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July 31, 2018

Mr. John E. Kieling
Bureau Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6313

RE: RESPONSE TO COMMENTS
DISAPPROVAL FACILITY-WIDE GROUND WATER MONITORING WORK PLANS – UPDATES FOR 2016, 2017 AND 2018
WESTERN REFINING SOUTHWEST INC, GALLUP REFINERY
EPA ID #NMD000333211
HWB-WRG-16-003
HWB-WRG-17-005
HWB-WRG-18-002

Dear Mr. Kieling:

Western Refining Southwest, Inc., Gallup Refinery ("Gallup Refinery") is in receipt of your letter dated June 5, 2018, which provided comments on the *Facility-Wide Ground Water Monitoring Work Plans - Updates for 2016, 2017 and 2018* (submitted May 3, 2016; March 29, 2017; and March 29, 2018, respectively). As indicated in the letter, Gallup Refinery has made changes to the 2018 Work Plan. In effort to satisfy requests communicated in the aforementioned correspondence, please accept the enclosed information:

- Attachment 1 - Responses that address each of your comments, as well as, a cross-reference to associated revisions to the 2018 Work Plan.
- Attachment 2 – 2018 Revised Work Plan as a red-line strikeout version that identifies all changes and edits to the original Work Plan.
- Attachment 3 – 2018 Revised Work Plan.

If you have any questions about the information being provided herein, please do not hesitate to contact me by telephone at (409) 454-3777 or by email at Jessica.L.Obrien@andeavor.com.

Sincerely,

Jessica O'Brien

Jessica L. O'Brien
Acting Environmental Supervisor
Western Refining Southwest, Inc. – Gallup Refinery

cc: K. Van Horn (NMED-HWB)
M. Suzuki (NMED-HWB)
C. Chavez (OCD)
J. Dougherty (EPA-Region VI)

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
1	[2016 Work Plan (HWB-WRG-16-003)] The titles for several sections (e.g., Sections 2.4.1 and 2.4.2) are missing from the 2016 Work Plan. However, these errors were corrected in the 2017 and 2018 Work Plans. No revisions are necessary.	None required.	n/a
2	[2016 Work Plan (HWB-WRG-16-003)] Comment 7.b in the July 24, 2015 Approval with Modifications states, "[t]he Permittee may discontinue sampling for SVOCs, but must add analysis for ORO and DRO-extended [for groundwater monitoring wells BW-1A, BW-1B, BW-1C, BW-2A, BW-2B, BW-2C, BW-3A, BW-3B, BW-3C]." The approved analytical suites for these wells (major cations/anions, VOC, WQCC metals, GRO/DRO extended) are appropriately updated in Appendix B Table 1 and Table 2 in the 2018 Work Plan; however, discontinuation of SVOCs analysis is not addressed in the table. Similarly, Comments 7.c and 7.d allow discontinuation of SVOC analysis for the OW wells. The change (elimination of SVOC analysis) must be addressed in the revised 2018 Work Plan.	The change to remove the SVOC analysis did not occur from the 2017 Work Plan to the 2018 Work Plan and therefore was not identified as a requested or approved change in the 2018 Work Plan. As noted by NMED, the approval for this change occurred on July 24, 2015 and as such was previously updated in Appendix B-Table 2 of the 2016 Work Plan. The 2018 Work Plan (Appendix B-Table 2) carries forward the same sampling requirements for these wells as included in the previous work plan; however, an entry was added to Table 2 to note the SVOCs were previously removed in 2016 pursuant to the July 24, 2015 approval.	App B - Table 2
3	[2016 Work Plan (HWB-WRG-16-003)] Comment 12.b in the July 24, 2015 Approval with Modifications states, "[t]he Permittee lists "DRY" for several wells and "0.00" for several other wells. For the wells with 0.00 reported in the Depth to Water (ft) column, there are groundwater elevations listed in the Groundwater Elevation (ft) column. A reading of 0.00 indicates that groundwater is at the top of the well casing. NMED suspects that 0.00 is not an indicator that groundwater is at the top of casing. Either explain the difference between a dry well and a well with 0.00 recorded for the depth to water (ft) or revise the table to display the correct data." Neither explanation or revision is found in Appendix C-1, Annual, Quarterly Measurements in the 2016 Work Plan; however, the discrepancy was corrected in the 2018 Work Plan. No revisions are necessary.	None required.	n/a

