information which may be used to assess environmental media against qualitative criteria (e.g., whether further treatment may do more harm than good).
9. Response efforts are recommended which, in addition to the decontamination process outlined in the Decontamination Plan, minimize the spread of invasive species, noxious weeds and/or weed seeds, and which maximize the protection of the River bank from erosion as good practice. Operational efforts should minimize soil disturbance, minimize travel through noxious weed stands unless absolutely necessary, remove weed seeds from clothing and equipment before moving between different work areas within the Site, and maximize protection of the River bank from erosion as good practice. Additionally, washing of boats and other watercraft including flushing of bilge water and washing out interior of craft, etc. should be considered. Add language regarding these efforts in Section 7.1 of the Oil Containment and Recovery Plan. Consult Environmental Unit and amend existing environmental language in the IAP 204s.
10. Response efforts involve agreement with landowners. Respondent, in its dealings with private and public land owners relating to ground disturbance and related operations during which oil is recovered, should consider activity which maximizes opportunity for native species and minimizes the potential for erosion. Neither EPA nor Respondent can mandate such activity of landowner.
11. Section 7.2, first sentence of second paragraph. The wording is unclear and requires clarification.
12. The Oil Containment and Recovery Plan states in Section 7.2 that oil containment and recovery resources will be re-deployed if necessary should any free oil re-appear. Any demobilization planning activity related to oil containment and recovery resources must consider the need for possible re-deployment, in a timely manner, of resources scaled to the likely need. Please verify appropriate language into Demobilization Plan.
13. An updated Wildlife Management Plan is requested. EPA agrees that appropriate considerations are in place for proper identification, recovery, and rehabilitation of wildlife, but the current Plan should be modified to reflect the current situation. Since the Work Plan references the Wildlife Recovery Plan as the document to capture many comments, EPA requests that the Wildlife Recovery Plan be reviewed and updated to the present condition within the normal planning processes of the UC.
14. The down River extent of the oil needs to be determined. EPA will not agree to the limitations of the extent of the oil or the response currently depicted in the Work

Plan until sufficient environmental and technical evaluation supports limiting the incident response to a specific geographical Division or location (e.g., beyond current Division H). Require Planning Section to consider all available information and recommend extent of the incident and areas for removal activities (e.g., oil recovery) and assessment efforts. Propose such definition through the Unified Command to the OSC for approval.

15. **The Work Plan must identify how Respondent will assure the protection of historic properties in the planning process. Propose such definition through the Unified Command to the OSC for approval.**

V. Administrative Order Section VI; Paragraph 15, Item (e)
Source Release Area Remediation Plan
Prior Title: Source Area Release Plan (July 13, 2011)

The Source Release Area Remediation Plan, dated July 19, 2011, satisfies paragraph 15, Item (e) of the Order subject to inclusion and revision as indicated in the **bold** comments below. Prior Comments to the Plan have been reasonably addressed unless otherwise noted in **bold** text. Comments on the July 19, 2011, Source Release Area Remediation Plan can be reasonably accomplished throughout the routine planning and approval processes of the Unified Command. Revision to the Source Release Area Remediation Plan is required as a condition of approval of the Work Plan.

COMMENTS on the July 19, 2011, Source Release Area Remediation Plan

1. **Section 4.5 of the Source Release Area Remediation Plan (or an applicable section of the Oil Containment and Recovery Plan) must include contingencies for recovering oil that may release during activity relating to the removal or repair, as appropriate, of the damaged pipeline segment. Revise as requested.**
2. **EPA requests implementation of a monitoring plan which includes routine observance of the discharge area until the pipe is permanently repaired or removed, as appropriate. Include this activity in Section 4.**
3. **Along with a bathymetric survey, Respondent should identify and evaluate the specific location of the pipeline failure to help guide the design of the sediment sampling task to verify threats posed by oil in the sediments near the source area. Revise.**
4. **Respondent is requested to bolster the sediment assessment activity. In addition to sediment sampling already identified in the Work Plan, and initially, Respondent is requested to attempt collection of some deeper sediment samples using traditional sediment sampling tools/techniques at the position of the discharge. If, based upon initial results indicating oil trapped in the sediment and as appropriate, additional more comprehensive sediment sampling (which may include, for example, deeper sediment sampling using less traditional methods which allow for deep sediment collection) is requested downstream of the release point. Such an assessment may be appropriate in the absence of definitive information regarding the mechanics of the release (e.g., directly into sediments at depth) or the potential for oil to have directly entered upon the ground water surface in the area of the discharge. A specific sub-**

plan for this activity is requested inclusive of deeper sediment sampling activity anticipating cobbles or gravel in the sediment load.