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
4	[2017 Work Plan (HWB-WRG-17-005)] In Section 6.3.2 of the 2016 Annual Groundwater Monitoring Report (2016 Report), dated August 31, 2017, the Permittee states, "BTEX, DRO, ORO, and MRO constituents have not been detected in either OW-50 or OW-52 since 2010 through 2016, however a low concentration of MTBE was detected in both wells in 2016 (Tables 8.5 and 8.5.1)." Current sampling frequency for wells OW-50 and OW-52 is on an annual basis according to Appendix B, Table 1, Groundwater Monitoring Schedule in the 2017 Work Plan. However, MTBE is observed in both wells according to the 2016 Report; therefore, the wells must be monitored more frequently. Future groundwater monitoring and sampling for wells OW-50 and OW-52 must be conducted on a quarterly basis. Update the sampling frequency in the revised 2018 Work Plan accordingly.	Section 6.1 and Appendix B-Tables 1 and 2 have been updated to reflect a change to quarterly sampling at OW-50 and OW-52.	Section 6.1, App B - Table 1 and 2
5	[2017 Work Plan (HWB-WRG-17-005)] In Section 6.1, Modifications to Sampling Plan, the Permittee states, "[t]he following are required changes to the Facility Wide Groundwater Monitoring Work Plan taken from NMED correspondence (HWB-WRG-14-006), Approval with Modifications Annual Facility Wide Groundwater Monitoring Report: Gallup refinery 2013, dated May 18, 2006." The correspondence is dated May 18, 2016. In addition, the Permittee states, "Comment 6: Permittee must sample the EP-2 inlet on a quarterly basis to monitor the level of benzene being discharged from STP-2 to EP-2." The discharge is from STP-1, not STP-2. The errors were corrected in the 2018 Work Plan. No revisions are necessary.	None required.	
6	[2018 Work Plan (HWB-WRG-18-002)] The Permittee included a red-line strikeout version with the 2018 Work Plan. A red-line strikeout version is only required to be submitted with a revised document. The 2018 Work Plan was a first-time submittal. Generally, when NMED disapproves a document, it must be re- submitted as a revised document with a red-line strikeout version that illustrates where all changes to text, tables and figures were made to aid in review of the revised document. When the revised 2018 Work Plan is submitted pursuant to this correspondence, the Permittee must submit a red-line strikeout version showing the revisions to the Work Plan along with the revised 2018 Work Plan.	Permittee acknowledges such direction.	n/a