VI. Administrative Order Section VI; Paragraph 15, Item (f)
Remediation Plan for Downstream Impacted Areas
Prior Title: Downstream Affected Areas Response Plan (July 13, 2011)

The Remediation Plan for Downstream Impacted Areas, dated July 19, 2011, satisfies paragraph 15, Item (f) of the Order subject to inclusion and revision as indicated in the **bold** comments below. Comments on the July 19, 2011, Remediation Plan for Downstream Impacted Areas can be reasonably accomplished throughout the routine planning and approval processes of the Unified Command. The OSC will direct implementation of activities required to verify that oil which may remain does not pose a continuing threat of discharge to the surface waters. The OSC encourages Respondent to implement sampling and analysis to verify/characterize residual oil to standards consistent with those of the State of Montana and to screen samples in that manner. However, approval of this Work Plan is not implication of a requirement for Respondent to achieve or exceed any specific quantitative risk-based standard relating to environmental media.

COMMENTS on the July 19, 2011, Remediation Plan for Downstream Impacted Areas:

1. **Remediation efforts which assure that oil does not pose a continuing threat of discharge may include activities which contribute to the spread of invasive species or erosion of the River bank. Remediation efforts may require, in addition to the decontamination efforts described in the Decontamination Plan, activities to minimize the spread of invasive species, noxious weeds and/or weed seeds, and activities which minimize the potential for erosion of the River bank and nearby areas as good practices. Activities which support remediation efforts should minimize soil disturbance, minimize travel through noxious weed stands unless absolutely necessary, remove weed seeds from clothing and equipment before moving between different work areas, and maximize protection of the River bank from erosion as good practice. The EPA stormwater menu of BMPs could be considered. EPA suggests adding language regarding these efforts in Section 6 of the Remediation Plan for Downstream Impacted Areas, or other appropriate Work Plan language, with regard to endpoints. Remediation should consider maximizing native species (and habitat) and minimizing the potential for erosion of the River bank and nearby areas.**
2. **EPA advises that constraints and limitations indicated or presented by property owners may be a factor affecting achievement of endpoints. Include in Section 6 and Section 2 bullet items.**
3. **Section 5, Page 7, Section 5.1, 2nd complete paragraph on page: The third sentence of this paragraph states "The River in the study area is expected to be a gaining water body". Without definitive information, Respondent is requested to consider the potential for gaining or losing reaches of the River when characterizing whether the release of oil has affected drinking water.**

4. **A website reference in Section 5.3 appears to be missing. Please provide information or citation.**
5. **Respondent, through the UC, is requested to coordinate with the OSC and State of Montana to develop documentation demonstrating that endpoint and restoration agreement (see Section 6.1), including monitoring (Section 6.2), is implemented or completed with respect to the removal of oil.**
6. **The down River extent of the oil needs to be determined (see comment on Oil Containment and Recovery Plan). EPA will not agree to the limitations of the extent of the oil or the response or assessment currently depicted in the Work Plan until sufficient environmental and technical evaluation supports limiting the incident response and assessment to a specific geographical Division or location (e.g., beyond current Division H). Require Planning Section to consider all available information and recommend extent of the incident and areas for removal activities (e.g., oil recovery) and assessment activities (e.g., characterization and achieving endpoints).**
7. **A component of the Remediation Plan for Downstream Impacted Areas, Section 6, must be effort to consider not only landowner agreements, but replacing or removing, by agreement with owners, the roads or other facilities used or damaged by the response. The Remediation Plan for Downstream Impacted Areas must discuss the inclusion of effort between the response with both public and private landowners regarding stabilization, re-vegetation, and restoration.**
8. **EPA is requiring Respondent to assess the extent of the oil. The assessment includes the collection of environmental samples. Analysis of the samples against screening values may, in some cases, assist in decisions regarding whether residual oil is to be removed or if such removal may cause more harm than good. Screening values are described both in this Plan component and the Sampling and Analysis Plan component. Screening levels other than those identified may be useful should analytes found within the oil not be found in the screening levels identified in the Plan.**
9. **Page 12, Section 6.2, Post Response Assessment: Please change "MDEQ" to "the State of Montana and/or other stakeholders."**

VII. Administrative Order Section VI; Paragraph 15, Item (g)
Waste Treatment, Transportation and Disposal Plan

The Waste Disposal Plan prepared for the Unified Command, dated July 18, 2011, satisfies paragraph 15, Item (g) of the Order. Additional comments relating to waste treatment, transportation and disposal can be reasonably accomplished throughout the routine planning and approval processes of the Unified Command.