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
7	[2018 Work Plan (HWB-WRG-18-002)] In Section 1.1, Scope of Activities, the Permittee states, "[t]his plan also includes sampling requirements for the evaporation ponds and for the effluent from the sanitary treatment pond." The facility is divided into five groups (Group A, B, C, D and E) for periodic monitoring; however, evaporation ponds are not categorized. Revise the 2018 Work Plan to include the evaporation ponds as a monitoring group (i.e., Group F).	The discussion on monitoring at the evaporation ponds and effluent from the sanitary treatment pond has been moved into a new Group F. This is reflected in the Executive Summary (page iii), Section 1.1, Section 5.0, and the removal of Section 5.2 Evaporation Ponds and Outfall with the content moved to Section 5.1 Group A Through Group F.	Exec. Summary, Section 1.1, Section 5.0, Section 5.1
8	[2018 Work Plan (HWB-WRG-18-002)] In Section 1.2, Facility Ownership and Operation, the owner and operator are listed as Permittee Refining. During the May 2, 2018 meeting, the Permittee notified NMED that the owner had changed. Accordingly, update the owner and operator information in the revised 2018 Work Plan.	At this time, the names of the owner and operator remain unchanged. The proposed name change to Andeavor has been canceled. The Marathon merger has been announced, but not completed.	n/a
9	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.1, Historical Site Use, the Permittee states, "[t]he clarified water is routed to the new waste water treatment plant (WWTP) where benzene is removed and the treated water flows into the new pond STP-1. STP-1 consists of two bays, north and south and each bay is equipped with five aerators per bay. Effluent from STP-1 then flows into Evaporation Pond 2 and gravitated to the rest of the ponds." The new waste water treatment plant (WWTP) uses granular activated carbon (GAC) to remove organic constituents from wastewater; however, it is not clear how the Permittee determines the timing of contaminant breakthrough from the GAC. Discuss in the revised Work Plan how the timing of breakthrough is monitored and whether the carbon is either replaced with fresh or virgin carbon, or removed, reactivated at high temperatures and returned to the vessel when the GAC is exhausted and constituents begin to break through. Water samples are collected at the pond EP-2 inlet on a quarterly basis; however, the sampling frequency may not be sufficient to monitor the timing of breakthrough from the GAC system. Revise the sampling frequency in the revised 2018 Work Plan to correspond to the observed breakthrough frequency.	There are two GAC canisters placed at the effluent from the Dissolved Gas Flotation (DGF) unit that are utilized to remove the organic constituents from wastewater discharging into STP-1. Wastewater treatment plant operations alternate the configuration of these GAC canisters from a single setup to an in-series setup (primary and secondary canister). To help monitor the breakthrough of these GAC canisters, several water samples are taken at the effluent from the end GAC canister. Specifically, wastewater treatment plant operations take three samples per shift (day shift samples are taken at 8:00 am, 12:00 pm, 4:00 pm and night shift samples are taken at 8:00 pm, 12:00 am and 4:00 am). These samples are sent to Permittee's internal lab for analysis of benzene, toluene, ethylene and xylene (BTEX). In addition to the aforementioned samples, another daily sample is taken around 8:00am at the effluent from the end GAC canister and sent to an off-site lab for analysis. Specifically, a single daily grab sample of wastewater effluent from the end GAC canister is sent to Hall Analytical Lab to be analyzed for the following parameters: DRO-extended, benzene, toluene, ethylbenzene, total xylenes, general chemistry, and pH. Results from benzene analysis of the daily BTEX samples sent to Permittee's internal lab are monitored to manage the breakthrough from the GAC canisters. When benzene values exceed 0.4 ppm, one or more of the following actions are taken: GAC canister configuration is modified to an in-series set-up (primary and secondary canister); GAC canister is replaced with fresh carbon; GAC canister effluent is recirculated to the API. Before revising the sampling frequency per the above-mentioned breakthrough monitoring, Permittee requests such sampling be discussed with NMED during the next quarterly progress meeting that is scheduled to be held on September 19, 2018.	Section 2.1

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
10	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.2, Potential Receptors, the Permittee states, "[c]urrently, PW-2 is sampled every three years, PW-4 is sampled semi-annually and PW-3 is sampled on an annual basis. Annual sampling results from 2009 through 2016 have indicated no detections of volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) above screening levels." In Section 6.4.1 of the 2016 Report, the Permittee states, "[t]here were a total of five organic constituents detected in PW-3 all at concentrations below the applicable standards in 2016 ... 10 organic compounds were detected at concentrations levels below the applicable standards in PW- 4." Revise the statement regarding the VOC detections in the revised 2018 Work Plan. In addition, the number of constituent detections is increasing and the water from these wells is used for human consumption; therefore, the contaminant concentrations must be monitored more frequently. Both wells PW-4 and PW-3 must be sampled on a quarterly basis to monitor for changes in VOC detections and concentrations. Propose the change in sampling frequency in the revised 2018 Work Plan.	The statement in Section 2.2 has been revised to reflect the number of detections above screening levels. Sulfate, iron, phenol, and tetrachloroethene have been detected above screening levels. Section 6.1 and Tables 1 and 2 in Appendix B have been revised to increase the monitoring frequency at PW-3 and PW-4.	Section 2.1, Section 6.1, App B - Table 1 and 2
11	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.3, Type and Characteristics of the Waste and Contaminants and Any Known and Possible Sources, the Permittee states, "[d]ry wastes could stem from wind-blown metallic powders used as catalysts, and regular municipal solid wastes stored in covered containers destined for municipal landfills." Provide information as to what metals are used as catalysts in the refining process at the facility and describe how wastes stored in covered containers could be a source (e.g., leaks, spills) in the revised 2018 Work Plan.	Covered containers are not possible sources and the discussion in Section 2.3 has been revised accordingly. Based on the manner in which the refinery manages catalyst, there is not a potential for metallic powders to be wind-blown. Fresh and spent catalyst is stored in closed containers, with the exception of the removal and refilling process. Small amounts of catalyst inadvertently spilled to the ground surface during the removal or refill process is immediately cleaned up, placed in appropriate disposal containers and sent for proper disposal. The revised 2018 Work Plan has been revised to remove the statements related to wind-blown powders from catalyst.	Section 2.3
12	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.4.1, Separate Phase Hydrocarbons (SPH), the Permittee states, "Separate-Phase Hydrocarbons (SPH) floating on shallow ground water has been found at the northeast end of the facility." The presence of SPH is not limited to the northeast end of the facility; revise the 2018 Work Plan to identify the presence of SPH across the facility (e.g., MKTF wells).	The discussion in Section 2.4.1 has been revised to explain the presence of SPH in other areas of the refinery.	Section 2.4.1

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
13	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.4.1, Separate Phase Hydrocarbons (SPH), the Permittee states, "[r]ecovery through hand-bailing continues on a quarterly basis indicating that the volume of SPH has continued to drop substantially from year to year in several of these recovery wells. In 2016, only Recovery Well (RW-1) and GMW-1 had measurable levels of hydrocarbons." Although the volume of SPH recovery may have dropped, SPH has not likely been eliminated. The screened intervals for some wells are submerged and these wells cannot properly assess the presence of SPH (e.g., RW-2). During the May 2, 2018 meeting, the Permittee asserted that well RW-2 was installed in artesian conditions; therefore, it was screened below the confining layer and the position of the screened interval was appropriate. However, most confined aquifers are not totally isolated from sources of vertical recharge, often referred as a semipermeable or leaky confining layer. Well RW-2 is most likely installed in a leaky confined aquifer. SPH will accumulate at the water table in a leaky confined aquifer. Well RW-1 also may exhibit the conditions of a leaky confined aquifer. In order to assess the presence of SPH at the site, wells must be screened across the water table. Furthermore, the elevated benzene, toluene, ethylbenzene and xylenes (BTEX) concentrations in groundwater samples collected from wells RW-2, OW-57 and OW-58 in September 2016 suggest potential presence of SPH. Correct the statements in the revised 2018 Work Plan.	NMED's direction to "[C]orrect the statements in the revised 2018 Work Plan" is somewhat vague as to exactly which statements NMED is referring; however, the discussion regarding the presence of SPH in Section 2.4.1 has been revised to more accurately reflect the presence of SPH.	Section 2.4.1
14	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.4.2, Methyl Tert Butyl Ether (MTBE), five new monitoring wells (OW-53, OW-54, OW-55, OW-57, and OW-58) are listed as observation wells. These wells have not been included in the previous groundwater monitoring plans. Revise the 2018 Work Plan to indicate that the wells are newly added to the monitoring plan. In addition, well boring logs for OW-57 and OW-58 are included in Appendix D; however, the logs for OW-53, OW-54 and OW-55 are not included. Provide well boring logs and well construction diagrams for OW-53, OW-54 and OW-55 in the revised 2018 Work Plan. If these well boring logs and construction diagrams were previously submitted, provide a reference to the submittal. The Permittee must submit a well completion report for each new well installed at the facility or must include the information in the associated investigation report.	Wells OW-53, OW-54, OW-55, OW-56, OW-57, and OW-58 were included in Appendix B, Table 2 of the 2017 Monitoring Plan to request they be added to the monitoring schedule. We assume per NMED's comment the wells are approved for inclusion. The inclusion of the new wells is discussed in the Executive Summary (page iii), Section 2.4.2 and a new Section 2.4.6 – OW-14 Source Area. The boring/well completion logs for OW-53, OW-54, and OW-55 have been added to Appendix D. It was noted that well OW-56 was left out of the listing of wells in Section 2.4.2 and this is corrected. Also, the reference to OW-57 and OW-58 has been removed from the list of wells in Section 2.4.2 as they are now discussed in new Section 2.4.6.	Exec. Summary Section 2.4.2, Section 2.4.6 App B - Table 2