ATTACHMENT #3

REVIEW/APPROVAL of July 19, 2011 Work Plan

SAP and QAPP

This document summarizes EPA review of the Administrative Order Work Plan documents of July 19, 2011, considering the comments previously submitted on the July 13, 2011, Work Plan.

The July 13, 2011, Work Plan documents, submitted by ExxonMobil pursuant to the Administrative Order, were distributed for review by USEPA to MT DEQ, MT FWP, BLM, USFWS, BIA, and the Crow Nation EPA. In addition to EPA comment, comments were received from MT DEQ, MT FWP, BLM, and USFWS.

On July 19, 2011, ExxonMobil submitted revised Work Plan documents including consideration of comments from other agencies. In this document, EPA has, among other things, evaluated whether the Work Plan documents have been reasonably revised, in the context of the Order, or if the requested comments would/could be addressed through the normal planning and approval processes conducted in UC.

Consideration of past comments, and review of the revised documents, by personnel on the incident as well as within the Region VIII office have led to the creation of this summary document and recommendation for approval/contingent approval/disapproval of the AO Work Plan documents.

The following revisions are required for the SAP:

1. **Please renumber tables to match applicable sections where the information is presented (e.g., Table 5.2-1 located in Section 7) and please double check references to tables, appendices, SOPs, etc. For example, in Section 9.6.3, the incorrect SOP is referenced for well sampling. For example, Section 8.1 refers to Appendix C, but Appendix C was missing from submission.**

2. **Please provide the appropriate tables referenced in Section 7.**

3. **[Section 7.1.3] The plan states that "site-specific background soil concentrations for metals *may be developed if necessary*". EPA advises that background samples should be collected as part of the response effort since this information may be important throughout the response. Please include a revision or reference in Section 7.4 to address background. Section 7.1.4 should include a similar statement for sediments as such sampling is identified in Section 7.5. Revise the SAP to include the development of background/upstream concentrations of constituents, either through site-specific collection or literature comparison, to allow for evaluation of Site data in the context of background. Also include appropriate sample nomenclature revision in SOP CTEH-ES2.**

4. To the extent that site-specific contaminants are being considered and not presented within the EPA Region 3 BTAG Freshwater Sediment Screening Benchmarks, EPA advises that the NOAA Screening Quick Reference Tables could be considered. See bullet item in Section 3, Section 7.1.4, and Table 5.5 in Section 7.5.

5. [Table 5.2-1] The Occupational Exposure Guidelines do not include action levels being used for readings in the community. Also, the table does not include an action level of VOCs for decisions affecting the community. Include these levels in the Sampling and Analysis Plan and assure consistency with the Community Air Sampling and Monitoring Plan component of the Health and Safety Plan. Additionally, please spell out hydrogen sulfide for non-technical review of Table 5.2-1.

6. Air Sampling – Air sampling in support of worker safety rests with the Safety Officer and the OSC. Adjustments to the Work Plan regarding sampling devices and analytical protocols in support of worker safety should be a component of the safety plan and approved through the UC process.

7. Air Sampling – Sampling information which would be conducted inside residences, if necessary, should be included on Table 5.1-3.

8. [Section 7.6] The Water Sampling Design section should be more thorough. The scope should not be limited to ensure the water quality criteria are being met. Water sampling should also be used to determine if dissolved product components are present, if weathered oil has impacted the water quality, etc. Add additional bullet items to Section 7.6.

9. [Table 5.6] "USEPA low flow" method in Table 5.6 is not likely an appropriate description of a method for drinking water or irrigation wells and not consistent with the SOP for collecting such samples. Revise the Table to better describe the method of collection for wells other than monitoring wells.

10. On Page 19, Section 6.9, EPA advises Respondent to consider that MDLs should be less than relevant screening levels.

11. [Section 7.3 and 9.3] Define reference sample. Revise the sentence in Section 9.3 regarding the use of the parameters detected in the crude oil sample as follows: Parameters detected in the crude oil reference sample, and other samples of oil or oiled environmental media (e.g., water) at the source area, will be used to determine the constituents of concern. It is reasonable to conclude that incident-related constituents may be detected in some samples and not in others; EPA advises against a very limited sampling of the source oil as the only source of information for developing constituents of concern. Anamolous parameters

(e.g., not reasonably believed to be related to the oil, but otherwise detected in samples in the immediate area of the spill) can be ruled out.