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15	[2018 Work Plan (HWB-WRG-18-002)] In Section 2.4.5, North Drainage Ditch, the Permittee states, "[a]n investigation work plan was submitted to NMED for review on August 13, 2015 and was subsequently implemented in May 2016 with installation of well OW-56." Although the Permittee states that investigation was implemented in 2016, the investigation report has not been submitted and reviewed by NMED. The Permittee must submit the investigation report no later than **August 17, 2018**.	The report will be submitted as requested by NMED.	n/a
16	[2018 Work Plan (HWB-WRG-18-002)] In Section 3.2, Drainages, storm water flow paths and drainage locations are described. However, it is difficult to understand the description without a figure. In order for readers to understand the description, provide a figure showing the flow paths and drainage locations in the revised 2018 Work Plan.	A new Figure 7 has been added to show the surface drainage flow paths.	Figure 7
17	[2018 Work Plan (HWB-WRG-18-002)] In Section 4.1, Ground Water Sampling Methodology, the Permittee states, "Appendix C-2 includes [a] well elevation summary for all the Marketing (MKTF) wells which includes date of establishment, ground elevation, top of casing elevation, well casing stick-up length, well depth, screening intervals and stratigraphic units in which the wells are located." Appendix C-1.1 includes well elevation and groundwater measurement data for MKTF wells. Appendix C-2.1 similarly includes well elevation data for MKTF wells. Appendix C-2.1 appears to be redundant; remove Appendix C-2.1 from the revised 2018 Work Plan or explain the purpose for Appendix C-2.1. In addition, Appendix C-2 does not include well elevation summary for MKTF wells. Appendix C-2 includes the elevation summary for all wells except the MKTF wells. Revise the 2018 Work Plan accordingly.	There is only one column of information (measuring point description) that is unique to Table C-2.1, thus this information has been added as a footnote to Table C-1.1 and Table C-2.1 has been removed. The description of Appendix C-2 has been revised in Section 4.1.	Section 4.1 App C, Table C-1.1
18	[2018 Work Plan (HWB-WRG-18-002)] In Section 4.1, Ground Water Sampling Methodology, the Permittee states, "[n]o changes were made to Tables in C-2 and C-2.1 for 2016 as there were no new monitoring wells added to the list." Appendix C-2 includes several wells that were installed in 2016 and 2017. These wells were added to the table in Appendix C-2. Revise the statement in the 2018 Work Plan accordingly.	The statement has been revised to reflect the addition of new wells installed in 2016 and 2017.	Section 4.1

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
19	[2018 Work Plan (HWB-WRG-18-002)] In Section 4.1.2, Well Purging, the Permittee states, "[f]ield water quality measurements will include pH, electrical conductivity, temperature, and dissolved oxygen (DO) %." The unit of dissolved oxygen concentration is shown as a percent (%). It is conventional to report the DO concentration with a unit in milligrams per liter (mg/L). Use mg/L when reporting DO values in future reports. Revise the 2018 Work Plan accordingly. In addition, include Oxidation- Reduction Potential (ORP) to the field water quality testing suite in the revised 2018 Work Plan. All water quality parameters must be tabulated and presented in an organized manner in all future groundwater monitoring reports.	The discussion in Section 4.1.2 has been revised to specify DO to be reported in mg/l and we have added ORP to the discussion. ORP has also been added to the list of acronyms. It is noted that ORP was already included Appendix B Tables 1 and 2, thus the change in only Section 4.1.2.	Acronyms Section 4.1.2
20	[2018 Work Plan (HWB-WRG-18-002)] In Section 4.1.2, Well Purging, the Permittee states, "[a]ll purged ground water and decontamination water from monitoring wells will be drained into the refinery waste water treatment system upstream of the NAPIS." Although one of the sewer leaks was repaired in October 23, 2013, unidentified sewer leaks were still present in the sewer system according to the results of the September 2013 and May 2016 dye tests. The Permittee must not discharge wastewater into the sewer system upstream of the New American Petroleum Institute Separator (NAPIS) until the Permittee demonstrates that the sewer system has been adequately repaired. In addition, various organic and metal constituent concentrations in the samples collected from the leak detection units (LDU) exceeded their respective standards in 2016 according to the 2016 Report. These results indicate that the NAPIS has on-going leakage; therefore, the source of the leaks must be identified and repaired in the NAPIS. The Permittee must not dispose any investigation-derived waste (IDW) into the refinery sewer system until the issues are resolved. During the May 2, 2018 meeting, the Permittee indicated to NMED and OCD that the NAPIS was repaired; however, no documentation demonstrating the completion of repairs has been officially submitted. The documentation must be submitted to OCD and NMED by no later than **July 16, 2018.**	The information requested to be submitted to NMED no later than July 16, 2018 documenting repairs to the NAPI was submitted.	n/a

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
21	[2018 Work Plan (HWB-WRG-18-002)] In Section 4.2.1, Sample Handling, the Permittee states, "[c]ollection of containerized ground water samples are in the order of most volatile to least volatile, such as: VOCs, SVOCs, metals, phenols, cyanide, sulfate, chloride, and nitrates." Comment 4 in the Disapproval letter for the 2015 Annual Groundwater Monitoring Report, dated January 31, 2018 states, "[a]ctual nitrate and nitrite concentrations provide valuable information to evaluate groundwater conditions." Further, Comment 11 in the Disapproval letter states, "[f]or all future monitoring, the method must be revised to provide actual and separate nitrate and nitrite concentrations." Revise the analytical suite to include separate analysis for nitrate and nitrite in the 2018 Work Plan.	The references to nitrates in Section 4.2.1, Appendix A, and Appendix B – Table 1 have been changed to nitrate and nitrite. The change is reflected in Section 6.1.	Section 4.2.1 Section 6.1 App A App B - Table 1
22	[2018 Work Plan (HWB-WRG-18-002)] In Section 5.2.1, Sampling Locations, "Boiler Water Inlet to EP-2" is indicated as one of the outfall sampling locations. However, the record indicates that boiler water is no longer discharged to pond EP-2. Provide clarification whether the water is still discharged to pond EP-2; otherwise, revise the 2018 Work Plan accordingly.	Boiler Reverse Osmosis (RO) water is discharged into EP-2, thus Section 5.2.1 (now Section 5.1) has not been revised to remove the reference to the sampling location for the boiler water inlet. Appendix B, Table 2 has been revised to reflect the RO water discharge.	App B - Table 2
23	[2018 Work Plan (HWB-WRG-18-002)] In Section 6.1, Requests for Modifications, the separate analysis for nitrate and nitrite addressed in Comments 4 and 11 in the January 31, 2018 Disapproval letter was not included. The Permittee must individually report the concentrations of nitrate and nitrite. Revise the 2018 Work Plan to include the modification. Refer to Comment 21.	As described above in the response to Comment 21, the Work Plan has been revised to include analyses for both nitrate and nitrite.	Section 6.1