12. The constituents of concern should be periodically reviewed and updated considering additional information (such as: analytical information indicative of weathered oil, overwhelming data or statistical analysis indicating that constituents of concern are well below screening levels, etc.).

13. EPA advises consideration of the analysis of source oil for carbon, sulfur, and/or nitrogen Stable Isotope Ratios as a possible means for differentiating the source oil from other oil that could be identified in the overall assessment of the area.

14. After identification of constituents of concern (see Section 7.3 of the SAP), EPA suggests that Respondent provide a comparison between the laboratory or method detection limits and the appropriate screening values proposed in the AO Work Plan. Such review will assure that reviewers can reasonably conclude that samples are above/below such levels.

15. Initial Soil or Sediment Sampling and Analysis – Respondent should consider initial sampling to include metals analysis inclusive of vanadium and nickel and organics sampling inclusive of phenanthrene which, preliminary information suggests, may be detectable in the oil. Such sampling will be useful to determine affects. QAPP Table 1 and SAP Table 5.2-2 should consider these analytes in the context of determining the presence of oil until such time that constituents of the oil as contemplated in Section 7.3 of the QAPP are confirmed.

16. [Section 8.1] Reference is made to a specific air analytical/sampling method. To the extent that the SAP/QAPP must be revised to accommodate, please include such revision in the re-submittal.

17. Section 8.3 indicates that "head space testing" may be used during soil sample collection. Please describe what this means (e.g., monitoring for the presence of VOCs in the sample in the field), why it would be utilized (e.g., upon request from oversight agency) and that the sample portion actually sent for analytical testing will not be minimally disturbed by such field testing. Additionally, SOP CTEH-ES4, should be adjusted to reflect this information.

18. [Section 7.5]; the final paragraph of this Section. Probably minor, but the use of the word "to" either means there is missing information or the incorrect use of the word. Please clarify.

19. [Section 9.6.1] The Groundwater Sample section does not address the purpose(s) of groundwater sampling, proposed areas of sampling or intended use of data. Please add language to address this need.

20. [Section 9.6.3] The plan indicates drinking water samples (includes ground water samples) will be collected where feasible prior to any water treatment. The SAP needs to include a description for collecting VOC samples in situations where sample spigots are not available prior to a treatment unit (e.g., first spigot post treatment).

21. [Section 6.2, p.15] Identify the specific purpose for split samples at this location or reference another section of the Plan. Identify also whether split samples will be sent to a different laboratory, provided to a different agency, and/or some other purpose.

22. [Section 9] Sampling and organic analytical requirements for environmental samples currently require VOCs (Method 8260B), SVOCs (Method 8270, VPH (Mass Method, MT Modified), and EPH (Mass Method, MT Modified). Pending sampling, analysis, and/or review of crude oil characterization (Section 9.3) and/or environmental samples from the source area, Respondent may propose to EPA that this list of parameters and analytical methods be adjusted.

23. [Section 9.10] Please update the SAP to state the required frequency of rinsate blanks collected from non-dedicated sampling equipment.

24. [Section 11] The introductory paragraph should explain more fully the range of sampling locations such as explaining source area, divisions, and/or SCAT segments. This plan does not need to identify each individual sampling point, but should be more site-specific than the information presented. The Plan may indicate that sub-plans addressing specific tasks with requisite specificity will be provided for UC approval prior to implementation.

25. [Section 11.2] Please verify that "un-impacted" refers to soil that has not been visually oiled based upon SCAT.

26. Section 11.5 contains a discussion of wells. EPA desires to verify that oil is not found upon the water table within the area of the response. In addition to direct requests from landowners, Respondent is requested to develop a plan which assures no unreasonable gaps in response area coverage.

27. Section 6.5.4 – second bullet – Clarify that the language does not mean that samplers will remove oil from the soil before sampling.

28. [Section11.2] For the purpose of determining whether oil poses a continuing threat of discharge to surface water, initial soil sampling should be conducted after UC operations have resulted in the removal of oil to meet qualitative endpoints or decisions have been made that further oil removal may result in more harm than good. Dependent on SCAT recommendations, soil samples may

be necessary in contaminated areas to determine potential for further impact. As such, samplers should not remove oily material from the sample location.