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
24	[2018 Work Plan (HWB-WRG-18-002)] In Section 6.1, Requests for Modifications, all changes that were made to the previous sampling plan must be presented. Some changes are not addressed in Section 6.1. For example, several new wells (e.g., OW-60) were added to the 2018 Work Plan. However, the changes were not discussed in this section. All proposed monitoring schedule and modifications must be discussed. Appendix B, Table 2, Requested/Approved Changes to the Ground Water Monitoring Schedule, lists these new wells. Rationale for the requested changes is provided in Appendix B, Table 2; however, the description lacks detail and is ambiguous. Revise the 2018 Work Plan to include a discussion of all changes that were made from the previous plan.	Additional discussion has been added to Section 6.1 regarding changes from the 2017 Work Plan. NMED references new wells (e.g., OW-60) as being added to the plan and the description provided in Appendix B, Table "lacks detail and is ambiguous." The 2018 Requested Changes column states, "add to monitoring schedule" to explain what is requested. Permittee is requesting to add these new wells to the monitoring schedule. That is the only requested change for the listed wells for which this change is described. In total, it includes BW-4A, BW-4B, BW-5A, BW-5B, BW-5C, OW-59, and OW-60. The rational refers to the fact that the particular well is a "new well." On multiple previous occasions, NMED has specified that all new monitoring/observation wells should be included in the Monitoring Plan and thus Permittee included the new wells. For OW-59 and OW-60, we have further included a specific reference to the exact comment letter in which NMED directed Permittee to add these wells to the Monitoring Plan (NMED Comment 2 – "The new wells must be added to the Facility-Wide Groundwater Monitoring Plan."). We do not understand how the rationale to add new wells could possibly be ambiguous based on the history of this requirement. However, if we have misunderstood and it is not a requirement to add these new wells to the Monitoring Plan, please advise and Permittee will remove them. The duplicate entry for OW-59 and OW-60 was removed in Appendix B Table 2.	Section 6.1 App B - Table 2
25	[2018 Work Plan (HWB-WRG-18-002)] In Section 6.1, Requests for Modifications, the Permittee states, "[p]ursuant to previous discussions and agreement with NMED, the sampling frequency at the MKTF wells is being changed from quarterly to either semi-annual or annual. NMED requested that samples be collected quarterly at the MKTF wells for two years and this requirement has been satisfied. The monitoring data has been reviewed and wells that showing potentially increasing concentration trends and/or are located near the leading edge of the plume have been selected for semi-annual monitoring. The remaining wells have been changed to annual monitoring." In general, contaminant plumes in the vicinity of MKTF wells remain and have been expanding. The proposed reduction in sampling frequency is not appropriate at this time. Groundwater samples must continue to be collected from all MKTF wells on a quarterly basis. Revise the 2018 Work Plan accordingly.	The request to change the monitoring frequency at the MKTF wells has been removed from Section 6.1 and associated revisions made to Appendix B Tables 1 and 2.	Section 6.1 App B - Table 1 and 2

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26	[2018 Work Plan (HWB-WRG-18-002)] According to the analytical data tables in the 2016 Report, 1,2-dichloroethane (EDC) was detected in the groundwater samples collected from wells OW-50, OW52, OW-13, NAPIS-3, OAPIS-1, and MKTF wells MKTF-01, 04, 18, 19, 23, 27, 33, 34, 40 and 42 in 2016. The Permittee must add analysis for 1,2-dibromoethane (EDB) to all monitoring wells where EDC has been detected. The analysis of EDB for the groundwater samples collected these wells are not included in Appendix, Table 1. The analytical method must be capable of detecting EDB at concentrations less than 0.004 micrograms per liter (e.g., EPA Method 8011). Revise the 2018 Work Plan accordingly.	Appendix B Tables 1 and 2 have been revised to add analyses by method 8011 for OW-13, OW-50, OW-52, NAPI-3, OAPIS-1, and MKTF wells MKTF-01, 04, 18, 19, 23, 27, 33, 34, 40 and 42. References to this comment are included in Table 2 to distinguish between wells for which method 8011 was already included in earlier versions of the monitoring plans.	App B - Table 1 and 2
27	[2018 Work Plan (HWB-WRG-18-002)] According to Table 8.16.3 of the 2016 Report, analysis for total and dissolved metals have not been conducted for samples collected from the STP-1 outfall since 2014. Since several metals concentrations exceed their respective standards in the evaporation ponds, effluent from STP-1 may contain metals. Resume analyses for total and dissolved metals for the samples collected from the STP-1 outfall. Update Appendix B, Table 1 and Table 2 in the revised 2018 Work Plan.	The requested analyses have been included in revised Section 6.1 and Appendix B, Tables 1 and 2.	Section 6.1 App B - Table 1 and 2
28	[2018 Work Plan (HWB-WRG-18-002)] The bromomethane concentrations in the water samples collected from ponds EP-3, EP-12A and EP-12B are recorded as 0.016, 0.04 and 0.038 mg/L, respectively exceeding the standard of 0.00754 mg/L in 2016 according to Table 8.15.4 of the 2016 Report. Since bromomethane is highly volatile, nearly all environmental releases of bromomethane partition into the air. When bromomethane is detected in surface water bodies, pesticides may have been used intensely nearby. Collect water samples from ponds EP-3, EP-12A and EP-12B for pesticides analysis using EPA Method 8081A during the 2018 sampling events. Unless pesticide constituents are detected, the pesticides analysis may be discontinued in 2019. Update the analytical suite in the 2018 Work Plan accordingly.	The analysis for pesticides using method 8081A has been added in Section 6.1 and Appendix B Tables 1 and 2 for ponds EP-3, EP-12A and EP-12B.	Section 6.1 App B - Table 1 and 2
29	[2018 Work Plan (HWB-WRG-18-002)] The Permittee lists "0.00" for wells RW-2, RW-5, and RW-6 in the Depth to SPH column in Appendix C-1, Groundwater Measurements. Correct the typographical errors in the revised 2018 Work Plan.	The reference to 0.00 for the depth to SPH has been changed to N/A to be consistent with the other wells in Appendix C- Tables C-1 and C-1.1. Also, the definition in C-1 for N/A has been changed to "Not Applicable" from Not Available" to avoid possible confusion that the measurement was not available. The fact is the reading is not applicable because no SPH was identified in the well. Appendix C-1.1 already has N/A defined as not applicable.	App C - Table C-1 and C 1.1

Comment Number	NMED Comment	Gallup Refinery Response	2018 Work Plan Section
30	[2018 Work Plan (HWB-WRG-18-002)] In Appendix B, Table 2, the sampling frequency for well OW-56 is not specified. Groundwater samples must be collected from well OW-56 on a quarterly basis. Revise the table accordingly in the 2018 Work Plan.	Appendix B, Table 2 has been revised to show quarterly monitoring at OW-56.	App B - Table 1 and 2
31	[2018 Work Plan (HWB-WRG-18-002)] In Appendix C-1, the screened interval of new well OW-58 is indicated as 38 to 48 feet below ground surface (bgs) while the depth to water was measured as 24.67 feet bgs during the December 2017 gauging event. Although well OW-58 is appropriately positioned to monitor the SPH plume, its screened interval is submerged approximately 12 feet below the water table. Submerged well screens hinder investigation of SPH. Refer to Comment 13. A work plan to install well OW-58 was not submitted to NMED and the Permittee conducted the investigation at risk. Propose to install new well with an appropriate screened interval at the location of OW-58 in a separate work plan. The Work Plan must be submitted no later than August 3, 2018.	The requested work plan will be submitted as requested. It is noted that well OW-58 was installed pursuant to NMED's May 12, 2016 approval with mods of the OW-14 Source Area Investigation Work Plan dated April 2016.	n/a
32	[2018 Work Plan (HWB-WRG-18-002)] Appendix D, Well Boring Logs presents the boring logs for new wells. It should be noted that NMED will conduct a full review of the new well installations when investigation reports and well completion reports are submitted. Review of this report does not constitute review of the newly installed wells.	None required.	n/a