29. [Section11.4] Contaminated materials should not be removed from surface water prior to sampling. Oil should not be physically removed by the sampler prior to surface water sample collection.

30. [Appendix B] The Plan states that blank and duplicate samples will be identified by blank or dummy numbers. Reconcile this language with SOP ES2 section 2.6

31. [Appendix B] All SOPs must have a clear approval (effective) date, signatures and version numbers to ensure that field samplers all are using the same and most current version of the field sampling SOPs. Please update the SOPs accordingly. Upon approval, begin document control numbering and procedures.

32. Vegetation Plan – Respondent is requested to develop a sampling and analysis provision for oiled or potentially oiled vegetation as a component of the Sampling and Analysis Plan including the criteria for identifying when such sampling could be required. Vegetation that may pose a continuing threat of release should be sampled.

33. To the extent practicable, sediment sampling should proceed from downstream to upstream and not vice-versa as indicated in the note on Section 6.5.3. Additionally, to the extent practicable, surface water sampling should occur before sediment sampling in nearby areas.

34. Sediment sampling is required (not "may be collected" as indicated in Section 9.5) for upstream locations and analysis is requested for all applicable parameters.

35. In Tables 5.4, 5.5, and 5.6, please define "one time".

36. In Section 6.2 relating to Field Precision, make reference to Section 9.1 containing definitions.

37. Update the SAP Section 6.5, and appropriate other sections, to require Trip Blanks for both solid and liquid sample matrices analyzed for VOCs.

38. Soil analyzed for volatile organic compounds indicated in Section 9.4, and sampled pursuant to the applicable SOP may result in loss of volatile content during the sampling process. SOP revision is requested which indicates that the potential for the loss of volatile content during the sampling process must be minimized; i.e., the sample should be disturbed as little as possible and placed directly into the sample container.

39. **Table 7.5.1-3 has a missing cell of information**

40. **Revise SOP CTEH-ES6 to consider stabilization of parameters as well as a time limit; consider 15 to 30 minutes or an estimated 3 well volumes.**

The following revisions are required for the SAP and QAPP.

1. **Check all references to Appendices, Tables, etc. to assure correctness. For example, Section 7.1 of the QAPP refers to SOPs which are not correctly identified.**

2. **Define Unified Command Health and Environmental Representatives in Section 3.1 of the QAPP to include, or similar: any agency or representative in Unified Command who may address issues, direct work, or write/review plans related to human health, animal health, or environmental.**

3. **In Section 3.1 define the CTEH organization. For example: CTEH is an independent consultant contracted by ExxonMobil which is working to address environmental and health issues related to the Silver Tip oil spill. Additionally, indicate that Unified Command provides overall direction to ExxonMobil which will then task CTEH.**

4. **Similarly, in Section 3.7 of the QAPP, define the Gradient organization; explain that they are a third-party validation firm. Here, briefly define what level II, III, and IV data validation entails, why Level II and Level IV were selected for this response, and provide a reference to other sections of the document that discuss data validation in more detail, if applicable.**

5. **Please define the position of the QI within the current UC organization, or identify the individual authorized to task CTEH or sampling activities under the Work Plan.**

6. **The original SAP, in Section 4.5, refers to Tables 4.5-1 through 4.5-14 for accuracy control limits. These tables were not provided by media and analyte. The revised SAP does not include tables of accuracy control limits in the applicable section. Please update the SAP or QAPP to identify and discuss accuracy control limits (or otherwise identify how this issue is addressed). Identify the performance acceptance criteria for accuracy.**

7. **[QAPP Section 9.3] The QAPP improperly identifies the assessment of representativeness through the use of co-located samples, which <u>may</u> be in actuality indicative of precision (variability in co-located sample measurements).**

8. **[QAPP Section 9.3] This section does not include any frame of reference for selection of sampling points (e.g. specified distances, area of biased sampling, step-out procedures, etc.). While specificity on sample locations is expected in future sub-plans, the SAP should provide a guide.**

9. **The SAP/QAPP should specify that a QA Audit will be conducted.**

10. **Assure that the QAPP/DMP lists the required elements for the Level II laboratory data report. Please add the analytical results for the field samples as well as: preparation and analysis dates, dilution factors, laboratory reporting limits, methods, qualifiers for both field samples and the field QC samples. Not all the elements could be found in the DMP.**

11. **The Entity Relationship Diagram, Appendix B of the DMP, is not of sufficient resolution to read, and does not include reference table. Please revise.**

12. **In the QAPP, please define the QAO using the same definition in the SAP.**